



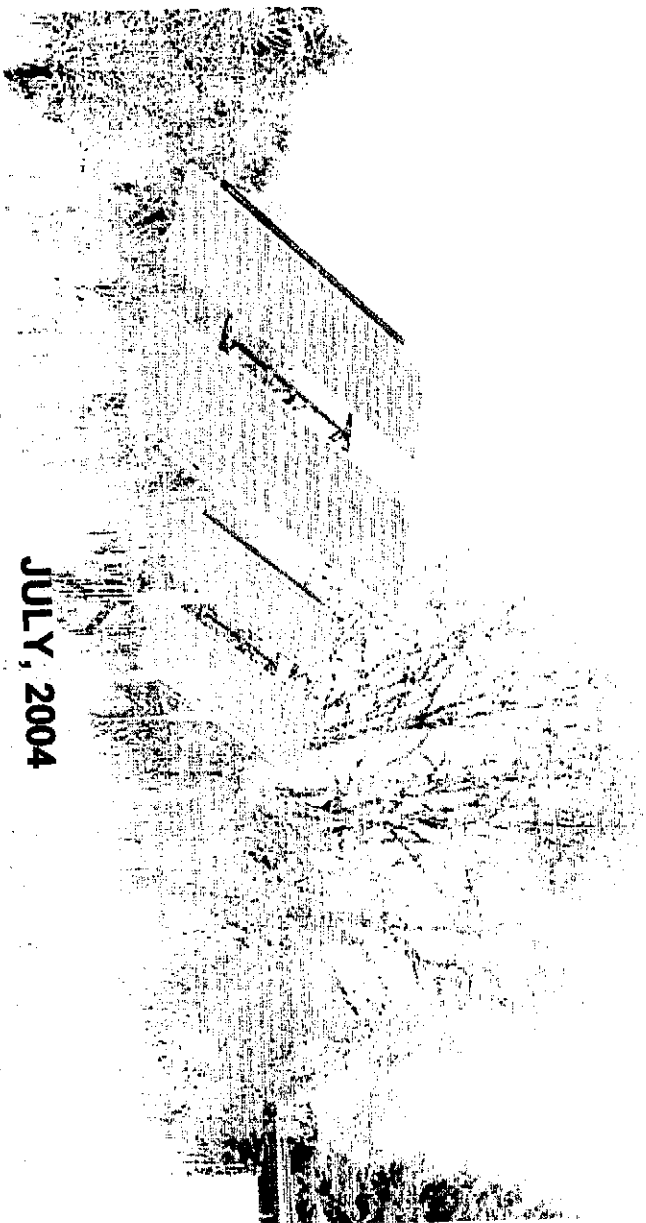
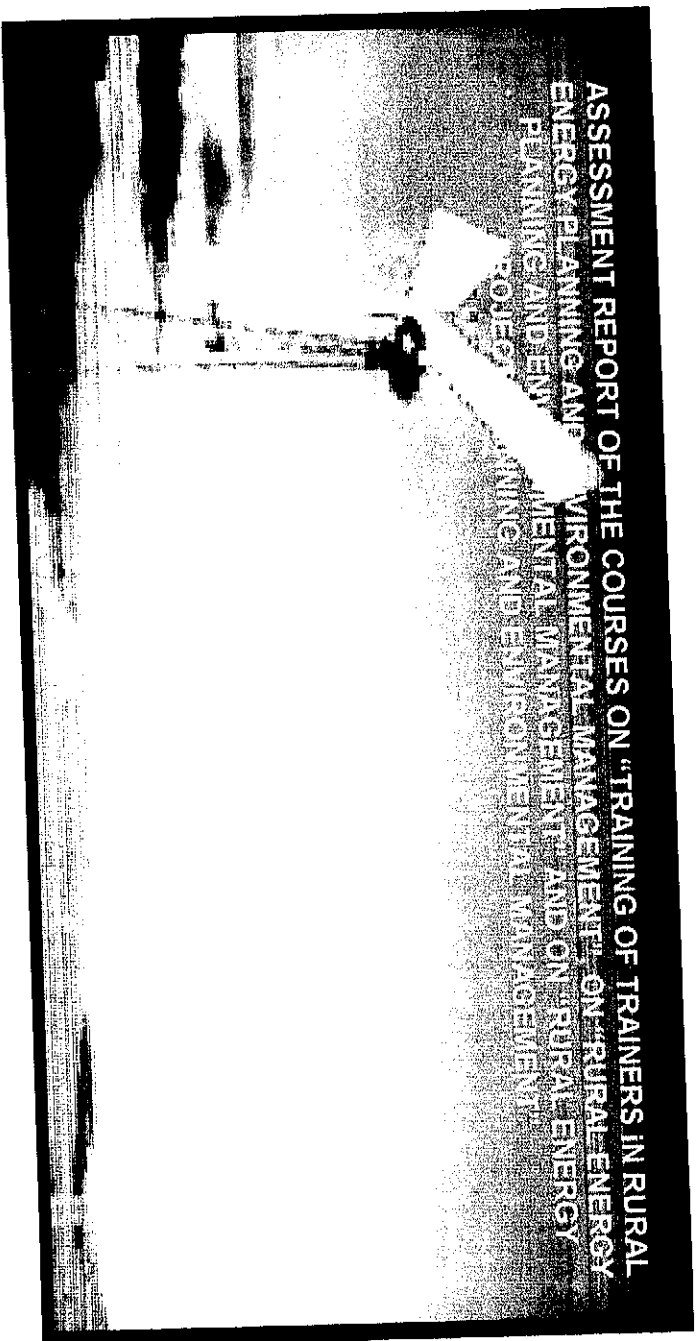
UNIVERSIDADE EDUARDO MONDLANE  
 FACULDADE DE CIENCIAS  
 DEPARTAMENTO DE FISICA



EASTERN AND SOUTHERN  
 AFRICAN MANAGEMENT  
 INSTITUTE (ESAMI)



REPÚBLICA DE MOÇAMBIQUE  
 MINISTÉRIO DOS RECURSOS MINERAIS E ENERGIA  
 Direcção Nacional de Energia



JULY, 2004

**ASSESSMENT REPORT OF THE COURSES ON "TRAINING OF TRAINERS IN RURAL ENERGY PLANNING AND ENVIRONMENTAL MANAGEMENT", ON "RURAL ENERGY PLANNING AND ENVIRONMENTAL MANAGEMENT" AND ON "RURAL ENERGY PROJECT PLANNING AND ENVIRONMENTAL MANAGEMENT"**

### **1. Introduction**

The countries of the Southern African Development Community (SADC) region are facing severe and interrelated problems of energy and environment. Growing shortages of traditional fuels, such as wood, are due to increased population pressure on land, biomass and other limited resources. About 80% of the population in the SADC region depend on wood fuel for domestic use, and also many agro-processing industries require substantial amounts of wood. Resource depletion and environmental degradation impede rural development. The environmental impacts of new and intensified production processes aggravate the degradation of ecological systems. The solution to the shortages of rural energy represent a challenge which should be oriented to improve demand-side management and enhance the effectiveness and efficiency of energy use, in conjunction with the optimisation of fuel supply. Having these facts in mind the SADC energy Ministers have placed high priority on rural energy planning and also on strengthening of local institutional capabilities to plan, implement, monitor and evaluate wood fuel projects effectively. In support of this objective the Technical Administrative Unit (TAU) of the Energy Sector of the SADC community, based in Luanda, Angola, sought funding from the Netherlands Ministry of Foreign Affairs (DGIS) in order to support the design of a training programme aiming at introducing planners and managers to the concepts and skills required for an analysis of rural energy problems. The Eastern and Southern African Management Institute (ESAMI), based in Arusha, Tanzania, was contracted to undertake this activity, supported by the Technology and Development Group of the University of Twente (TDG-UT), from the Netherlands. As a result of the work carried out a core curriculum and a training programme comprising eleven separate courses in rural energy planning and environmental management was designed and its implementation started during the past decade. The aim of the courses within the programme is to introduce planners and managers to the concepts and skills required for analysis of rural energy problems, and to help them to produce effective solutions. The training is job-oriented. The methodology of the courses is based on an overall framework, which links the different planning elements in a systematic way. It shows that if rural energy planning and environmental management are to be effective, energy needs should be the starting point, and that they should be analysed within the context of the physical, social and economic environment found in rural areas. Local resources, appropriate energy technology systems, human resources and appropriate energy policies can then be identified. All courses are specifically designed to be used in the SADC countries. They address the particular rural energy and

environmental problems of the SADC region. The courses fall into three broad distinct groups based on their content: (i) technical courses (biomass energy technologies - 3 weeks -, solar energy technologies - 2 weeks -, wind energy technologies - 2 weeks -, energy technology assessment - 3 weeks); (ii) management courses (rural energy planning and environmental management - 3 weeks -, rural energy project planning and environmental management - 2 weeks -, data survey methods forestry for energy and environmental management - 2 weeks -, data survey methods and applications for energy planning and environmental management - 2 weeks) and gender analysis in energy planning and environmental management - 2 weeks (iii) communication courses (communication planning and mass awareness - 2 weeks -, training of trainers in rural energy planning and environmental management- 3 weeks). The target group for the courses are professionals working in the broad field of energy planning and environmental management, including agriculturalists, economists, foresters, engineers, planners and policy makers from government, non-governmental organisations (NGO's) and private sector.

Reference on general problems of energy and environment faced by the SADC countries was made above. Surveys carried out by different organisations indicate that lack of skilled manpower is a factor contributing to this problem. The view of many experts in the region is that the lack of rural energy plans is a fundamental constraint in ongoing national and regional efforts to attain sustainable energy supply and environmental management in the rural areas. Policies and plans are needed to achieve multi-sectoral coordination in rural development and to estimate manpower and other resources required for implementing the plans and ensure that people are trained and resources secured to implement development programmes.

Energy planning only came to prominence after the first major oil price rise in 1973, and governments, at first, focused on ensuring secure supplies of strategic commercial energy sources such as oil, coal and electricity. Since then it has been realized that effective energy planning needs an understanding of the entire energy system, of which energy demand is vital, if complex, component. It has also been realized that energy use has major environmental impacts, and this environmental dimension needs to be incorporated into energy planning. It is also very important that planning has a rural focus.

Decision makers have to be aware that simple, single-sector 'solutions' to rural energy problems do not exist. Rural energy planning is a broad-based approach because it has to match the complexities of rural society. Therefore, an underlying assumption in this training course is that decision makers need to take a multi-disciplinary perspective towards rural energy planning, and the starting point should be at the grass roots, rural community level.

The target group for this specific course are decision makers, planners and managers involved in rural energy planning and environmental management from government, NGOs and the private sector. Participants should be qualified academically with a degree and should have several years of work experience in appropriate disciplines.

These courses have been implemented in English language since the past decade by ESAMI, from Arusha, Tanzania, and by the Minerals and Energy Education and Training Institute - MEEETI, from Johannesburg, South Africa. Both MEEETI and ESAMI subcontracted the Renewable Energies Research and Training Programme of the Eduardo Mondlane University (UEM) to organise the courses in Maputo in Portuguese in order to enable a full participation of the two Portuguese-speaking countries in the SADC region, namely Angola and Mozambique.

## **2. Contents of the Courses Delivered**

Three courses were delivered in Portuguese, with a duration of three weeks each, in the period 2002-2003 for participants from Angola and Mozambique, namely:

- Training of Trainers in Rural Energy Planning and Environmental Management, which took place from 15 July to 2 August 2002 with a total number of participants of 23, being 8 from Angola and 15 from Mozambique;
- Rural Energy Planning and Environmental Management, which took place from 26 May to 13 June 2003 with a total number of participants of 24, being 8 from Angola and 16 from Mozambique ;
- Rural energy Project Planning and Environmental Management, which took place from 18 August to 05 September 2003, with a total number of participants of 30, being 8 from Angola and 22 from Mozambique.

Next sections describe the contents of each course.

### **2.1 Training of Trainers in Rural Energy Planning and Environmental Management**

The course is arranged into three modules. Module 1, which is on Introduction and Overview, presents papers, which demonstrate the breadth of topics, which make up the energy and environmental management sectors. Module 2 on Training Cycle presents participants with the skills they will need to become effective trainers. Module 3, which is the last one, contains practical assignments and guidelines for carrying out a training course; this provides the participants with practical advice on the organising and delivery of a course. ESAMI in collaboration with TDG has elaborated a self-contained course manual on Training of Trainers in Rural Energy Planning and Environmental Management. The Renewable Energies Research and Training Programme, who translated the manuals, made the present course possible. The course was conducted according to the mentioned programme, which included field visits: one to Liquáti, a rural area located some 120 Km South of Maputo and

the second one to Mozal a big state of the art and recently installed aluminium smelter in Beloluane, 20 km from Maputo.

## 2.2 Rural Energy Planning and Environmental Management

Module 1, *Introduction and Overview*, presents the key issues in energy and environment facing SADC countries. The next three modules, *Data Needs and Survey*, *Energy Planning*, and *Environmental Management*, review the information, the skills and the tools, which planners need to address these key issues. In the final module, *Energy and Environmental Policy and Institutions*, the focus is on the broad policy and institutional context in which planners and decision makers have to operate. ESAMI in collaboration with TDG has elaborated a self-contained course manual on rural energy planning and environmental management. The Renewable Energies Research and Training Programme, who translated the manuals, made the present course possible. The course was conducted according to the mentioned programme, which included a field visit to Mahau, Matutíne District, a rural area located some 120 Km South of Maputo

## 2.3 Rural Energy project Planning and Environmental Management

The course is arranged into six modules, which are linked together as explained in the course manual. Module 1, *Introduction and Overview*, presents the main problems in the SADC countries and the obstacles to be removed for the success of rural energy programmes. The participants learn some tools and approaches for a more effective energy project planning, which are dealt with in a more detailed manner in the following modules. Module 2, *Project Planning*, leaves a clear message to the participants, which is: "a good identification of the problem and a well structured project planning are essential for its success". This module offers practical tools and concepts to be used by the participants in the project planning. Module 3, *Basic Energy Concept*, is an opportunity given to the participants to review the basic concepts on Physics and Technologies related to energy. Module 4, *Evaluation of Energy Technologies*, the aim of this module is the presentation and discussion of tools for the evaluation of energy technologies, with special focus on economic evaluation of energy projects as well as the environmental impact assessment and other criteria. Module 5, *Project Implementation*, this module discusses some techniques of project management and includes some exercises on human resources management. The concepts of activity planning and structuring of a time schedule as well as the monitoring of the projects have special emphasis in the present module. Module 6, *Energy and Environmental Policy and Institutions*, the focus is on the broad policy and institutional context in which planners and decision makers have to operate. ESAMI in collaboration with TDG has elaborated a self-contained course manual on rural energy planning and environmental management. The Renewable Energies Research and Training Programme, who translated the manuals, made the present course possible. The course was conducted according to the mentioned programme, which included a field visit to Mafuíane, Namacha District, Mahubo

and Massaca, Boane District, all rural areas located in a 100 Km radius from Maputo.

### 3. Preparation of the Courses

The preparation of the courses comprised basically two activities: (i) the translation of the manuals on "Training of Trainers in Rural Energy Planning and Environmental management", on "Rural Energy Planning and Environmental management" and on "Rural Energy Project Planning and Environmental Management" elaborated by ESAMI from English into Portuguese and (ii) the organisation of the training activities. The first activity has been carried out during the period going from July 2001 to May 2002. Then an organising commission has been set up in order to prepare the training activities. The organising commission had the task to identify suitable places for running the courses, to identify and invite facilitators to give their inputs into the courses and also to make the links with the national directorates of Angola and Mozambique in order to provide participants.

### 4. Funding of the Courses

The course were scheduled for 25 participants each, 15 of which would be funded by a grant provided by DGIS via ESAMI (for eight participants from Angola and seven from Mozambique), and 10 by a grant provided by the Norwegian Agency for International Cooperation (NORAD) via DNE (only for Mozambican participants). People outside the number of 25 should find their own means to finance the course.

### 5. Participants

One important objective to be achieved in this training activity is a good involvement of female participants, as according to the traditional division of work they are responsible for providing fuel for domestic use. In average in the three training activities a target of 40% of participation of women was exceeded. The task of identifying participants was given to the national directorates of energy of both countries. The final statistics of participation in each of the training activities, in terms of country of origin and sex is presented in the tables below.

#### 5.1 Training of Trainers in Rural Energy Planning and Environmental Management

*Table 5.1.1 – List of Participants*

	Participant	Country	Sex
1	Adélia Muambeno Samuel	Angola	female
2	Amaral da Conceição Seva Nhandumbo	Mozambique	male
3	Bernabé André Chilinga	Mozambique	male
4	Camilo Bernardo Neves	Angola	male
5	Cândida Aurora Cumbe	Mozambique	female
6	Euclides Rego Segredo Dias	Mozambique	male

	Participant	Country	Sex
7	Francisco de Maria de Meireles Vascorcelos Júnior	Angola	male
8	Guilhemina Fátima Amurane	Mocambique	female
9	Isália Deolinda Munguambe	Mocambique	female
10	João Alberto José	Mocambique	male
11	José Fernandes Quelhas	Mocambique	male
12	José Nelson Mapilele	Mocambique	male
13	Júlio Jolamo Tsimpho	Mocambique	male
14	Maria Vitória de Sousa	Angola	female
15	Miguel Francisco Pedro Tocota	Mocambique	male
16	Newton Jorge Mangureira Olavo Gambôa	Angola	male
17	Norte Luaili	Mocambique	male
18	Ofélia Simão	Mocambique	female
19	Pascoal Evaristo	Angola	male
20	Rosa da Conceição Chambrisse	Mocambique	male
21	Silvia Vieira Dias da Silva Fernandes	Angola	female
22	Sota Alberto Bonde	Mocambique	male
23	Suzana Augusta de Melo	Mocambique	female

**Table 5.1.2 – General Statistics of Participants**

	Number	Percentage
Total Number of Participants	23	100%
Angolans	8	35%
Mozambicans	15	65%
Female	9	39%
Male	14	61%
Female Angolans	4	17%
Female Mozambicans	5	22%

**Table 5.1.3 – Statistics of Participants by Country (Angola)**

	Number	Percentage
Total Angolan Participants	8	100%
Total Angolan Male Participants	4	50%
Total Angolan Female Participants	4	50%

**Table 5.1.4 – Statistics of Participants by Country (Mozambique)**

	Number	Percentage
Total Mozambican Participants	15	100%
Total Mozambican Male Participants	10	67%
Total Mozambican Female Participants	5	33%

## 5.2 Rural Energy Planning and Environmental Management

**Table 5.2. 1 – List of Participants**

Nr.	Name	Sex	Origin
1	Albertina Lisboa	female	Moçambique – Inhambane
2	Alicina Manhiça	female	Moçambique – Maputo
3	Argentina da Glória	female	Moçambique – Maputo
4	Berlinda Joaquim Artindo	female	Moçambique – Niassa
5	Cândida Cumbe	female	Moçambique – Maputo
6	Cândida Zita	female	Moçambique – Maputo
7	Clara Sanches	female	Angola
8	Emília Fumo	female	Moçambique - Cabo Delgado
9	Euclides Rego Dias	male	Moçambique – Gaza
10	Fátima Cangil	female	Moçambique – Maputo
11	Henure Mudoro Matene	male	Moçambique – Maritica
12	João Gouveia Ngunza	male	Angola
13	Júlio Tsimpho	male	Moçambique – Maputo
14	Lombo Matusiwa	male	Angola
15	Luciano Paulo Vidal	male	Angola
16	Luisa André Cuchamano	female	Moçambique – Tete
17	Miguel António Manuel Diogo	male	Angola
18	Mónica Vicente Barbeiro	female	Moçambique – Sofala
19	Newton Jorge O. Gamboa	male	Angola
20	Norah Greta Chade	female	Moçambique – Nampula
21	Norte Luaili	male	Moçambique - Cabo Delgado
22	Raul Dongama	male	Moçambique – Zambezia
23	Telmo Vaz Cardoso	male	Angola
24	Vieira Manuel Fernando de Carvalho	male	Angola

**Table 5.2.2 – General Statistics of Participants**

	Number	Percentage
Total Number of Participants	24	100%
Angolans	8	33%
Mozambicans	16	67%
Female	12	50%
Male	12	50%



**Table 5.2.3 – Statistics of Participants by Country (Angola)**

	Number	Percentage	Percentage (from total)
Total Angolan Participants	8	100%	33%
Total Angolan Male Participants	7	88%	29%
Total Angolan Female Participants	1	12%	4%

**Table 5.2.4 – Statistics of Participants by Country (Mozambique)**

	Number	Percentage	Percentage (from total)
Total Mozambican Participants	15	100%	62%
Total Mozambican Male Participants	10	67%	42%
Total Mozambican Female Participants	5	33%	21%

### 5.3 Rural Energy Project Planning and Environmental Management

**Table 5.3.1 – List of Participants**

Order	Name	Sex	Origin
1	Albertina Lisboa	Female	Mozambique - Inhambane
2	Amaral da Conceição Nhamitambo	Male	Mozambique - Sofala
3	Argentina da Glória	Female	Mozambique - Maputo
4	Artete Naene	Female	Mozambique - Gaza
5	Berlinda Joaquim Arlindo	Female	Mozambique - Niassa
6	Cândida Zita	Female	Mozambique - Maputo
7	Clara Sanches	Female	Angola
8	Constantino Cachela	Male	Mozambique - Maputo
9	Emilia Fumo	Female	Mozambique - Cabo Delgado
10	Eucides Rego Dias	Male	Mozambique - Gaza
11	Fátima Karji	Female	Mozambique - Maputo
12	Henure Mudoro Matene	Male	Mozambique - Manica
13	Joana Mahumane	Female	Mozambique - Maputo
14	João Gouveia Ngunza	Male	Angola
15	Júlio Tsimpho	Male	Mozambique - Maputo
16	Lombo Matuswa	Male	Angola
17	Luciano Paulo Vidal	Male	Angola
18	Luisa André Cuchamano	Female	Mozambique - Tete
19	Maria Aurora Silvestre	Female	Mozambique - Maputo
20	Mário Gualter dos Santos	Male	Mozambique - Maputo
21	Miguel António Manuel Diogo	Male	Angola
22	Mónica Vicente Barbeiro	Female	Mozambique - Sofala
23	Newton Jorge O. Gamboa	Male	Angola
24	Norah Greta Chade	Female	Mozambique - Nampula

Order	Name	Sex	Origin
25	Noite Luali	Male	Mozambique - Cabo Delgado
26	Raúl Dongama	Male	Mozambique - Zambezia
27	Rosa da Conceição	Female	Mozambique - Maputo
	Chambisse		
28	Simão Saranga Júnior	Male	Mozambique - Maputo
29	Telmo Vaz Cardoso	Male	Angola
30	Meira Manuel Fernando de Carvalho	Male	Angola

*Table 5.3.2 – General Statistics of Participants*

	Number	Percentage
Total Number of Participants	30	100%
Angolans	8	27%
Mozambicans	22	73%
Female	14	47%
Male	16	53%

*Table 5.3.3 – Statistics of Participants by Country (Angola)*

	Number	Percentage	Percentage (from total)
Total Angolan Participants	8	100%	33%
Total Angolan Male Participants	7	88%	29%
Total Angolan Female Participants	1	12%	4%

*Table 5.3.4 – Statistics of Participants by Country (Mozambique)*

	Number	Percentage	Percentage (from total)
Total Mozambican Participants	22	100%	73%
Total Mozambican Male Participants	09	41%	30%
Total Mozambican Female Participants	13	59%	43%

## 6. Facilitators and Speakers

In order to cover the different subject matters involved in the training activity, facilitators from different backgrounds had to be identified. The total number of facilitators and speakers was of 20, representing and/or originating from several institutions like the Faculty of Agronomy and Forestry Engineering, the Faculty of Engineering, the Faculty of Sciences, the Centre for African Studies all at the Eduardo Mondlane University, the Cahora Bassa Dam (MOZ), the Technical Unit for the Management of Hydropower Dams (UTIP) (MOZ), the Regional Water Management Authority of the South of Mozambique (ARA – Sul), the International

Unit for the Conservation of Nature, the Norwegian Agency for International Cooperation (NORAD), the Ministry of Planning and Finance (MOZ), the Ministry for the Coordination of Environmental Affairs (MOZ), the National Directorate of Energy (MOZ), the Ministry of Energy and Water (Angola), as well as independent consultants. Next sections give the distribution of the facilitators in terms of sex.

## 6.1 Training of Trainers in Rural Energy Planning and Environmental Management

*Table 6.1.1 – List of Facilitators and Speakers for the “Training of Trainers in Rural Energy Planning and Environmental Management Course”*

Facilitators	Country	Sex
José Matsinhe	Mocambique	male
Alberto Tsamba	Mocambique	male
Carla Pereira	Mocambique	female
Michaque Alberto	Mocambique	male
Ernesto Mandlate	Mocambique	male
Graciete Macuacua	Mocambique	female
José Uqueio	Mocambique	male
Xavier Muianga	Mocambique	male
Isabel Casimiro	Mocambique	female

*Table 6.1.2 – Statistics of Facilitators and Speakers for the “Training of Trainers in Rural Energy Planning and Environmental management Course”*

	Number	Percentage
Total Number of Facilitators	9	100%
Female Facilitators	3	33%
Male Facilitators	6	67%

## 6.2 Rural Energy Planning and Environmental Management

*Table 6.2.1 – List of Facilitators and Speakers for the “Rural Energy Planning and Environmental Management Course”*

Nr.	Facilitators / Speakers	Institution	Country	Sex
1	Alberto Tsamba	JEM – Engineering	Mocambique	Male
2	Anne Krone Helgestad	NORAD	Mocambique	Female
3	António Mubango	JEM – Sciences	Mocambique	Male
4	Arsídes Baloi	UTIP	Mocambique	Male
5	Boaventura Cuamba	JEM – Sciences	Mocambique	Male
6	Cândida Zita	JEM – Agron. and Forestry	Mocambique	Female
7	Eugénio Silva	JEM – Sciences	Mocambique	Male

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Nr.	Facilitators / Speakers	Institution	Country	Sex
8	Felicidade Munguambe	MICOA	Mozambique	Female
9	Francisco Meireles	Min. Water & Energy	Angola	Male
10	Isilda Nhantumbo	IUCN	Mozambique	Female
11	José Matsinhe	Nat. Dir. Energy	Mozambique	Male
12	Manuel Gamito	Min. Plan. & Finance	Mozambique	Male
13	Margarita Meija	Independent Consultant	Mozambique	Female
14	Marta Morjane	IUCN	Mozambique	Female
15	Máximo Mandava	Nat. Dir. Energy	Mozambique	Male
16	Michaque Alberto	JEM – Agron. and Forestry	Mozambique	Male
17	Paulo César Selamane	ARA – Sul	Mozambique	Male
18	Samuel Souto	JEM – Agron. and Forestry	Mozambique	Male
19	Telma Manjate	IUCN	Mozambique	Female
20	Valentim Mendes	Cahora Bassa Dam	Mozambique	Male

*Table 6.2.2 – Statistics of Facilitators and Speakers for the “Rural Energy Planning and Environmental Management Course”*

	Number	Percentage
Total Number of Facilitators and Speakers	20	100%
Female Facilitators / Speakers	7	35%
Male Facilitators / Speakers	13	65%

### 6.3 Rural Energy project Planning and Environmental Management

*Table 6.3.1 – List of Facilitators and Speakers for the “Training of Trainers in Rural Energy Planning and Environmental Management Course”*

Facilitators	Country	Sex
José Matsinhe	Mozambique	male
Alberto Tsamba	Mozambique	male
Boaventura Cuamba	Mozambique	male
Michaque Alberto	Mozambique	male
Eugénio Silva	Mozambique	male
Ximena Andrade	Mozambique	female
Manuel Gamito	Mozambique	male
Chemane	Mozambique	male
Páscoa Themba	Mozambique	female
Esperança Bias	Mozambique	female

**Table 6.3.2 – Statistics of Facilitators and Speakers for the “Rural Energy Planning and Environmental Management Course”**

Total Number of Facilitators and Speakers	10	100%
Female Facilitators / Speakers	3	30%
Male Facilitators / Speakers	7	70%

## 7. Courses Evaluation

### 7.1 Evaluation by the Participants

The courses were evaluated both by the participants and by the organizers. The participants were given evaluation forms, to be filled and surrendered anonymously, in order to guarantee freedom of expression. The forms were distributed at the end of every week for a weekly evaluation and at the end of the course for a final evaluation. Additionally a meeting was convened on the last day of each course for the sole purpose of providing the participants an opportunity to frankly and openly make a few remarks about the course, which they did.

A summary of the written evaluations of the participants is attached hereto.

Both in the written evaluations as well as in the referred meetings the participants unanimously considered the courses useful and well conducted. Some common and outstanding comments were made, which are presented below:

- The time was too short to deal with some of the interesting subjects in an appropriate and more fruitful manner;
- The presentations of the facilitators were generally good and very good;
- The manual and other supporting material were considered good, despite some limited problems to be corrected, like some faint and hardly visible pages and a few remaining misspelled words;
- The group work sessions and respective presentations were positive and productive, with the merit of bringing the participants together and strengthening the gained knowledge by means of interaction and practical exercise. The participants would like to have more group work sessions;
- The field trips were considered excellent occasions to see on site some particular aspects learned during the sessions. Participants would generally like to have more field trips;

- Participants were keen to implement their knowledge as soon as possible and would like to take part in more courses on the same and related subjects;
- The lunch services have improved from the first course up to the last. In the first training activity the lunch service was not considered good by a substantial number of the participants, in the second it was reasonable and in the last it was very good.

### *7.2 Evaluation by the Organizers*

The organizers agree with the critics made in each training activity and are grateful for the generally good appraisal. In addition to the above referred the organizers believe that there is room for improvement in the coming courses, especially but not only on administrative aspects. For that purpose the organizers held daily and weekly meetings during the courses, where many annotations were made. The following comments summarize the evaluation of the organizers:

- The courses were well conducted, with clearly visible improvements from course to course;
- The level of the participants was good and appropriate, which helped to achieve the positive results;
- The participants were enthusiastically participative and quickly managed to mingle and form a strong collective.
- The facilitators were committed and had a professional approach, which was essential to the overall rating of the courses;
- Some weaknesses in the organization, particularly on the catering were registered in the first and second training activities, which nevertheless did not affect the overall rating of the administrative setting;
- The organizers made effort in order to achieve a desirable gender balance, which was exceeded in the last two courses.

### **8. Budget**

The courses were funded by two institutions, ESAMI and NORAD. ESAMI had a contribution of US\$ 54,000.00 and NORAD US\$ 21,000.00, totalling US\$ 75,000.00 for each course.

## **9. Conclusions and Recommendations**

The purpose of the courses was to provide the participants sufficient skills to deal with rural energy planning and environmental management.

The organizers believe that these courses should be repeated after a certain period of time in order to strengthen and update the skills of the participants. The period would depend both on the assessment to be made in participants countries and agencies as well as on the availability of resources.

Short courses should be also organized for decision makers, like National Directors, in order to improve their sensitiveness to the aspects related to rural energy and environment.

Maputo, July 2004

Boaventura Chongo Cuamba



Course Director