

**REPORT OF THE
WORKSHOP ON GENDER AND ENERGY IN LESOTHO**

**Held at Maseru Sun Cabanas
on 4-5 September, 2001**

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1.0 Acknowledgements

This report has been compiled as a result of the workshop in Gender and Energy in Lesotho. The workshop was held at Maseru, Lesotho. The Lesotho Environmental Information Network (LEINET) hosted it. The purpose of the workshop was to establish a Network on Gender and Energy in Lesotho and to choose an institution, which will be a National Focal Point for ENERGIA.

We wish to convey our gratitude to participants who made this workshop a success. Their contributions have been very educational and eye opening. Information exchanged at this forum has laid a good foundation for a network such as this to take-off. The Network acquired the name of Gender and Energy Network of Lesotho (GENOL).

We hope the activities of the Network to be successful. The Network should carry out its responsibilities with an obligation to achieve its objectives and bring to the solution all obstacles that have been hindering progress for the development in the field of gender and energy. We reckon that this Network will play a major role in linking with other networks, women/men groups, clubs, associations, etc around the region and exchange skills, expertise and the dynamics of new technologies.

It is our pleasure to extend our gratitude to the institutions/organizations, which released their people to attend this rewarding activity and hope they will always support the network activities. We would like to thank the Institute of Education, National University of Lesotho (NUL), in particular for facilitating the hosting of this workshop. LEINET is based at the Institute of Education, NUL.

The last but not the least salute should in a special way honour ENERGIA for financially supporting this workshop, had it not been because of these funds, the workshop would not have taken place. We sincerely thank ENERGIA for granting LEINET's proposal to host this workshop.

2.0 List of Acronyms

AFNET	Agro-Forestry Network
ENERGIA	International Network of Women and Sustainable Energy
GENOL	Gender and Energy Network of Lesotho
IgeBEC	Information and Gathering and Exchange for Biomass Energy Conservation
IEMS	Institute of Extra Mural Studies
INFOTERRA	International Environmental Information Exchange Network
ISAS	Institute of Southern African Studies
LEINET	Lesotho Environmental Information Network
NUL	National University of Lesotho
ProBEC	Programme for Biomass Energy Conservation
REINLES	Renewable Energy Information Network - Lesotho
SADC	Southern African Development Community
SAREIN	Southern African Renewable Energy Information Network

3.0 Introduction

On the 4th and 5th September, 2001. Lesotho Environmental Information Network (LEINET) held a workshop to establish a Gender and Energy Network in Lesotho and also to identify the Lesotho National Focal Point for this network. Mr. Jerry Seithheko from the Department of Energy facilitated the workshop, while Mrs. Likonelo Bitso was a rapporteur. The workshop started with registration of participants who attended. There were 20 participants in all, from various institutions that deal with Gender and Energy matters. The institutions ranged from NGOS, Government Departments, Private Companies and tertiary schools.

On the first day, the workshop started with the introductory remarks, by Mrs. Emma Nthunya, the founder and chairperson of LEINET. This was followed by a presentation on Gender and environment in Lesotho by Mrs Matau Futho-Letsatsi, Director of Gender, Ministry of Environment, Gender and Youth Affairs, then Mrs Masikila Molapo gave an overview of energy in Lesotho. Mrs Molapo is a senior system analyst in the Department Energy. Her presentation was followed by Mr. Seboka Thamae's presentation on Energy and Health. Mr Thamae is a Directory of Health at the Maseru City Council. Dr Bantu L. Morolong, a senior lecturer at the National University of Lesotho, did the major paper, on Gender and Energy. Dr Morolong has a long- standing field experience in Gender issues in the SADC region. The last presentation was on networking by Mrs Emma Nthunya. The day ended with group discussions on major issues that emerged through the presentation particularly those that would help towards the establishment of a network and its modalities. Some of the participants attended the second day. This was mainly to discuss the network objectives, functions and activities. Furthermore, the terms of reference for the network and for the national focal point were drawn and the major contents of the report were agreed upon.

This report covers a summary of all the workshop events. It has also attached full papers presented, the programme and the list of participants as annexes.

4.0 INTRODUCTORY REMARKS BY MRS EMMA NTHUNYA, THE FOUNDER AND CHAIRPERSON OF LEINET

4.1 LEINET

Lesotho Environmental Information Network (LEINET) was established in 1995 as a national information network on environmental matters. LEINET resulted from the International environmental Information Exchange Network (INFOTERRA), whose National Focal Point is the Institute of Education at the National University of Lesotho. At a regional level, INFOTERRA Focal Points formed a network called Southern African Sub-regional INFOTERRA Network (SASIN). LEINET as a result has links with other regional networks as well as national networks in the endeavour to exchange information.

LEINET became a member of the regional network, the Southern African Renewable Energy Information Network (SAREIN) and established the national network, Renewable Energy Information Network for Lesotho (REINLES) in 1998. Among other activities, LEINET in conjunction with the Institute of Southern African Studies (ISAS) has established projects on energy conservation, such as Demonstration Solar Villages at Liphiring and Ha Machaha in the Southern Districts of Lesotho. Moreover, LEINET has initiated the National Steering Committee for ProBEC (Programme for Biomass Energy Conservation) have initiated the national programme on Information Gathering and Exchange of Biomass Energy Conservation (Igebec) in Lesotho. Today, with this workshop, LEINET is establishing a network on Gender and Energy, this obviously should have a Focal Point, which will be responsible for making connections with the regional and other networks, and the headquarters network – ENERGIA in the Netherlands.

4.2 ENERGIA

ENERGIA is an international network of Women and Sustainable Energy founded in 1995 by a group of women involved in gender and energy working in developing countries.

The objective of ENERGIA is to engender energy and empower women, through the promotion of information exchange, training, research, advocacy and action aimed at strengthening the role of women in sustainable energy development. ENERGIA is based at

the University of Twente in the Netherlands. It has more than 800 members in Africa, Asia, Latin America, Europe and North America.

4.3 PURPOSE OF THE WORKSHOP

At the Women and Sustainable Energy Workshop held in Nairobi, Kenya in March 2000, which resulted with the formation of the African Gender and Energy Network, it was recommended that countries attending should establish national networks on gender and energy. First of all, the Southern Africa Regional Network was formed and the Focal Point was agreed to be the Minerals and Energy Policy Centre (MEPC) in Johannesburg. The aim of the Regional Network was to coordinate the national networks in the member countries and to be answerable to ENERGIA. As a result LEINET decided to host a national consultation workshop in order to establish a national network.

4.3.1 The objective of the workshop:

- To develop ideas for women, energy and households management in Lesotho in order to increase women's involvement in energy technologies for sustainable development
- To establish the situation of women, energy and households management in Lesotho and all appropriate energy technologies applied in the country; including health issues pertaining to the use of biomass energy conservation and other available forms of energy.
- To form a national network on gender and energy, which will guarantee dissemination of information, serve as an advocacy tool for relevant policies, and address the needs of grassroots.
- To decide on the National Focal Point for ENERGIA in Lesotho and the way forward.

4.3.2 Workshop outputs

- Dissemination of information on women and energy for households management in Lesotho
- Dissemination of information on appropriate energy technologies applied in Lesotho
- Information on health issues pertaining to the use of biomass, solar and other forms of energy
- Ideas on the way forward for the network and ENERGIA National Focal Point

4.3.3 COMMENTS

It was observed that ENERGIA is a network about gender and energy, it is therefore imperative that Lesotho government's Departments of Energy and Gender should have a clear role in the network.

5.0 GENDER AND ENVIRONMENT BY MRS MATAU FUTHO LETSATSI, DIRECTOR OF DEPARTMENT OF GENDER

Mrs Futho-Letsatsi, Director of Gender Department in the Ministry of Environment, Gender and Youth Affairs, presented a paper on Gender and Environment with specific focus to developing countries and Lesotho in particular. The presentation started with explaining what women and men are in the context of gender and energy, she went further to define environment according to SADC, thereby stating that gender and environment has shifted from looking at the environment in isolation, but through considering environment in relationship with human activities.

It was highlighted that women are in close contact with the environment due to their daily activities, these activities include food production and processing, which involve energy needs for household purposes. Energy is needed and collected by women for cooking and heating derived from biomass in the form of fuel wood, crop residue and cow dung. In the process of fuel collection, women are psycho-socially and/or sexually abused by men, thus the gender-based discrimination and violence results in hazardous gynaecological problems.

The presenter emphasized that poverty and environmental degradation are closely interrelated, whereby the major causes of environmental degradation are patterns of consumption and production. Therefore, there is a need to eradicate poverty for sustainable development. The deterioration of natural resources removes communities especially women from income generation. This calls for serious attention and recognition on the role and situation of women living in rural areas, as they constitute the majority of the population in Lesotho and other African Developing countries. Women were recognised as role players in sustainable development as they provide sustenance to their families and communities, and yet they are highly exposed to environmental risks at home and workplaces.

It was realized that women have minority legal status often absent in policy-making for natural resources management. They are therefore rarely trained and underrepresented in various aspects of professional natural resource management. Nevertheless, women have taken leadership role in promoting friendly environment ethics. They are generally stable members of communities who have potential to safeguard their natural resources. It was concluded that sustainable development will be an elusive goal without due recognition of women's contribution towards environmental management. The presenter mentioned that information on Gender and Energy Network comes at a time when the commitment of the Government of Lesotho towards gender and development issues is taking shape, there is no doubt that the Network will be well received. Mrs Futho-Letsatsi's full paper is attached as **ANNEX 1** of this report.

5.1 COMMENTS AND QUESTIONS on Gender and Environment

In summary the following comments emanated from the presentation:

- (a) The presenter was generally well commended for her articulate presentation. It was observed that in line with the presentation the proposed network should try and advocate for women involvement in decision-making and policy formulation, as they are key stakeholders in natural resource utilization.
- (b) It was time to engage in debates and basic education programmes for women capacity building.
- (c) Problems of girl child and boy child were deliberated and posed as a big challenge to the network
- (d) Women empowerment as major environmental users was deemed necessary as they have potential to impact negatively and positively on the environment, knowingly or out of ignorance.
- (e) It is now time for advantaged minority to start helping the disadvantaged majority.
- (f) Women problems in legal matters, power and politics challenge the network to be strong on gender advocacy.
- (g) Improvement of indigenous energy technologies is crucial as most people are difficult to shift from traditional way of energy use.
- (h) Efforts are underway for policy formulation on environment, gender and energy. There is a draft policy in place.

6.0 ENERGY SITUATION IN LESOTHO BY MRS MASEKILA MOLAPO, SENIOR SYSTEM ANALYST, DEPARTMENT OF ENERGY

The presenter gave an overview of energy in Lesotho, by considering types of energy sources in the country. The types of energy mentioned are electricity, petroleum, liquid gas, coal and traditional sources (wood, shrubs, dung, crop residues). Since 1998, electricity has been produced in the country at Muela, hydropower station. However, some electricity is still imported from South Africa from time to time. Furthermore, there are four other mini-hydro power stations at Semongkong, Tsoelike, Tlokoeng and Mantsonyane. Companies such as British Petroleum, Engen, Caltex and Shell import all petroleum products.

The presentation discussed the trend on petroleum products consumption, as well as liquid gas. On the issue of liquid gas, it was observed that there is no legislation controlling its import and sales, there are however, procedures on how the dealers should store it because of its dangerous nature.

Energy consumption and supply was explained per sector. The major sectors observed were rural households, urban households, industry, commerce and transport. For each of these sectors, the major types of energy used were indicated. The presenter ended by considering the barriers to energy efficiency. Affordability and access were noted as major hindrances. Bearing in mind the issues highlighted the presenter ended by calling for ideas on what can be done to improve the situation. The slides presented are available as **ANNEX 2**.

6.1 COMMENTS on Energy Situation in Lesotho

- (a) It was observed that women mostly use for household purposes traditional energies.
- (b) On the issue of affordability it was noted that the Department of Energy has tried to reach out a lending hand to the private sector, however, it is still a huge challenge to make energy and its technologies affordable to most of Lesotho citizens. It is hoped that the network might help in this regard.
- (c) The Department of Energy should network and work together with other government ministries in promotion of clean and efficient energy use. Particularly in as far as energy related information is concerned.

- (d) Some private companies have approached the government through the Ministry of Education and Health to supply energy technologies to schools and clinics respectively, but they received negative response. It was therefore appealed that the Department of Energy could assist in energy advocacy in the government sectors.
- (e) There is a need to educate users and dealers of liquid gas as there are fatal cases reported caused by mismanagement of gas.
- (f) There is a need for Department of Energy to ascertain quality control in all types of energy imported, particularly petroleum products.

7.0 ENERGY AND HEALTH BY MR. SEBOKA – DIRECTOR OF HEALTH AND ENVIRONMENT, MASERU CITY COUNCIL.

The speaker looked at the energy use in a global context. The trends show that developed countries have the highest per capita levels of energy consumption. He also looked at the developments that have occurred in terms of technology for extraction, production and use of all types of energy. While initially the primary concern was on the reduction of cost, in recent years there has been a shift, thus emphasis is now on reducing adverse environmental and health risks.

He went further to show the relationship between health and energy, which he described as being complex because there are both direct and indirect effects. He cited the use of electricity in hospitals for running different equipment to save human life as a typical example. A detailed analysis on how fossil fuels affect health was made. Fossil fuels are considered as the largest source of atmospheric air pollution (out door pollution). The incomplete combustion of these fuels results into hydrocarbons such as carbon monoxide. Exposure to this type of air poses a health risk to many people in the world. This is particularly true in the developed countries where out door pollution is most evident.

In the developing countries, indoor pollution from unprocessed biomass fuels and coal is the major health risk. Majority of people in the developing countries depend on burning wood fuel for cooking and heating purposes. Women and children are most affected, as it is their primary responsibility to prepare meals for their families. In 1992, it was estimated that indoor pollution arising from the burning of biomass fuels affected 700 million women in the

world. Statistical evidence on the number of deaths because of carbon monoxide inhalation is hard to find in Lesotho but it is a common knowledge that deaths do occur because of carbon monoxide inhalation. Exposure to smoke results into respiratory diseases, affects eyes and so on.

In conclusion, the speaker noted that some energy sources have impacted tremendously on the human lives and therefore safer means of production and efficient use of energy has to look into very seriously. His full paper is attached as **ANNEX 3**

7.1 COMMENTS on Energy and Health

The following points have been drawn from the discussions:

- (a) Solar Matla (PTY) LTD, Appropriate Technology Section and Sunshine Lesotho, as companies that promote clean energy technologies, should be approached to be part of the network.
- (b) The network should work out strategies on how to help on indoor pollution.
- (c) The proposed network could also try and see how it could help with outdoor pollution due to burning of waste such as plastic, tyres which seem to be common in urban centres.
- (d) There is a need for educational campaigns to aid the paradigm shift from traditional methods of cooking to modern clean energy technologies.
- (e) It was commended that solar is clean, but not 100% efficient, it needs to be supplemented with other types of energy. Therefore the network could look at clean energy sources that could supplement solar.
- (f) The network may also have to concentrate on policy and regulations of clean energies, to make the environment cleaner and healthier.

8.0 GENDER AND ENERGY IN LESOTHO BY DR. BANTU L. MOROLONG, SENIOR LECTURER, INSTITUTE OF EXTRA MURAL STUDIES, NATIONAL UNIVERSITY OF LESOTHO

Dr. Morolong's paper was the main paper for the workshop. The introduction began by defining gender and energy and pertinent dynamics in Lesotho and SADC. Her premise was that energy issues are part of the global environmental concerns, and that there might be

enough energy to support current levels of consumption. Therefore energy is an ecological issue. Energy concept conjures up energy sources and types.

Energy was viewed as a developmental input, that is, requirements for energy in development. This were viewed in line with consumption of energy for Agriculture, health, transportation, and energy supply needing large investments out of total country budgets. A comparative analysis of urban and rural energy demands and supply were discussed, highlighting that for urban areas electricity and kerosene are dominant, while in the rural areas biomass is heavily used. In Lesotho and other developing countries, rural electrification is rare.

The issue of energy in SADC region were discussed, these included:

- High costs of petroleum imports
- Limited capacity to formulate adequate energy policies
- Poor performance of large energy investments
- Poverty in SADC countries
- Health hazards of some energy sources
- Prolonged droughts
- Indiscriminate use of existing sources

On the core of gender and energy, energy as a concept was explained against a background of gender perspectives. The ultimate target goal being to achieve equality between men and women in terms of access and control to natural resources. There is a need for a rationale to engender energy issues and discussions paying attention to the fact that men and women play different role in energy production and utilization determined by their gender roles in societies. Energy issues impact on how human beings perform these roles. Key energy and gender issues which make gender planning in energy are imperative. These key issues are quick depletion of sources of energy, unequal access and control over energy sources between men and women with a major distinction between their gender roles in society.

Different distinct roles of gender concerning energy uses were discussed. It was observed that women need to be helped to access energy, because energy poverty has increasingly become a female phenomenon, whereby there is feminisation of poverty due to limited access and control over resources (e.g. land, labour, and technologies, such as radio, transport and many others. Lesotho is not an exception; access to energy is a gender issue. Participation in decision-making about energy production and use is not a gender-neutral enterprise it is a power phenomenon. Power gets articulated in many ways at different levels household, land, nationally, and in as far as control of natural resources is concerned.

Gender, Energy and Health, here energy was discussed as an economic good and takes a huge percentage of family and national income. Health and nutrition are the first ones to suffer in the process. Some of the cross cutting issues that emerged are that more time is spend by women collecting fuel, thus they are often fatigued, to focus on other activities such as income generation. It was further highlighted that health and nutrition suffer as a result of prioritisation of energy. Alternative foods and food preparation methods are employed to safe energy. Sometimes, this may have adverse effects on health and gender, in the sense that women are more exposed to indoor pollution leading to various diseases more than men as they are doing cooking and heating of the households. Therefore, there is element of gender perspective in as far as exposure to energy health risks is concerned.

Challenges that gender and energy issues pose were outlined along with the commitment to provide awareness on gender analysis in energy programmes and planning in Lesotho and SADC region. Training of women and girls in the energy sector for gender sensitive policies and empowerment of female human beings since they are the most disadvantaged. This calls for better technology and energy choices with reliability, equity in access and control, affordability, economic efficiency, environmental friendliness; health and convenience being core issues. Her full paper is attached as **ANNEX 4** of this report.

8.1 COMMENTS on Gender and Energy

After the presentation, there were discussions that could be summarized thus:

- (a) Is there ever a time when there shall be absolute equality between men and women in societies? In response to this question, it was noted that change has to happen and it needs to be enacted by those who are suffering, therefore, women should not despair.
- (b) The role of international conventions regarding human rights issues were discussed and it was noted that gender is a human rights issue.
- (c) It was observed that culture could be a hindrance to gender equality issues. On this note it was explained that cultures are made by people are cultures are dynamic. Therefore they could be changed for the betterment of all the people, so that cultures do not put a certain gender at an advantage over the other.
- (d) National standards on gender issues should be based on international standards. Women should be empowered to know more about international human rights and gender issues so that they can advocate on raising their national standards.
- (e) It was further debated whether is it not a waste of time to empower women about and for gender, rather it would be appropriate to educate men as they are in control and oppressing women. The issue was that men should be educated not women. On this matter, it was noted that women have to be empowered economically, psycho-socially, emotionally and otherwise so that they can confront, function and live better in their environments.

9.0 NETWORKING BY MRS. EMMA NTHUNYA, CHAIRPERSON OF LEINET.

Networking was defined and described giving particular attention to its varieties, objectives, motivation, procedure, tools, principles, importance, constraints and priorities.

TYPES

The two categories are namely, the human and technical.

OBJECTIVES

The goal is to maximize and facilitate access to information. Thereby making problem solving and decision-making easier through exchange, transfer and sharing of resources. Work can thus become easier and duplication of effort is avoided.

RATIONALE

The purpose is to identify, articulate and discuss pertinent issues, concepts and ideas by encouraging as many stakeholders as possible to participate. This builds oneness in community development practitioners and maximizes the potential to execute essential changes.

PROCEDURE

Networking is a process that firstly requires one to establish and recognize the need to engage in it. Afterwards, single out the likely supplier to articulate the need to. The information from the potential source is weighed in terms of sustainability and technological viewpoint before used in undertaking any decision or action.

TOOLS

There are various instruments such as printed and audio-visual materials, seminars and workshops, meetings and conferences, electronic devices and institutions that are employed for networking purposes.

PRINCIPLES

The fundamental essence of networking is to keep in touch, acknowledge and appreciate others in terms of their knowledge and skills. Besides, participants with new and old perspectives are assisted to ultimately develop their potential as resources by giving advice and facilitating participation in development. Selfish and competitive interests should not be the grounds for being part of a network; on the other hand a 'give and take' principle is advocated.

IMPORTANCE

The significance of networking is access to a large pool of expertise and skills. The efficiency, effectiveness and impact to bring about necessary change are enhanced as diverse and extensive groups are involved. Moreover, confidence, solidarity, mobilization of unused resources, local problem solving and better understanding of issues, concepts and ideas is encouraged and increased.

CONSTRAINTS

Networking can be obstructed when stakeholders are competitive or lack commitment and interest. Furthermore, the absence of training, facilities or compatible technological devices can hinder the process.

PRIORITIES

The most pressing and prime concerns for networking for gender and energy were explained as follows:

- ❖ To distinctly pin-point the mandate and direction and be able to put the finger on issues that take precedence by delineation of the objectives and purposes;
- ❖ Influence relevant legislation; promote support from government; make inquiries and proposals to likely funding for network activities;
- ❖ The network should become a database for gender and energy information.

Her full paper is attached as **ANNEX 5**.

9.1 COMMENTS on Networking

It was commented that the proposed network should be given a name, and participants felt that in order to come up with the role and functions of the network, the terms of reference of Energia should be explicit so that the proposed network should be functioning under the umbrella of Energia-International.

10.0 GROUP WORK

After the day's deliberations, participants worked in two groups to discuss further the core issues that emanated from the presentations and their comments. The following questions guided group discussions:

- (a) What role can the Department of Gender and Department of Energy play in the proposed network? What other government departments could play a significant role in the network?
- (b) Which institutions, not present today, could be part of the network?
- (c) Suggest strategies for women empowerment as major stakeholders to energy

- (d) Discuss strategies for addressing accessibility and control issues pertaining to energy.
- (e) How can the network address the problem of affordability and other energy related problems?
- (f) How can the challenges posed today, such as, community development, poverty reduction, policy, procedures and legislation pertaining to energy be addressed by the network
- (g) Suggest a candidate person/institution for Energia Focal Point in Lesotho and state reasons.

10.1 Group's Views

- (a) Department of Energy and Gender could play a leading role in advocacy, policy formulation, implementation and evaluation. As well as legislation matters. These two departments could create a feedback mechanism between the network and the Government of Lesotho. Furthermore, these departments could provide relevant data. Other Government Ministries that could part of the network are Social Forestry, Conservation, Range Management, Local Government through Appropriate Technology Section, Health, Maseru City Council, National Environment Secretariat, LFCO.
- (b) The Non -Governmental Organizations that focus on gender, environment and energy issues should be invited to join the network, these include Lesotho Electricity Co-operation, Lesotho Highlands Development Authority, FIDA, Women in Law Southern Africa, Masianokeng Environmental Centre, Institute Southern African Studies, Lerotholi Polytechnic, Technical School of Leribe and other vocational schools. As well as other energy affiliated associations, such as Lesotho Solar Society.
- (c) Suggested strategies for women empowerment as major stakeholders to energy were
 - Basic skills training through workshops, seminars.
 - Development and production of instructional materials.
 - Information dissemination through various channels, e.g. mass media.
 - Target oriented basic education for women at different levels and different locations.
 - Access to credit schemes, it was further suggested that revolving credit schemes need to be established.

- Revision of legislation for the betterment of women livelihood.

(d) Strategies for addressing accessibility and control issues pertaining to energy could be:

- Women empowerment legally, politically, economically, psychologically and socially.
- Situational assessment of women with regard to their energy needs.
- Review of legislation and land Tenure system in Lesotho.

(e) The network could address the problem of affordability towards energy technologies through public education and advocacy, establishment of affordable credit schemes, introduction of affordable energy technologies, networking with other countries to draw ideas and experiences. Considering socio-economic status of target groups in order to understand their livelihoods. Relevant needs assessment that will allow provision of development services of different kinds to various people. Encouraging people to use the technology available at different places, e.g. solar, biomass, micro hydropower. There is need for research and consultation forum.

(f) The challenges such as community development, poverty reduction, policy, procedures and legislation pertaining to energy can be addressed by the network thus:

- Creation of consultation forums that can facilitate and be involved in community development, policy and legislation matters.
- The network could act as a key facilitator for gender and energy affairs that are related to focusing on community development, poverty alleviation, policy, procedures and legislation.
- The network, upon formation, should immediately set up an information database of individuals, companies, institutions and organizations that are involved in gender and energy matters.
- The network should make its mandate to enhance information exchange and dissemination.
- The network should encourage and promote resource sharing, such as information, expertise, equipment and facilities for the sake of women empowerment in energy affairs.

- The network should make proposals for projects that will generate income for women, since it has been realized that economic and financial empowerment is vital for survival.
- The network should advocate for women representation in politics, law and legislation bodies.

(g) Candidates that were suggested for Energia Focal Point in Lesotho were:

- Khalema Redeby and Associates (PTY) LTD
- Ntlafalang Consultants
- Institute of Extra Mural Studies, National University of Lesotho
- TIN-CAN Recycling NGO
- Institute of Southern African Studies

11.0 ENERGIA FOCAL POINT IN LESOTHO

It was generally agreed that:

- Participants of the workshop have formed the network and are the members of the network.
- The name of the network formed is Gender and Energy Network of Lesotho, and it's acronym is GENOL.
- LEINET should choose the National Focal Point among the candidates suggested, it was further proposed that the suggested candidates, should go and discuss the issue with their employers to find the possibilities of hosting the network. Because the network and the contact person will need institutional support of the focal point.
- A task team should continue with the workshop on the 5th September 2001 to work on the terms of reference for the network and the national focal point, as well as the objectives, functions and activities of GENOL.

11.1 GENDER AND ENERGY NETWORK OF LESOTHO (GENOL)

GENERAL OBJECTIVE

To engender energy and empower women in Lesotho through the promotion of information exchange, training, research and advocacy.

Specific Objectives

Facilitate and promote information exchange.

To make women aware of energy and its technologies,

To create a forum for women to discuss and exchange information on energy and gender matters.

To encourage education in activities, that promote gender and energy.

To facilitate maximum collaboration and cooperation among members on energy and gender

To empower women through training and research on energy related matters

To provide women at grassroots with skills that strengthen their role and in sustainable energy development

To liaise with other national, regional and international networks

To work closely with the Departments of Energy and Gender on matters concerning energy and gender in the country

11.2 Terms of Reference

11.2.1 GENOL

To compile an inventory of all institutions and individuals in gender and energy issues in Lesotho

To improve and maximise flow of information relating to energy and gender matters

To enhance contact among network members on energy and gender issues

To mobilise and seek funding for GENOL activities and projects

To facilitate strategic planning for GENOL activities.

11.2.2 National Focal Point

Coordinates energy and gender matters in the country

Liaise with Energia and regional networks

Maintain and update database of the network

Assists members of the network in preparing project and seeking funds for the project prepared.

Convenes and chairs GENOL meetings

11.3 GENOL Focal Point

There were five candidate institutions for GENOL focal point. The workshop task force and organisers decided to call for institutional profiles of the suggested candidates so that the NFP can be selected based on concrete information. We will communicate the institution and contact person of the National Focal Point soon after it has been selected.

ANNEX 1

GENDER AND ENVIRONMENT BY MRS MATAU FUTHO LETSATSI

Women refer to all female individuals able or disabled, single, divorced, separated, widowed and or married. According to SADC (2000) environment is defined as “land, water, minerals, all living organisms and life processes, the atmosphere and the climate”. Looking at this analogy one is justified to add or include the mountains, highlands, the valleys, rivers, streams and lowlands.

Attention in gender and environment has shifted from looking at the environment in isolation, but is considering environment in relationship with human activities. This is done with an emphasis on the relationship between human and natural environments as well as between poverty and environmental degradation.

Women are in close contact with the environment than men due to the fact that most of their daily activities are environment based. It is women not men who best know when it is suitable to take an infant out into the open or vice viz. They are the best detectors of climatic conditions and their effects on family members.

Food processing, almost a full time duty for women is sometimes done using the grinding stone as well as the traditional drying of cereals and vegetables. Women, who are often household heads and administrators in the absence of men, find themselves having to decide on agricultural issues. They decide on when to plough and type of crops to be cultivated. They predominantly engage in weeding mostly done by hand, with the traditional hoe. Most women are often found in harvesting and threshing with occasional support from men.

Most energy needs for cooking and heating is derived from biomass in the form of fuel wood, crop residue and cow dung that are collected mainly by women. This is where most women are psycho- socially and sexually abused by men. Most of this gender-based discrimination and violence reported or not, consequently results in gynaecological problems, STDs, HIV/AIDS, early sexual experiences, infertility, unprotected sex, unwanted pregnancies, increased abortions, substance abuse, suicide and unreasonable deaths.

Poverty and the environmental degradation are closely interrelated. The major causes of the continued deterioration of the environment are the patterns of consumption and production. There is need to cooperate in the essential task of eradicating poverty for sustainable development, which will only be realized if disparities in standards of living associated with gender-based violence, destruction of resources, displacement of people, effects of war, armed and other conflicts are addressed so as to better meet the needs of the majority of the people.

The deterioration of natural resources displaces communities, especially women, from income generating activities while greatly adding to unremunerated work. Environmental degradation results in negative effects especially on women's health, well being and quality of life in both urban and rural areas.

Particular attention and recognition should be given to the role and situation of women living in rural areas especially because they constitute the majority of the population. Environmental risks in the home and workplace disproportionately impact on women's health due to their susceptibility to toxic effects of various chemicals. Where there is high concentration of polluting industrial facilities women and girls' health are particularly in danger or at risk.

Women provide sustenance to their families and communities through management and use of natural resources. As consumers, producers, caretakers of their families, communities and educators, women play an important role in promoting sustainable development through their concern for the quality and sustainability of life for present and future generations.

Due to their minority legal status women remain absent at policy-making levels in natural resources and environment management, conservation, protection and rehabilitation. Women are rarely trained or are underrepresented as professional natural resource managers with policy-making capacities as land use planners, agriculturalists, foresters and environment lawyers.

It is my sincere hope that the out come of this workshop will among other things consider addressing or advocating for women's access and full control of economic resources like land and credit as well as the alleviation of their minority legal status.

Women have often played leadership roles or taken the lead in promoting an environment friendly ethics, reducing resources use to minimize waste and excessive consumption. Women's contributions to environmental management to protect the environment have often taken place at the local level where decentralized action on environmental issues is most needed and decisive.

Unlike men, women are generally the most stable members of the community left behind while pursuing work at distant locations. Women safe guard the natural environment and ensure adequate and sustainable resource allocation within the household and the community. Women's experiences and contributions to an ecologically sound environment must therefore be central on the environment agenda.

Sustainable development will be an elusive goal unless women's contribution to environmental management is recognized and supported. Thus a gender perspective has to be taken into consideration in all environmental engagements and activities.

Information of the Gender and Energy Network comes at a time when the commitment of the Government of Lesotho towards gender and development issues is taking shape and I have no doubt that this network will be well received. I am hopeful that the network will closely collaborate with all organizations that have a stake and interest in the energy and environment issues and will ensure full participation of all relevant groups especially women.

ENERGY SITUATION OVERVIEW

By

M.M. Molapo

4th September 2001

Department of Energy P/B A91
Maseru Lesotho

ENERGY SITUATION OVERVIEW LAYOUT

- Traditional Energy Resources
- Petroleum Supply
- Electricity Supply
- Other Energy Resources
- Energy Consumption by Sector
- Conclusion
- Main references

TRADITIONAL ENERGIES

Main traditional sources are:

- FUEL WOOD
- SHRUBS
- DUNG AND
- CROP RESIDUE

PETROLEUM SUPPLY

Through RSA by registered companies -

- Petrol
- Diesel
- Paraffin
- Lpgas

STORAGE CAPACITY FOR FIVE REGISTERED COMPANIES

PRODUCT	QUANTITIES (litres)
Petrol	706, 760
Diesel	588, 800
Paraffin	833, 430

ELECTRICITY SUPPLY

- Muela Hydropower station 72 MW
- Potential 450Mw
- 4 Mini-hydro power stations
- 2 connected to grid 2 isolated Some import from ESKOM

OTHER ENERGY RESOURCES

Solar Energy –Lesotho = 300 dys sunshine /yr hence solar energy

- PVs for water pumping, Communication systems and several household needs like lighting
- Wind Energy – water pumping
- Study wind speed for power generation (DANCED)

COAL AND FIREWOOD SUPPLY

- Coal and some firewood **imported** from RSA by private companies.
- No legislation
- Quantities not clear

ENERGY CONSUMPTION BY SECTOR

- Residential sector – Rural and Urban
- b) Commercial and services
- c) Transport
- d) Government Institutions

RURAL HOUSEHOLDS

- Coal in winter and
- Some LPG
- Main source of Energy is biomass 70%
- Illuminating paraffin

Cooking, lighting and space heating

URBAN HOUSEHOLDS

- Main energy consumed is coal in winter 59%
- Firewood
- Paraffin
- Lpg – import is growing and
- Electricity

Cooking, Lighting and space heating

INDUSTRY

- Electricity
- Coal
- Lpgas

Production line, steam and lighting

COMMERCE AND SERVICES

- Electricity
- Coal
- LPg
- Lighting and heating

TRANSPORT

- Mode of transport = Road and air to some degree
- Petrol
- Diesel

BARRIERS TO ENERGY EFFICIENCY

- Affordability
- Poverty
- Lack of information
- Or Dissemination of available technologies
- Sustainability- Teach a man to fish ??
- Monopoly

INSTITUTIONAL FRAMEWORK

(a) Ministry of Natural Resources

- Power Sector Policy Committee
- Department of Energy
- Lesotho Electricity Corporation
- Lesotho Highlands Development Authority

(b) Other Government Institutions

- Appropriate Technology Section
- Forestry Division

(c) NGOs

(d) Private Sector

CONCLUSION

The country will still continue to rely on imports to meet the needs for the fossil fuels for some time. The residential sector is doomed to use biomass.

WHAT NOW??

Is there any thing that we can Do ????

AFFECTED AND INTERESTED INSTITUTIONS AND THEIR ROLES

- Energy Department
- Ministry of Natural Resources
- Power Sector Policy – Forum
- LHDA
- LEC
- Min of Agric – Forestry, Land Use Plan etc

MAIN REFERENCES

- Lesotho Energy Master-plan 1988
- Electricity Mater-plan 1996
- LEC/LHDA interface study 1993
- ToR Power Sector Policy Committee
- Lesotho poverty mapping 1994 (Sechaba)
- State of Environment Report 1997
- Energy and the Environment- Integrated Resource planning 1988

ANNEX 3

Energy and Health- Revisiting the World Commission on Environment and Health. By Seboka A. Thamae

Introduction

Energy plays a very important role in our lives. Due to its significance, a lot of effort and financial resources have been committed towards the development of technology for extraction, production and use of all types of energy. The primary aim has always been to reduce cost, making systems more efficient and to research alternative sources. However, in recent years emphasis has been put towards reducing the adverse environmental and health effects of energy. Although this paper is not a cost benefit analysis, it is going to look at both the positive and negative effects of energy use and production.

International energy consumption trends have clearly demonstrated a disparity in energy consumption between the developed world and the developing world. Developed countries have the highest per capita levels of energy consumption. Quantified, this reveals ten times more commercial energy than in developing countries. In order for this energy to be produced, developed countries burn about 70% of the world's fossil fuels. Since a direct link has been established between energy consumption and wealth of a country, the wealthy states have to increase their fossil fuel consumption considerably in order to strengthen their economies.

As demand for energy increases, there is definitely going to be a change in energy sources. Poorer communities depending on bio-mass fuels such as wood, cow dung and crop wastes will change to fossil fuels and within fossil fuels from coal to oil and natural gas. Furthermore, industrial and service based production structures coupled with increased earning power of individuals imply an increase in demand for electricity as a more "convenient" form of energy source. Fossil-fueled power stations, hydropower and nuclear power generate most electricity. Unfortunately, all these changes have profound implications on human health and the environment.

Impacts of energy on Health

The relationship between health and energy use is somewhat complex, as there are both direct effects and indirect effects of energy on health. In both cases there can be positive or negative impacts to health.

Looking first at the indirect positive effects one finds that many energy dependent processes offer direct benefits to health. The large reduction in health risks from food contamination in the developed world owes much to improved food handling, storing; packaging and cooking, all of which are depended on fossil fuel or electricity. The provisions of domestic and commercial refrigerators have played a major role in controlling Gastro Intestinal Diseases (GID) due to improved storage of food.

The provision of health care is highly energy dependent. Hospitals cannot function effectively without uninterrupted sources of electricity and this implies a need for emergency power generators. The importance of transport in transporting patients and health staff

cannot be over emphasised. For health personnel to reach patients, distribution of drugs and medical equipment is all dependent on transport that uses petrol or diesel as a form of energy source. Many other basic services important to maintaining good health are energy dependent. These include provision of piped water and disposal of both household liquid and solid waste.

Secondly, one can look at the negative effects of energy on health, which come as a result of its production and subsequent use. Almost all forms of energy production and use have a potential to produce environmental changes that may give rise to direct or indirect adverse effects on human health. The effects of energy on health can be seen at different points of production and use for instance at extraction points, transmission points, emission of pollutants and the subsequent disposal of wastes and residues. The magnitude of health effects varies with the type of energy and its source.

Types of energy source and their impacts on health

Fossil fuels

Fossil fuels are the largest source of atmospheric air pollution, and the growth in population has paralleled the growth of modern industry, power plants, domestic use of coal and the expansion of road transport. Complete combustion of fossil fuels produces carbon dioxide and water together with some oxides of nitrogen. Incomplete combustion leads to black smoke, comprised of finely divided particles of carbon or complex hydrocarbons, or to carbon monoxide and a range of partially oxidised organic compounds. To some extent, fossil fuels also contain organic or inorganic sulphur compounds.

According to WHO (1992), most of the world's population is exposed to a mixture of air pollutants that may represent a health risk. This is estimated at 100 million urban residents being exposed to out door pollution levels higher than those recommended by the WHO. According to the same report a large number of people are exposed to indoor pollution from coal or unprocessed bio-mass fuels burned on open fires or unvented stoves. Whilst the dose effect of many pollutants is known, very little is known on exposure/ response relationships. This implies that acute effects from short-term exposure are more understood than chronic effects.

The major sources of urban air pollution are overwhelmingly coal-fired or oil-fired power stations, motor vehicles, home cooking and heating as well as industry. The relative contribution of the different sectors varies considerably from period to period and season to season. In Lesotho this is characterised by a white blanket of smoke that hovers over major towns in winter due to temperature inversion.

Table 1: Fossil Fuel Constituents and their Effects

Pollutants	Effects
Smoke (suspended particulates)	May irritate bronchi or penetrate the lung with long term effects
Sulphur dioxide	Readily absorbed on inhalation: irritation of bronchi leading to bronchospasm
Polycyclic aromatic hydrocarbons	Mainly absorbed onto smoke: can penetrate with it to the lungs
Hydrocarbons	Non-toxic at moderate concentrations
Nitric oxide	Capable of combining with haemoglobin in blood, but no apparent effect on human.
Nitrogen dioxide and ozone	Can penetrate the lungs to cause oedema at high concentrations.
Carbon monoxide	Combines with haemoglobine in blood .
Lead	Taken up in blood, distributed to soft tissues and some to the bone.
Sulphuric acid	Highly irritant if impacted in upper respiratory tract.
PAN, Aldehydes	Eye irritation

Adapted from Holland as cited in WHO,1992

Airborne lead remains one of the major problems where Lead is used as an anti-knocking additive in petrol. The greatest threat is to young children who may breathe in lead particulates or ingest soil contaminated with lead from automobile exhausts. Lead affects neurological development in children.

The presence of sulphur dioxide in air has always been associated with increased mortality, especially from cardio respiratory disease. Transient impairment of respiratory function has been induced by exposure to sulphur dioxide with symptoms being seen mainly on asthmatics.

Another pollutant of concern is ozone, which gets produced from photochemical smog. As pollutants from motor vehicles comprising of oxides of nitrogen and unburned volatile organic hydro carbons get trapped close to the ground during morning temperature inversion, they are acted upon by sunlight in the presence of oxygen as the sun comes up. The concentration of photochemical oxidants like ozone and peroxy acetyl nitrate (PAN) increase in concentration. These oxidants have a potential to cause eye irritation and respiratory illness to sensitive individuals. The phenomenon of photochemical smog was first recognised in Los Angeles, even though other major cities seem to experience this problem.

The extent to which air pollution poses a risk to general public depends on a number of factors including:

- The hazards of a compound or its derivatives, its persistence on the environment as well as its ability to penetrate indoors;
- The concentration of pollutant and the height above ground at which it is released;
- Atmospheric conditions leading to dilution and dispersal, local topography and climate leading to temperature inversions;
- Distance from source;
- Susceptibility of individuals and

- Location and activity of general public during releases.

Other Effects of Fossil Fuels

Health and Safety

Exposure to coal dust has been one of the major occupational hazards associated with energy production. Common conditions resulting from this are pneumoconiosis and occupational asthma. Coal mining has been associated with cave-in accidents, methane explosions and transportation accidents. It must be mentioned however that advances in the field of Occupational Health and Safety have improved the situation tremendously.

Hydropower

The effects/impacts of producing this form of energy are still fresh in the minds of many Basotho baring in mind phase 1 of the Lesotho Highlands Water Project. Most health effects are indirect and relate to environmental changes arising from construction of large dams. Such large dams do not only bring electricity, but could have other secondary benefits like flood control, provision of water for both irrigation and domestic use, tourism, improved infrastructure etc. But hidden behind all these are potential health problems brought about by accidents, illness and deaths among dam construction workers, displacement anxieties of people residing near the dam and other negative socio cultural impacts, (e.g. HIV/AIDS belt in Lesotho¹). Another important factor that gets overlooked is that of health problems associated with disruption of food supplies as well as the impact of the dam on the livelihoods of people living downstream.

Nuclear power

Although this form of energy production has had negative publicity, on paper it remains one of the safest forms of energy production. The average individual yearly radiation dose of people living within 50km of a power station is estimated to be 1/1000 of the dose received from background radiation. However, concerns still remain with occupational exposure of people working in reactor operations. Public out cries are also heard from people concerned with nuclear plant accidents and the final disposal of radioactive wastes.

Electricity

Energy in the form of electricity brings little or no risk to the household, industrial or commercial user as long as wiring has been installed correctly and not interfered with. However there are always concerns on electro magnetic fields created around high voltage sub stations and power lines. It is usually argued that electro magnetic waves may increase the risk of developing leukemia, lymphoma and nervous system tumors. All these are forms of cancer. The debate on severity of this still goes on.

Energy use in Developing Countries

The general scenario thus presented of energy and health trends tend to obscure the real picture of what happens in the developing world. Developing countries have peculiar problems related to poor Regulation hence poor quality coal being used. Most serious health

problems associated with energy in the developing countries arise from the use of coal and unprocessed bio-mass fuel. Therefore, the major problem of energy related health crisis stems from indoor pollution rather than out door pollution. An estimated 700 million women (WHO, 1992) in the world are likely to be affected by indoor pollutants arising from the use of bio-mass fuel. This factor is going to be dealt with by my colleague writing on Energy and Gender.

The use of inefficient “stoves” for burning coal and Kerosene used for cooking and surface heating results in major exposures to petrochemical fumes and carbon monoxide poisoning. Even though statistics is not available it is common knowledge in Lesotho that someone or even a family is going to perish due to inhalation of carbon monoxide from a “Paola”- a stove made from a metal tin cut in half and punctured with holes all round.

Apart from problems posed by fossil fuels, a major problem of indoor pollution in developing countries is the use of bio-mass fuels. These fuels include wood, animal dung, crop residues, agricultural waste and others. The uses of some of these have resulted in land carrying capacity being surpassed thus reducing carbon dioxide sinks. Many of us who grew up in Lesotho know that many areas which were once “forested” now lie bare.

Bio-mass fuels are usually burned in open fires or simple stoves at floor level. This scenario increases the risk of accidents especially burns for children as well as respiratory diseases as large volumes of smoke get inhaled.

The combustion of raw biomass products produces hundreds of chemical compounds including suspended particulate matter, carbon monoxide, oxides of nitrogen and sulphur, hydrocarbons, phenols, benzene, etc. WHO (1992) suggests that exposure to pollutants is 60 times more in indoor environments in the rural area of developing countries than in urban area of developed countries. The principal effects of pollution from bio-mass fuel are respiratory. Most bi-products of combustion are known carcinogens even though research is yet to show direct relation between cancer development and the use of biomass as source of fuel.

Constant exposure to biomass pollutants can result in chronic effects like inflammation of the respiratory tract. This in turn increases susceptibility to acute respiratory infection, which in turn increases sensitivity to smoke and fumes. As a result a vicious circle of pathological changes occurs. These major changes may lead to emphysema and chronic obstructive pulmonary diseases.

Conclusion

It goes without saying that advances in energy have impacted tremendously in our lives. Therefore, it is imperative that safer means of production and efficient use of energy should be looked into.

The projected increase in global energy production will vary in the next two decades depending on population growth and changes in per capita energy use. If the most ideal assumption is made regarding improved efficiency in the production and use of energy to make acceptable standard of living possible for less energy per person than it is currently

estimated, a world population larger than the current population is likely to need more than the present level of global energy.

Apart from population growth, economic development in developing countries is bound to have a higher energy demand as more stable economies develop and human needs are met. It is therefore important that nations of the world embark on strategies for responsible use of energy. On looking at the principles of sustainable development, then a lot of thinking has to be channelled towards identifying alternative sources of energy.

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ANNEX 4

GENDER AND ENERGY: A PAPER PRESENTED AT A WORKSHOP TO KICK-START THE FORMATION OF A GENDER AND ENERGY FOCAL POINT IN LESOTHO. Bantu L.K. Morolong PhD

Introduction

This paper overviews the relationships between gender and energy and the dynamics thereof. At different points in the discussions, a particular focus is made on issues as they pertain to Lesotho within the context of the SADC region. The fundamental premise behind the thinking in this paper is that gender and energy issues cannot be understood outside of the global environmental concerns. Key among these concerns was that expressed by Meadows et al (1972) as cited in Ophuls. Meadows forcefully brought to the attention of the world the fact that "... there might not always be enough material and energy to support the current levels of consumption". The energy crisis of the early 1970s also got most of the world thinking seriously about energy as an ecological issue. This paper aims to tease these concerns out but with a gender focus. However, it does this at a more practical level than a theoretical one.

ENERGY: The concept

To many non-professionals in the field of energy, the concept energy conjures up ideas around energy sources and types such as woodfuel, coal, liquid fuels such as gas, paraffin, petrol, diesel and electricity. Inclusion of transportation, human power, animal traction and solar energy takes our understanding of energy to a level a little beyond the concrete this is more abstract and sophisticated. This is perhaps why it often seems easier to make reference only to energy sources rather than the abstract concept "energy".

Energy is a development input whose consumption is often used as one of the development indicators. The need for energy in industry, agriculture, transport, health and education as part of socio-economic services infrastructure is not hard to recognise. On a national scale, energy supplies need large investments which usually chip quite deeply into national budgets. The same could be said about energy supplies and use at the household level. On a national scale energy can be classified into urban energy and rural energy. For urban energy, electricity, gas, kerosene at household use level are quite characteristic. Characterising energy use in the urban places is also use of better technological appliances. For rural energy, even though kerosene and gas are used, in most areas especially the more remote areas use of biomass is more predominant. This has implications for added drudgery on household chores. This is a gender issue which will be explored in detail later in the paper. It is to be noted too that in many developing countries rural electrification is a far fetched idea. And even in the urban centres only certain privileged parts have electricity.

ENERGY IN THE SADC: A brief overview

SADC countries like many other countries in the world are facing severely interrelated energy and environment issues (ESAMI course Manual, 1997). Such issues include fuel shortages due to population pressure on the land and limitations on traditional sources of energy. This is happening against a background in which 80% of the populations of these countries depend mainly on wood fuel for domestic use.

Other problems facing the energy sector in SADC have been identified as;

- High costs of petroleum imports
- Lack of capacities for formulation of adequate energy policies
- Limitations in achieving environmentally sustainable energy policies
- Poor performance of large energy investments
- Poverty in the majority of the SADC countries populations which makes it difficult for them to access energy sources and technologies resulting in worsening energy scarcity
- Health hazards of some of the energy sources
- Prolonged droughts which raise major problems for supplies e.g. hydropower
- Indiscriminate use of existing sources. (Kaale, 1997)

In view of all of these then, what are the gender and energy issues, is a pertinent question in this paper. In an attempt to answer this question this paper looks at the issues in very broad terms.

GENDER AND ENERGY ISSUES

The world over, in the last few decades, we have seen an increasing recognition of the need to include gender perspectives in many sectors. The energy sector is no exception. The ultimate aim of the move to incorporate gender issues into the energy debate was to achieve equity between men and women. Broadly speaking this is to be achieved in the context of issues of equal access to natural resources. Evidently, capacities of countries to develop gender sensitivity in energy depend very much on their full understanding of the dynamics between the two. Other related factors to these issues are the environment and development. It was against this background that the SADC Council of energy ministers has been committed on behalf of their countries to place high priority on rural energy planning, with a gender perspective. (Esami, 1997)

This commitment also featured a pledge to strengthen efforts for rural institutional capacity building in order to plan implement, monitor and evaluate woodfuel projects more effectively. With active involvement of some UN agencies such as UNIFEM, some guidelines were provided regarding which energy subsectors had to receive particular attention. Suggestions of steps to be followed were also made.

The importance of highlighting gender as an issue in energy programmes hinges on the fact that men and women play different roles in energy production and utilisation. To further illustrate this point we could examine the tables below:

Table 1:**Gender roles in Biomass fuels production**

	Main Activities	Women's contribution	Men's Contribution
X	Policy formulation	Low	High
X	Land Ownership	Low	High
X	Management of natural forests and woodlands	Low	Low
X	Species Selection	Low	High
X	Tree Planting	High	Medium
X	Protection of farm lands from fire and animals	High	Low
X	Research and Training	Low	High

Source: SADC Energy Sector 1993 Energy Statistics Yearbook. TAU, Luanda, Angola.

Table 2:

Gender Roles in Biomass Utilisation

	Main Activities	Women's Contribution	Men's Contributions
X	Woodfuel collection for household purposes	High	Low
X	Woodfuel collection for sale	Low	High
X	Charcoal production	Low	High
X	Sales of Charcoal	High	Low
X	Development of improved firewood stoves	Low	Medium
X	Development of improved charcoal stoves	Low	Medium
X	Provision of extension services	Low	High

Source: SADC Energy Sector 1993. Energy Statistics Year Book 1991. TAU, Luanda, Angola.

Studying these two tables, enables us to answer the basic and pertinent questions such as, is there a linkage between energy and gender? How would energy issues impact on either men or women's attempts to perform their gender roles or do men and women have the same options in trying to address energy concerns?

In sum it could be observed that these tables highlight issues in gender and energy around the following broad categories:

a) **Energy sources and their depletion**

Energy sources have quickly gotten depleted. Countries such as Lesotho are a classic example of this. At household level, there is documentation to suggest that the impact of this is more directly felt by women than men. This is because energy issues at this level are closely tied to women's roles in their subsistence and household activities such as taking care of the food needs of the family members. It is estimated that women in developing countries spend between 12 and 16 hours a day on these activities. In some parts of Tanzania, it is on record that women spend an average of 3 to 4 hours daily searching for a bucket of water and walk an average of 5 km to search for water. (Beyond Inequalities, 1997:51)

b) **Access to and control over energy sources**

Evidently, as energy resources get depleted, the role of accessing these resources is increasingly being shared between men and women. A positive development indeed. However, notably, looking at accessing energy sources for commercial and consumptive purposes there are the following facts:

- (i) When large loads of firewood are collected for commercial purposes there are more men involved than women. (*See Table 2, part on woodfuel collection for sale*)
- (ii) When such large scale activities are gone into, use of technologies to carry them out is imperative. Again more men become involved than women.
- (iii) When the predominant purpose for accessing fuel sources is consumptive, then it is more women involved than men. (*See Table 2, part in woodfuel collection for household purposes*) This adds drudgery to the already tedious productive responsibilities of women.

It is a fully acknowledged fact that both men and women in the rural and urban settings need to be helped to access energy. However, energy poverty has increasingly become a female phenomenon. This is due to the overall feminisation of poverty in which

unemployment rates are higher among women in most developing countries. Such high rates of unemployment mean limited access to energy sources and some of the technologies that go with the use of these sources. It is noteworthy that in our developing economies, use of such technologies is also a status symbol that most women do not enjoy.

The social dynamics of use of some energy sources are so complex. For example, there are discriminatory attitudes to use of some of them. Therefore the use of some technologies is debasing for the users while access to certain sources is a "class thing". In instances where there might be capacity to buy the fuels, at household level. Such capacity might be a result of sacrifice and foregoing to buy other household amenities.

c) **Participation in decision making about energy production and use**

From the foregoing, it is apparent that participation in decision making about energy production and use is not a gender neutral process. There is a whole gamut of socio-cultural dynamics around it. Who can or cannot make decisions about energy has a web of complex gender dimensions starting with access to one of the most fundamental production resources which is **land**.

In most African contexts between men and women, men have unlimited access to land while women's access to land is very greatly determined by their relationship to men as wives, daughters or sisters. This impacts therefore on women's access to decision making power about land and access to and control over most of what it carries such as some key energy sources. For example, timber harvesting in Tanzania (Beyond Inequalities in Tanzania, 1997:23) is said to be a commercial male dominated economic activity. (The same could be said about the use of woodlots forests in Lesotho). Women's access to and control over forests is very limited to wood collection and yet their participation in tree planting is high. Similar limitation access apply to large stock which produces some of the types of energy sources and it is also used as an energy source in transportation. We now focus on another pertinent issue of relationships which is, that between gender, energy and health.

Gender, Energy and Health

When energy becomes an economic good, health and nutrition in the family are the first to suffer. It is important at this point to unpack the concept of family and see who exactly in the family is likely to be more affected.

When within the overall context of their productive roles, women spend more time on collecting fuel wood as it gets increasingly scarce, then they have less time for other activities. These specifically include their income generating activities from which women usually cater for family food needs. It also means increased work loads leading to fatigue against a backdrop of very low calorie intakes because in the context of traditional practices, when food is served, this is done in specific order. It is the husband first, then the children and the woman who prepares the food last. When there is not enough food to go round, the woman will most likely go without. She often does if visitors were to arrive just after she has dished for everybody who by this time will be well into their meal and the only food left to offer to the visitors is hers. The health implications of this for women are serious.

The relationship between energy and gender could also be considered against some of the energy uses which are heating, cooking and the use of biomass sources for these purposes. When these sources become scarce, some basic needs take precedence over others. For instance heating water for use to bathe becomes secondary to using energy for cooking. This often leads to unhygienic practices whereby taking a full bath becomes a luxury for women while men can demand it as part of women's responsibilities to them. Unhygienic practices on the part of women may or often lead to infections against economic situations in which health services are not affordable.

Another very important health dimension to energy issues and gender is that the less energy there is the more the following alternative strategies are resorted to while attempting to address the family's food needs;

a) use of less fuel intensive foodstuffs, in the process compromising achievement of a balanced the diet. For example, cabbage and maize meal could be served instead of beans and maize meal which is more nutritious.

b) Less cooking time to save energy. Inadequately cooked food has health implications.

c) Fewer meals and use of left overs as cold food to reduce instances of actual cooking which also has health implications.

Decisions pertaining to all the above are hard gendered decisions for which some women have been criticised as having failed in the performance of their gender roles in the household. This failure might go as far as being physically assaulted for not satisfying the food needs of their husbands and sometimes the extended family, especially the parent-in-law.

One of the crucial dimensions of energy use with health consequences is that of exposure to indoor pollution as a result of use of hazardous energy sources such as coal, unrefined kerosene or cow dung. Extended use of these by women in the households has been recorded as one of the causal factors for women's lung diseases and infection of their respiratory tracts as well as eye problems. These problems are often accentuated in situations whereby use of these hazardous biomass energy sources is for routine income generating activities such as local beer brewing or pottery. Of course, such engagement as a plus for women's economic empowerment is full acknowledged. Men on the other hand also get exposed to hazardous use of energy such as in tinsmithing, welding and other metal works. However, on a comparative scale the economic payoffs in this case are better and perhaps well worth the health risks.

CHALLENGES

Kaale, in a paper presented at a workshop for the Energy, Transport and Communication Sector held in Zimbabwe in 1977, noted a high awareness about the need to include gender analysis approach in energy programmes in SADC. Further noted however are factors which hampered achievements in this regard. These included among others:

- Lack of technical skills in gender analysis
- Lack of data on gender needs and roles in gender use, and

- Low involvement of women in the formulation of energy policies and plans in most SADC countries (p3). This is the first set of challenges faced by all who attempt to understand the dynamics between gender and energy.

That there is a world wide energy supply problem is an unsettling issue which was foreseen by researchers many years ago. What is even more unsettling however, is that energy production itself can be an energy intensive undertaking. What is certain though is that the increasing demands for energy cannot be stopped from growing. Most sad is that energy sources are not infinite. They are getting depleted. In actual fact there are some which have completely been eroded. This ends an era of delusions about unlimited supplies. This state of affairs affects certain sectors of society more than others with a strong gender bias.

There are indications that some energy sources are becoming less popular and more redundant for health and environmental reasons. With advances in technology some sources are more efficient and safer to use than others. There is a view that solar energy perhaps is the most available. However it is also seen to be problematic in certain areas such as its diffuseness, being not available at night, being unequally distributed around the globe, variable with season and weather and being available in limited quantities as any one given period. Its costs for collection are also quite high posing problems of storage (P115). A gender sensitive approach to energy issues would require of us to ask relevant questions regarding energy use of any type. For example on the issue of some energy sources becoming redundant, taking a gendered demand responsive approach would be an ideal approach. This means dialoguing with those concerned in order to understand and appreciate the factors around the perceived redundancy.

By way of challenges too a focus could be made on energy policy/ies. Gender mainstreamed energy policies can be designed in close consultation with the end users who are men and women. The processes of gender mainstreaming can be achieved by first acknowledging the users' knowledge about specific energy sources. This knowledge is most of the time based on their experiences.

Some UN agencies, the World Bank through its Energy Sector Management Assistant Programme (ESMAP) and UNIFEM in particular, are recorded to have made successful inroads in gender mainstreaming for the energy sector. These successes can be a useful basis for others. The SADC too has made commendable efforts. However, a lot more could be done. A gender sensitive policy is gender desegregated in its use of concepts in order to better describe and focus on the real needs of target groups. Such a policy could also be a useful tool for efficient gender planning.

Technological solutions to gender insensitivity in energy have also been tried. These have included adoption of environmentally sound and less health hazardous technologies which are also efficient and accessible to their specific users. Regrettably, in some cases such technologies lack congruence with certain cultural dynamics of household management. For example, having to chop wood into neat pieces which can fit into a coal stove was seen as extra work by women in Zimbabwe. This was cited as one of the contributing factors to failure of a certain coal stove innovation in Zimbabwe (Energia, 200 p.6).

TRAINING

Closely related to the use of technological solutions to gender and energy problems is training. Such training could be part of the whole process for achieving efficiency, starting with gender balanced participation in fora that discuss energy issues. This would afford those concerned an opportunity to share ideas and network about energy specific innovations. Training could also include imparting of repair skills, energy regulation techniques in the use of certain technologies, their overall maintenance as well as learning about the necessary safety measures. It is likely that imparting of skills in a gender balanced way could also open up opportunities such as those for women to engage in commercially viable energy uses such as tinsmithing, joinery and other uses for income generation. It is true that there is energy use by women for small-scale industries such as in pottery and ceramics. However, the viability of these industries is not always assured. Still on training, opinion is strong that having more girls train in the

energy sector would enhance gender sensitivity in energy policies, energy conservation measures and in health, nutrition and hygiene. It is believed that girls could also positively contribute to better and more gender sensitive technology choices with energy use for economic empowerment as the main aim.

All in all, we are saying, that a gender sensitive policy is that which has gender equity concerns; that is, equity in terms of access to adequate, affordable and reliable energy sources. Special consideration would also be given to convenience of the users, economic efficiency and environmental friendliness of the technologies used and health issues.

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ANNEX 5

NETWORKING FOR GENDER AND ENERGY by Mrs. Emma Nthunya.

INTRODUCTION:

This presentation will show why networking, how to network, the objectives of networking, types of networking and the examples of relevant networks will be given. Identification of networking problems will be presented.

Definition of a network

A network refers to a system that links people together for the purpose of sharing information, exchanging ideas and therefore learning from each other.

TYPES OF NETWORKING:

Networking can be categorized into two ways, that is networking at the Human and Technical level.

At Human level, networking involves individuals, groups, NGOs and other institutions, which are put into contact with one another in a manner that enables them to learn from each other in order to strengthen the purpose of their course.

At Technical level, networking allows electronic communication, which enables one to access remote databases, servers, software and printers. This type of networking includes radio and telephone lines.

OBJECTIVES OF NETWORKING:

- to avoid repetitious work , this helps us to know who is doing what and where about
- to control resources, this assists us in knowing who has what, and who is responsible for what
- to have access to resources, we need to know who owns what
- to share resources, we can only be able to share if we know who is having what
- to share experiences and ideas, so that we can make right decisions and be able to solve problems

- to exchange information on participatory development,
- to exchange and transfer skills and expertise to others
- to keep each other informed of our activities, successes and failures,
- to provide better service, we would like to make work much easier

REASONS FOR NETWORKING:

- we want to identify, articulate and discuss issues
- we want to elaborate and advance new concepts and ideas a strategy to enlarge the community of people and organizations involved in participatory community development
- to share experiences, ideas and information
- to use networking as a strategy to effect change
- to break barriers and build new linkages between innovative community development practitioners
- to build solidarity and a common vision of development

HOW TO NETWORK:

- clearly identify and understand your need for networking
- identify potential sources of solution
- communicate your need clearly to the potential source of a solution
- evaluate all available solution, consider their sustainability, and technological aspects
- make decision and take action

MEANS OF NETWORKING:

Networking can be done:

- through printed and audio visual materials
- through seminars and workshops
- through meetings and conferences
- through electronic means:
 - Electronic networking (e-mail)

- Bulletin Boards Systems
- Tele-conferencing
- use of institutions:
 - Associations, Clubs, etc
 - National, Regional and International Networks.

Printed and audio visual materials:

This considers media such as newspapers, newsletters, videocassettes, audiotapes, posters, etc. Information can be disseminated through these and the message can be passed on to all concerned. For example a newsletter can facilitate information exchange among network members. Activities could be documented in video-cassettes, audiotapes, etc, to be exchanged by network members and thus fulfilling the objective that people should share experiences and be informed of others' activities.

Seminars and workshops:

Seminars and workshops assist in training and education, because participants are able to learn and exchange ideas with both the resource persons and other participants. They also facilitate participants' interaction at various levels. Interaction as a result of workshops and seminars is more effective than networking through printed matter as this interaction allows face to face communication. For an example, LEINET Seminars are held every Tuesday of the month at a venue accessible by the majority of people. The seminars disseminate environmental information from various topics delivered by people who volunteer to deliver topics in areas of interest, or as demanded by the audience. Sometimes LEINET request individuals to do so. These seminars/workshops are very important because they keep people abreast of new developments in different areas of interest.

Electronic Networking

This involves electronic mail, bulletin boards systems, tele-conferencing and on-line searches from remote databases. We are all aware of the e-mail capabilities and that it is a one-way broadcast of news to a larger number of users. With this facility mail is usually

posted to the user's mailbox. E-mail provides services such as the Electronic Bulletin Board, which facilitates the sharing of information, programmes, and the like. The Bulletin Board Service (BBS) functions very similar to a usual notice board. For example the INFOTERRA (International Environmental Information Exchange Network) uses this medium to broadcast environmental queries and their answers to members of the network around the world.

With tele-conferencing, groups of people may be interconnected by means of closed circuit television; all groups (spread over a wide area or in different countries) can see each other on television monitors and hear others' live comments.

On-line searches are conducted on Internet. Members of a network may have common software to create their databases say for example on gender and energy in their respective countries and access it on Internet. ENERGIA too, can be accessed on Internet at www.energia.com

Institutional Networking:

Associations and clubs form part of networks. They promote exchange of information and ideas in a given area of development. Members are always commitment to their activities; this type of networking is very effective in its activities because clubs, associations and networks play an important role in ensuring confidence and solidarity among their members.

PRINCIPLES OF NETWORKING:

- learn to keep in touch with others, inform them of your activities
- acknowledge and appreciate the experience, knowledge and skills of others as resources
- redefine yourself as a resource
- help others to discover their own potential as resources and participants in development process
- avoid competing institutional and personal interests as the driving force for your participation in networking, consider the principle of give and take

- take opportunity to engage new participants who bring in new perspectives and may appeal to additional segment of the society
- Never ignore a request for help even if the action is negative, give advice.

IMPORTANCE OF NETWORKING:

- access to a large pool of expertise and skills efficiency: the capacity to utilize inputs and resources to produce results
- effectiveness: the ability to effect change using the network outputs
- impact: the extend of the impact of the change on the networking objectives and on the community
- extensive and enthusiastic involvement by participants
- diversity of participants
- increased confidence and solidarity among the participants and the network machinery
- mobilization of unused resources
- encouragement of local problem solving
- inter-organizational cooperation
- benefits from networking
- better and broad understanding of issues, concepts and ideas

CONSTRAINTS IN NETWORKING:

At human level:

- some people take a very long time to feel committed to a network and therefore hinder progress
- sometimes people sit back so that others play the front role
- some people want to play a competing role among the active members, this also hinders the development of the network
- lack of interest

At technical level:

- absence of information technology equipment e.g. computers
- incompatibility of hardware and or software
- when the computer system is down
- untrained personnel in the technology

NETWORK PRIORITIES

- Clearly identify the mandate and priorities of the network
- Decide on the objectives and purpose of the network
- Share and use information to achieve the objective of the network
- Influence the formulation of relevant legislation
- Generate increased government and political support for the network
- Investigate potential funding to support the functions of the network
- The network should become a repository for gender and energy information

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ANNEX 6

PROGRAMME

4 September, 2001

8.00 – 8.30	REGISTRATION
8.30 – 9.00	INTRODUCTORY REMARKS BY MRS. EMMA NTHUNYA
9.00 – 9.30	GENDER AND ENVIRONMENT BY MRS. M. FUTHO
9.30 – 10.00	ENERGY SITUATION IN LESOTHO BY MRS. M. MOLAPO
10.00 – 10.30	TEA/COFFEE BREAK
10.30 – 11.00	ENERGY AND HEALTH BY MR. S. THAMAE
11.00 – 11.30	GENDER AND ENERGY IN LESOTHO BY DR. B.M. MOROLONG
11.30 – 12.00	NETWORKING BY MRS. EMMA NTHUNYA
12.00 – 13.00	GROUP DISCUSSIONS
13.00 – 14.00	LUNCH BREAK
14.00 – 14.30	GROUP DISCUSSIONS CON.
14.30 – 15.00	GROUP REPORTS
15.00- 15.30	TEA/COFFEE BREAK
15.30 – 16.00	ENERGIA FOCAL POINT IN LESOTHO
16.00 – 16.15	CLOSING REMARKS BY J. SEITLHEKO.

5 September 2001.

09:00 - 10:30	TERMS OF REFERENCE FOR THE NETWORK
10:30 - 10:45	Tea Break
10:45 - 11:30	TERMS OF REFERENCE FOR THE NATIONAL FOCAL POINT
11:30 - 12:00	OBJECTIVES, FUNCTIONS AND ACTIVITIES OF THE NETWORK
12:00 - 13:00	CONTENTS OF THE WORKSHOP REPORT
13:00 -	LUNCH AND CLOSURE

ANNEX 7

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