



## Contents

The African Agenda: – gender and energy access	1
<i>Editorial</i>	
News from the Secretariat 4	
International Programmes 7	
<i>TIE-ENERGIA</i>	
Meeting Friends of ENERGIA	10
<i>Hon. Daudi Migereko</i>	
Gender auditing energy policy in Africa	11
<i>Nozipho Wright</i>	
Energy policy gender audits in Kenya and Senegal	13
Towards a comprehensive household energy information system in Uganda	14
<i>Peter Opio</i>	
Access to modern energy services: the gender face of energy technologies	16
<i>Daniel Theuri</i>	
Partnerships foster women's access to energy services: Ndamo Lo Women's Group in Senegal	18
<i>Mirville A. Ehemba</i>	
Translating policy into action: alternative income- generation for rural women in Mali	20
<i>Johanna Togola</i>	
Resources	22
<i>ENERGIA's e-learning tool</i>	
Bulletin Board	23



Sitan Boubia and Alima Coulibaly preparing clay for their pottery business which provides them with an alternative income to selling wood. Sinsibere project, near Bamako, Mali. (Photo: Tuuli Kaskinen, Dodo, Finland)

## The African Agenda

### Gender and energy access

May Sengendo and  
Stephen Gitonga

#### The issues

Both women and men seek increased access to energy services that can address their differentiated tasks, responsibilities and needs. The social relationships that are established within this process of searching for available resources involve domination, exclusion and subordination which tend to be exercised by the powerful in allocation of resources, control over the resources, distribution of benefits and decision-making. It is within this context that this issue of ENERGIA News illustrates that there are direct relationships between gender and energy access and human development.

Human development should be about expanding choices and opportunities in a sustainable and equitable way. Expanding choice contributes immensely to the livelihood needs of people. In Africa, inequality in access to modern energy services exists between men and women, with men generally having better access than women. The opportunities for expanding human choices and livelihood opportunities are constrained by the level of access to modern energy services. Since human development is about expanding choices, the inequalities in access to modern energy services have exacerbated the inequalities suffered by women in terms of development. This contributes to the needs, the tasks as well as the interests of women being excluded from energy planning in ways



*Productive use of energy by the Ndamo Lo Women's Group in Senegal. A tray of bananas is put into the furnace for commercial fruit drying. (Photo: Mireille A. Ehemba, PERACOD, Senegal)*

that make them relatively worse off than men. The result is that these inequalities are reflected not only at the household level, where access to modern energy services would be enjoyed by those who do most of the tasks that require energy to facilitate social and economic related activities, but also at the macro-level, where achieving development goals such as the MDGs is hindered.

The gender dimension in energy access is more pronounced in Africa's rural areas, where the majority of people and especially of women live, than in the urban areas. Livelihood strategies are constrained by biomass being the main source of energy and the lack of access to modern energy services. This raises the issue of equity in energy access when those in society with the most energy choices, when it comes to livelihood activities, are well endowed with resources while the majority, and especially women, continue to live in poverty.

It is in emphasising again that access to modern energy services has a gender dimension that this issue of ENERGIA News highlights the aspects that should be addressed in order to enhance the benefits and impacts of development in Africa. The challenge of increasing the current level of energy access reveals the great disparity and inequality between energy access opportunities for men and women. At the national policy level, planners and other stakeholders face the challenge, through policy initiatives, of formulating and implementing policy content and strategies that can deliver sustainable, accessible and affordable energy services that benefit both women and men.

This newsletter showcases a number of case studies drawn from different African countries that highlight important issues concerning gender and energy access. The topics cover gender audits, institutional capacity building and local-level implementation of engendered project interventions. In many ways, the newsletter echoes the 1995 UNDP human development report that looked at the thematic issue of gender and human development, and raised important issues that remain relevant to gender and energy access in Africa. The same issues were reflected at the Forum of Energy Ministers in Africa (FEMA) and discussed at the 15th Commission on Sustainable Development (CSD) held in New York in 2007. The issues revolve around the following questions:

- How can the challenges to gender mainstreaming in energy policy and programmes be revealed, and what can be done at the policy

level to address the challenge of gender and energy access? Answers to this question are highlighted in the case study on energy audits in Botswana and in the article on institutional capacity development in terms of gender-disaggregated data in Uganda.

- What solutions exist to put the gender and energy access agenda at the heart of development planning in Africa? Some successful solutions, highlighting tested approaches in Kenya, Senegal and Mali, are discussed in this newsletter.
- What actions should Africa take to address the gender and energy access agenda in achieving sustainable development and meeting the MDGs?

## The challenge

Access to modern energy services is recognised as one of the most essential needs in sustaining people's livelihoods and propelling communities living at subsistence level to higher levels of prosperity. This newsletter demonstrates that, where there is access to energy services, gender mainstreaming in development operations can be fostered and greater equality between women and men in African communities nurtured.

It is emphasised that greater equality should include not only equality in opportunity to access modern energy services but, more importantly, also equality of outcome (benefits) from the opportunities generated by access to modern energy services. For example, in the case of Botswana, it was demonstrated that there are equal opportunities for men and women to compete for energy-related jobs and careers. However, in terms of equality in enjoying the outcomes of energy interventions, few opportunities are available to the women. Their participation in energy decision-making is hindered, as is their representation in energy data. The lack of budgetary allocations for gender-related activities also poses a challenge. A range of factors prevent women in Botswana availing themselves of the opportunities for a career in energy firms or departments including their limited education and training. Similarly, various factors have prevented women in Botswana receiving equal benefits from modern energy services, including the fact that relatively few women participate in those sectors supported by modern energy services. The Botswana audits have demonstrated a characteristic that is common in many sub-Saharan countries and separates equality in opportunities from equality in receiving benefits.

## Solutions

The articles discussing Senegal and Mali demonstrate some of the solutions that can be put in place at the local level. The projects in Senegal and Mali have enhanced equality in outcome by taking measures that address the prevailing barriers to women benefiting from modern energy services. Such measures include targeted interventions to provide women in Senegal with energy technologies that can add value to agricultural products thus enabling women to participate in development activities and become more productive. By providing women with training, and empowering them to take control of the value-adding activity chain, the project opened up new opportunities to remove barriers that prevented them benefiting from both the opportunity and from the outcome of access to modern energy services. The project demonstrates that mainstreaming gender in energy access and provision can build a strong foundation for attaining the MDGs at the local level.

## Institutional capacity

To get an understanding of the issues, it is important to understand that institutional rules and capacity in collecting and utilising gender-disaggregated data are key elements in revealing gender inequalities in participating in and benefiting from energy policies and programmes. Giving women similar opportunities to men in the policy planning

process is also an issue. The article on institutional capacity for data collection in Uganda demonstrates the importance. By carrying out gender audits and building capacity, it becomes possible to carry out specific steps that help ensure equality of outcome while enhancing equality of opportunity. The article from Kenya further emphasises the point that it is important to enhance equality in access to modern energy services while ensuring equality in the benefits accrued from the new opportunities. It can be observed from the case studies that when women have the opportunity to participate in activities that expand their choices, and thus their decision-making opportunities, their ability to influence processes and resource allocation on many issues including energy is enhanced. Addressing gender and energy access agenda in Africa would therefore have a profound impact globally taking into account that 70% of the estimated 1.3 billion people living in poverty are women, and that many of these are in female-headed households in rural areas.



Woman in Mali headloading wood and carrying her baby on her back. This use of metabolic or human energy, mainly by women, is generally not included in policy or project planning, making these policies and projects gender-blind. (Photo: Tuuli Kaskinen, Dodo, Finland)

A project that explicitly set out to build this institutional capacity in gender and energy in 18 countries in Africa is described under “International Programmes”. The TIE-ENERGIA project (Turning Information into Empowerment: strengthening gender and energy networking in Africa) showed that it is possible to change attitudes and practices at both policy and implementation levels. This was achieved by offering the most comprehensive training programme on gender and energy so far attempted in sub-Saharan Africa, as well as carrying out gender audits on energy policies in Botswana, Kenya and Senegal.

## Conclusion

Policy provisions that can deliver gendered outcomes through increased energy access are available, but turning words into actions at the institutional and programme levels remains a challenge. Energy leadership forums, such as the Global Forum on Sustainable Energy (GFSE-6) in Vienna Austria in 2006, have presented FEMA as a platform for political leadership and advocacy over sustainable energy in Africa. FEMA outlined a work plan that identified drought, increased

fuel prices, the poor state of transmission systems and the limited financial resources as challenges to energy security within Africa. During the same GFSE-6, it was proposed that work on access to energy should be scaled up in the pursuit of three overarching goals:

- *Electricity for growth:* by increasing coverage to enterprises and households;
- *Powering the MDGs:* by connecting public facilities – clinics, community centres and schools – using the least-cost mix of grid extensions and decentralised solutions;
- *Meeting basic needs:* by equipping households with affordable modern lighting, boosting the use of improved stoves, increasing access to cleaner fuels and making biomass fuel supply sustainable.

While these are good intentions, the picture will not be completed unless gender and energy access is put at the heart of development interventions. In specific situations, where the inequity of opportunity and development outcomes in energy access between men and women merits it, affirmative action at the political level may be required. ■



◆ Dr May Sengendo has over fifteen years of experience in a broad range of sectors including energy. May has been involved in policy planning, implementation and monitoring, and in institutional strengthening. Gender has been an important element in her work. May has extensive international experience and has been working on a number

of internationally-funded programmes including providing coordination and technical guidance to the gender audits within the TIE-ENERGIA project. She is based in Uganda where she works as a lecturer in the Department of Women and Gender Studies at the Makerere University. She is the regional-level chair of the East African Energy Technology Development Network (EAETDN).



◆ Stephen Gitonga is an energy and climate change specialist working for the GEF Small Grants Programme in New York to support the global climate change and energy activities of the Programme. Stephen has been involved in several energy and gender initiatives over the last 15 years.

◆ Address details of both guest editors can be found at the back page of this issue.



# News from the Secretariat

## New to the ENERGIA Family

We are happy to welcome a new member to the ENERGIA family, Sara Cristina the beautiful daughter of Ana Rojas who was born on 4th June 2007. Ana returned to the office from maternity leave in September 2007, and will continue to be the primary contact person for the ENERGIA Asia Network at the International Secretariat (IS). Ana will also be involved in some additional support activities such as strengthening links with the Energy and Gender Network in the Pacific and in Latin America, and facilitating the network's involvement in discussions related to climate change.

As the ENERGIA Network has grown, the need to increase its capacity to manage and coordinate its activities became a critical gap that needed to be addressed. In this regard, ENERGIA is pleased to welcome two new colleagues to the IS, Ms Karin Kauw and Ms Heleen Broekkamp.

Karin joined in May 2007 and has a Masters Degree in Anthropology, for which her thesis was based on field research on local-level democratisation in Madagascar. In 2006, Karin carried out further research in Mali and Burkina Faso under the ETC EASE programme focussing on a comparative analysis of the business set-ups and management structures of small informal and larger formal energy entrepreneurs. Karin will backstop the IS's coordination and knowledge management activities in 2007 and 2008. She can be contacted by email at k.kauw@etcnl.nl.



Karin Kauw, new member of the ENERGIA International Secretariat.

Heleen is the newest member of the International Secretariat, joining the team in September 2007. Heleen has a Masters

Degree in Development Economics with field research experience that includes gender and household finance in Vietnam. For the past 12 years, Heleen has been working with the Interchurch Organization for Development Cooperation (ICCO) as a programme officer for various Asia (mainly Vietnam and India) and Africa desks (South Africa and Madagascar). Heleen joins the IS as the lead contact person for Africa. She can be contacted by email at h.broekkamp@etcnl.nl.



Heleen Broekkamp, also new to the ENERGIA International Secretariat.

## Outcomes of CSD 15

As a formal coordinator for Women as a Major Group, ENERGIA provided leadership in integrating gender and energy considerations into the official UN discussions at CSD 15. The ENERGIA team's initial activity of organising national multi-stakeholder consultations in 19 countries (11 in Africa and 8 in Asia) and developing relationships with government officials responsible for the CSD process led to excellent success in raising awareness of specific gender and energy linkages and in laying the groundwork for future work on mainstreaming gender within receptive governments. The strategy was based on earlier experience at CSD sessions and the WSSD, and was grounded on a clear understanding of the opportunities and limitations of the CSD process. Although CSD 15 did not deliver a negotiated Decision Text due to political controversies about sustainable energy and climate change targets, ENERGIA's progress in pressing for greater attention to gender and energy issues and its support for intergovernmental negotiation processes was well reflected in the Chair's Summary of the CSD negotiations, as well as in his proposed Decision Text, which was based on those points that CSD

members had been able to agree upon by the end of the session. Most importantly, the opening section of the Chair's Summary noted that there was general agreement on the importance of gender mainstreaming: *"The importance of mainstreaming gender considerations, in particular the role of women in management and decision-making, at all levels, was seen as necessary for implementation of the interlinked issues of energy for sustainable development, industrial development, air pollution/atmosphere and climate change."* (Chair's Summary, paragraph 8).

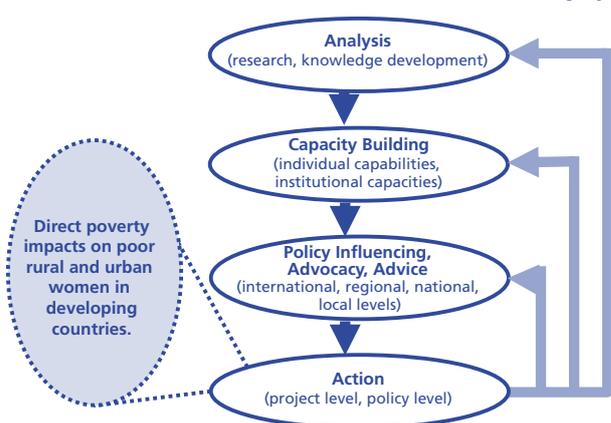
Much progress was made in terms of international acceptance of the importance of gender considerations in energy initiatives in developing countries, and the book of regional and national papers "Where Energy is Women's Business: National and Regional Reports from Africa, Asia, Latin America and the Pacific" provided country-specific recommendations as a basis for concrete actions. Since CSD decisions are not formally binding, the text itself is not as important as the concrete actions it inspires. One thing that has become clear over time is the importance of having a well-funded, long-term and strategically planned effort if one is to have an impact on international discussions and national actions. By securing adequate funding from Sida to organise national meetings and pay for international travel and the production of advocacy materials, ENERGIA was able to operate a successful and well-documented advocacy campaign and take a strong team to CSD meetings. The team was able to develop personal relationships with potential ENERGIA partners and collaborators, and acquired a reputation for substantive expertise and positive, professional inputs. These are extremely valuable assets for a network like ENERGIA. As the United States pointed out at the close of the CSD 15 session, a negotiated Decision Text is not the only measure of success. CSD 14 and 15 provided important opportunities for networking, sharing useful information and successful approaches, identifying trends and resources, establishing and reinforcing partnerships, and planning future steps.

## Completion of ENERGIA Phase 3

The third phase of the ENERGIA international programme that began on 1st January 2003 ended on 31st December 2006. Its key aim was to strengthen the capacity to

integrate gender and energy into the policies and programmes of government institutions, NGOs, knowledge institutions, multilateral and bilateral donors, and private companies engaged in sustainable development in the South and the North. This objective was operationalised through the implementation of a wide range of activities under three strategic areas: capacity building, analysis, and advocacy and advice. These activities were undertaken by various members of the network based on the specific requirements. Most activities were focussed on Africa and/or Asia at the national and regional levels. In addition to its own activities, ENERGIA participated in key international events on energy, and was associated with other leading international institutions and initiatives involved in gender, energy, poverty reduction and sustainable development.

The figure below shows how the combination of the three strategies enhance their relevance to the overall objective of the Phase 3 programme and form a feedback loop.



The main outcomes of Phase 3 were:

- Seven accessible training packages in English and French plus resource guides that contain tools for use in mainstreaming gender in the energy sector.
- Active and expanding information and knowledge sharing and learning on gender and energy to a broad constituency, mostly from developing countries through the dissemination of printed and electronic newsletters, plus online resources on the ENERGIA website.
- Clear and convincing message disseminated at 15 key international meetings, 12 regional consultations and 3 high-level expert advisory groups on the importance of mainstreaming gender in energy access policies, programmes and projects, and how to achieve this.
- 'Southernisation' of the network's ownership and involvement in its activities resulting from a substantially decentralised strategy using regional network coordinators in Africa and Asia and holding

four regional meetings to define the network's priorities.

- Strengthened networking by institutions and individuals involved in gender and energy access that has facilitated the exchange of knowledge/information and the development of new skills/actions in 9 Asian and 13 African countries.
- Increased awareness and knowledge of viable entry points for mainstreaming gender approaches in national energy policy amongst key government and civil society decision-makers in three countries in Africa facilitated by gender audits in Kenya, Senegal and Botswana.
- Several notable partnerships with leading international institutions including the UNDP Regional Centre for Asia and the Pacific, GVEP Partnership Board, Sida consultative group, M&EED International Group and ESMAP.
- Over 280 national professionals, spread across 13 countries in Africa and 9 countries in Asia, trained, thus creating a critical mass equipped to mainstream gender approaches in energy access projects and policies.
- Resource base of 40 professional trainers created to sustain the demand for gender and energy training in 16 African countries.

### Recommendations from the ENERGIA external evaluation

An external evaluation of ENERGIA Phase 3 was conducted in 2006 by two independent evaluators: Mr K.V. Ramani, technical advisor to UNDP, Regional Energy Programme for Poverty Reduction; and Ms Priyanthi Fernando, Centre for

Poverty Analysis (CEPA). This was carried out on behalf of ENERGIA's two core donors: the Netherlands Directorate General for International Cooperation (DGIS) and the Swedish International Development Cooperation Agency (Sida). The resulting recommendations included:

- ENERGIA should commit more resources to national activities and engage more with mainstream national energy institutions in order to increase its country-level impacts.
- A high priority should be given to developing national action plans as building blocks for the network's work programme.
- The network should seek new ways, such as projects that 'exemplify' change, to translate individual capabilities developed through its work into institutional capacities for action.
- ENERGIA should work to improve the management arrangements for Phase 4 at the regional and international levels.

## ENERGIA Advisory Group Meeting

The ENERGIA Advisory Group (AG) held its second 'face-to-face' meeting on the 29th and 30th March 2007 in Amersfoort, the Netherlands. The meeting served to clarify the role of the AG as primarily advisory. It also provided guidance on the network's new policy and operational guidelines and reflected on the lessons learnt from the third phase of the ENERGIA programme (2003-2006) as input for the planning of activities for, and anticipated results from, Phase 4 (2007 – 2011), in particular those included in the 2007 work plan.

## Start-up of ENERGIA Phase 4

ENERGIA successfully secured funding from DGIS and Sida for its fourth phase from 1st January 2007 to 30th June 2011.

The funding continues to be channelled through the ETC Foundation which will continue to act as the host organisation for the ENERGIA Network's International Secretariat. In Phase 4, the Network's actions, based on recommendations from the earlier evaluation and on the outcomes of consultations with the AG and NFPs, will be operationalised using the four broad objectives outlined below:

- *Capacity building*: the aims are to make impacts at the individual level, to strengthen the capabilities of project managers and policymakers working in developing countries where the ENERGIA network is present and to design and implement gender-sensitive rural energy access projects and national energy policies.
- *Gender in energy projects*: aiming to have impacts at project and community levels, to produce a body of first-hand experiences that demonstrate how gender-specific impacts can be generated through rural energy access projects/markets, and to use the outcomes of these projects to exemplify how, given sufficient commitment on the part of concerned stakeholders, such impacts could be replicated.
- *Policy influencing*: aiming to have impacts at the institutional and policy levels, to inform Ministries responsible for energy and to influence the content as well as the direction of the national energy policies, so as to make them gender-sensitive, in those developing countries where the ENERGIA network is present.
- *Networking*: cutting across the above three components, the aim is to strengthen energy and gender networking, advocacy and resources at the regional, national and international levels.

## ENERGIA activities in 2007

During 2007, ENERGIA activities have focused on finalising the TIE-ENERGIA activities (see elsewhere in this issue) before August 2007 and the starting up of activities in Asia under ENERGIA Phase 4. These latter activities include:

### *Establishing a Regional Secretariat in Asia*

At the Regional Focal Points Meeting held in November 2006, the National Focal Points (NFPs) in Asia expressed the need to re-shape and institutionalise their regional coordination structure and to further adjust it to their context and needs. It was agreed that coordination at the regional level would be central in ensuring appropriate information and experience sharing, and that ENERGIA Asia should have its own Regional Secretariat (RS) primarily responsible for logistical and administrative support in implementing the work plan, and a Regional Network Coordinator (RNC) primarily responsible for content support in implementing the work plan. In line with this approach, Ms Soma Dutta continues to be the RNC in Asia, and the Centre for Rural Technology in Nepal has been appointed as ENERGIA Asia's RS. The contact person within the RS is Dr Indira Shakya. The RNC and RS will work closely together to ensure the successful functioning of the Network. To allow for the positions to become well established, both appointments were made for a four-year period, with annual reviews to allow for critical reflection and improvements. Ms Dutta can be contacted at somadutta@vsnl.com and Dr Shakya at indira@crtnepal.org.

### *New National Focal Point for India – IRADe*

On the 22nd May 2007, a one-day ENERGIA India National Stakeholders Consultation was held in New Delhi and hosted by IRADe (Integrated Research and Action for Development). The main output of the consultation was the nomination of IRADe as the new national focal point for the India Gender and Energy Network. IRADe is a non-profit research and action institute established with the aim of promoting innovative approaches to development that increase the welfare of all citizens but especially the poor and disadvantaged. The consultation also provided an opportunity to identify and review gender and energy issues and programmes in India with key stakeholders from government and civil society working at grassroot as well as national levels.

### *Philippines and India selected for gender audits in Asia*

As part of the strategy to influence policy in ENERGIA Phase 4, gender audits of national energy policy, building on the TIE-ENERGIA approach, are being conducted in the Philippines and in India. The gender

audits are led by national teams of experts working closely with the local ministry responsible for energy and are coordinated by the NFPs (IRADe in India and Approtech Asia in the Philippines). Dr Govind Kelkar of the IFAD-UNIFEM Gender Mainstreaming Programme in South Asia has been identified as the lead technical advisor for the gender audits and will provide overall guidance and technical backstopping to the national teams. The methodology will involve a review of available literature, current government policies, programmes and annual reports; focus group meetings and interviews with key informants within relevant ministries, civil society etc. to assess the gender actions in their organisations; analysis of the data and information collected; peer reviews of the reports produced by the national advisory groups and international experts; and finally the validation of an action plan to address identified gender gaps and agreement on a monitoring framework with key stakeholders within the national policymaking and influencing apparatus.

### *Gender and Energy Training of Trainers*

ENERGIA and UNDP organised a Gender and Energy training course from 22nd to 26th October 2007 in Chiang Mai, Thailand, hosted by CRT/N. The training course is the first step in ENERGIA's Capacity Building strategy for Asia and had two target audiences: (i) energy and development practitioners, mainly from UNDP, such as project managers who recognise the need to address gender issues in their work and want to know how to do this in practical terms; and (ii) gender and/or energy trainers with at least three years of experience in delivering training courses in Asia and who are willing, with support from ENERGIA, to design and deliver gender and energy courses in their respective countries. In total, over 30 participants took part.

The training course was conducted jointly by Dr Joy Clancy, Associate Professor in Development Studies at the University of Twente and a founder member of Energia, and Ms Christina Aristanti, Manager of the Asia Regional Cookstove Program (ARECOP). One month before the training took place, participants were required to follow a short e-learning module introducing the concepts of gender and energy that was facilitated by the ENERGIA International Secretariat. During the training course, the participants were required to develop a follow-up work plan for which token financial support will be provided along with coaching support during the implementation of the plan. The trainers' follow-up activity is expected to include the adaptation of the curriculum to their national contexts and then the running of training programmes in their own countries, with ENERGIA support.

Coaching will be largely organised through internet-based technologies, such as e-mail, text chats, and Skype.

### *Seed funding*

As part of the Networking strategy for Phase 4, ENERGIA continues to provide seed funding to national networks in Asia to leverage other resources and actions that can facilitate the exchange of knowledge/information and the development of new skills/actions among institutions and individuals involved in gender and energy access in nine Asian countries. The process is being managed by CRT/N and proposals received from the Asia NFPs are being assessed and will be implemented in the period up to June 2008.

### *EASE4Women in Vietnam*

As part of the Project Implementation strategy for Phase 4, ENERGIA is collaborating with the ETC EASE programme and with the EASE partner in Vietnam, the Research Center for Energy and Environment (RCEE), to provide technical assistance to support efforts to mainstream gender approaches in the EASE portfolio of projects on improved cookstoves and the dissemination of biogas systems. Ms Hanh, who has a Masters degree in gender and development from the Asia Institute of Technology, has joined the EASE core team in Vietnam as a gender and poverty specialist. She attended the Asia gender and energy training workshop held in October 2007, and will receive technical support from Ms Soma Dutta the Asia RNC. In general, EASE projects are based on the rationale that the main challenge in energy access for the rural poor is addressing the geographical, cultural and political distances between the target groups in remote rural settlements and the providers of modern energy access solutions that are generally based in cities beyond the reach of the target groups. EASE thus focuses on ensuring that hardware delivery and supply, payment and financing, technical support, awareness and sales promotion functions are all available at the end-user level (i.e. in or near the village). EASE supports the development of delivery channels by working with local industrial networks, businesses, shops, cooperatives, community-based organisations, micro-financiers and rural technicians. These should be well embedded in the rural societies, should have the capacity to provide products and services of the right quality and at the right price; and should be able to follow changing and growing customer needs. In this way, EASE projects are designed to develop into self-sustaining and self-propelling energy access initiatives.

# International Programmes

## TIE-ENERGIA

Sheila Oparaocha

ENERGIA's programme 'Turning Information into Empowerment: Strengthening Gender and Energy Networking in Africa', TIE-ENERGIA in short, was launched in January 2005 and was implemented in 18 sub-Saharan African countries with support from the "Intelligent Energy - Europe" Programme of the European Community. It was jointly implemented by ENERGIA, Eco UK, Centre for Knowledge on Sustainable Governance and Natural Resources Management (KuSiNi), East Africa Energy Technology Development Network (EAETDN) and Practical Action - East Africa. Also involved were all 12 of ENERGIA's African National Focal Points<sup>1</sup>. The project recently ended in June 2007.

### Rationale for TIE-ENERGIA

Gender and development concerns have been recognised at the international level as universal prerequisites for achieving sustainable development. The UN Conference on Environment and Development in 1992, the 1995 Beijing Platform for Action (BPFA), the Millennium Development Goals (MDGs) of 2000, the SADC Declaration on Gender and Development of 1998, the 9th, 14th and 15th sessions of the Commission on Sustainable Development (CSD) and many other international and regional instruments clearly identify gender mainstreaming as an important development and planning variable and concept. Gender is seen as a crosscutting issue and one that requires recognition in the context of achieving balanced development.

ENERGIA's focus on gender issues is important within the context of energy poverty since the majority of the world's poorest people are women living in developing countries. These women are disproportionately affected by the lack of modern fuels and power sources for household maintenance and productive enterprises (UN 2006). The gender dimension of energy and poverty exists because of the social divisions in poor communities that allocate the primary responsibility for household energy provision and use to women and limits their decision-making within the household and community. This limits their ability to influence processes and resource allocation on many issues including energy. Unfortunately, most energy projects and policies in developing countries are gender blind (Mensah-Kutin R. 2006). As a result, projects and policies generally fail to recognise that there is a gender bias in energy services and, as a consequence, women's energy needs tend to be marginalised in planning and implementation.

ENERGIA believes that this lack of attention to gender issues may in part be due to a lack of knowledge about the significance of the gender dimension in the energy sector and in part due to uncertainties about how to incorporate gender into a sector that has primarily been technology-driven. Since training and gender audits can be used to develop individual and institutional knowledge of procedures and ways of working through which gender issues can be incorporated into regular design and implementation practices, ENERGIA proposed adopting this approach as a way of creating energy projects and policies that are more gender-responsive in terms of content and process.

TIE-ENERGIA thus set itself the ambitious goal of integrating gender into energy access in Africa through human and institutional capacity strengthening. As such, the project is the most comprehensive training programme on gender and energy so far attempted in sub-Saharan Africa. To achieve its goals, the project developed a generic training programme on gender and energy. Training materials were developed and adapted, training of trainers was provided for trainers from 18 African countries, and energy experts at both the policy and implementation levels were trained. In addition, the programme undertook gender audits of energy policies in three African countries using a comprehensive pioneering approach that assessed the policy formulation and implementation processes and priorities. These activities were aimed at creating greater awareness, knowledge and skills for integrating gender into energy policies, programmes and practices. At the same time, the programme attempted to identify gender gaps in energy-poverty policies, increase awareness and support advocacy initiatives aimed at influencing energy policies and programmes.

This article highlights the achievements of TIE-ENERGIA, and its plans for taking the programme forward.

### Training programme

The initial focus of TIE-ENERGIA was on developing and updating training material, divided into five generic training packages on gender and energy. Two of these packages were already available to the ENERGIA network but needed updating to include experiences from the field with testing to demonstrate their usefulness in practice. All the packages contain new gender tools specifically designed for use in the energy sector by planners, policymakers and project implementers. These tools can be used during various stages of project and policy cycles to ensure that gender differences are not inadvertently overlooked and that project and policy choices are made with full recognition of what their differential effects are likely to be on women and on men. In addition, gender-aware tools and techniques for policy advocacy and for developing project proposals have been prepared to support the processes of policymaking and project implementation in the energy sector.



Participants to the National Gender and Energy Training Workshop held in Ghana, July 2006. (Photo: Sabina Mensah, GRATIS, Ghana)

The training packages have been designed to be both multifunctional and modular, that is they have been developed as individual learning units that can be used separately or combined. They are accompanied by trainers' guides, include case studies which describe the realities and provide examples of implementing the main elements and steps for mainstreaming gender in energy processes. Thus, they can be used to prepare short programmes for high-ranking government officials in order to introduce the benefits of gender mainstreaming in energy and its role in sustainable development, to prepare longer courses for energy practitioners who require a detailed understanding of the gender and energy tools and methodologies, or for training trainers on how to adapt the training packages to specific country contexts and needs. All five packages are available in English and French and are available through the TIE-ENERGIA website at [www.energia-africa.org](http://www.energia-africa.org).

Once developed and tested, the training packages were first used in three sub-regional training of trainers (ToT) workshops in West, East and Southern Africa, attended by a total of 40 professional trainers from 18 African countries. These 40 trainers amount to a resource base that can be used to respond to the demand for gender and energy training on the continent. Trainers from the 12 countries in the ENERGIA Africa Network, in close collaboration with the ENERGIA National Focal Point, then took the lead in facilitating national training workshops.

*“The understanding of energy and gender issues will assist society, especially governments and other development partners, put in place strategies that will take account of the gender perspective of the production and use of energy”,* excerpt from the speech by the Deputy Minister of the Ministry of Energy and Water Development, Hon. Guston Sichilima, M.P., at the official opening of the ZGEN training workshop, Lusaka, Zambia, 27 December 2006.

A priority activity, before the national training workshops were started, was to adapt the training packages to national requirements and priorities, rather than simply adopting the generic versions. Training content, methodology and programmes were matched to the assessed needs of the target group. To make the training workshops more relevant, useful for implementation activities and interesting to participants, local sources of information, contacts and case studies were also included.

*“Coverage of the identification and differences between various gender needs, which derive from the gender roles in society, was particularly pertinent given the limited understanding and almost equal measure of scepticism over the relevance of gender in development in some circles. By proffering these goals as veritable proof of the relevance of gender in development, it was noted that gender activists and planners in various sectors can present a more robust case for gender mainstreaming... Participants were able to derive how the different roles of men and women require different forms of energy. In this respect, it was noted that energy planners have been culpable in limiting gender transformations by planning with the inherent assumption that women's energy needs are limited to cooking fuels. To demonstrate the link between energy and gender, the workshop heard and critiqued case studies presented by participants on how gender roles have influenced the performance of the programmes they have been involved in. Overall, it was observed that projects that did not recognise the importance of gender in planning and implementation ultimately had less impact.”*

Feedback on the National Training Workshop in Kenya from Lydia Muchiri, Practical Action - East Africa, ENERGIA National Focal Point in Kenya.

Over 230 practitioners (114 women and 118 men) were trained within the project. These practitioners were selected from various

types of organisation and from different sectors to encourage smoother cooperation between these stakeholders in implementing post-training actions. Key outputs of the national training workshops have been group and individual action plans that were developed by the participants to translate the concepts and skills learnt during the training into practice. In most countries, these action plans have led to considerable efforts to integrate gender into the work environment and to change organisational policy and practice which, in turn, could translate into practical actions to provide energy services to poor women.

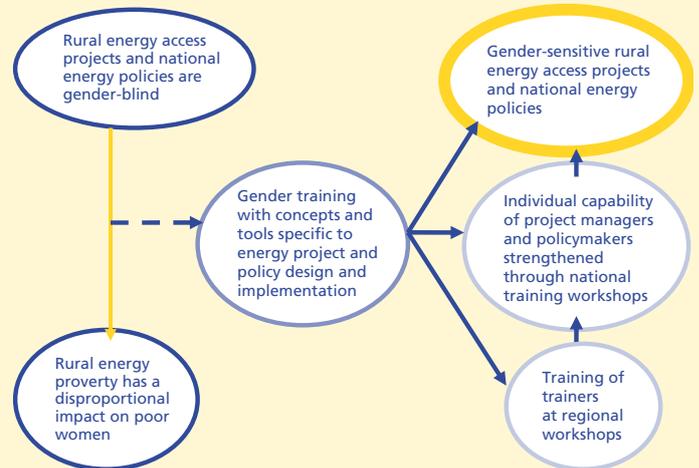


Figure 1: TIE-ENERGIA Gender Mainstreaming Strategy: Framework for Gender and Energy Training

## Gender audits

TIE-ENERGIA was the first to develop and undertake gender audits of energy policies in three African countries: Botswana, Kenya and Senegal. The audits were used as a tool to identify and analyse the factors that hinder efforts to mainstream gender in energy policy. Figure 2 below shows the framework under which TIE-ENERGIA carried out this activity. The audits considered energy statistics, communication channels, energy policy, development strategies, and the objectives and priorities of key institutions.

The approach used in the gender audits was primarily participatory, led by a national team of experts. The gender audits all provided in-depth analysis of energy planning, budgets, the institutional capacity of ministries to implement gender-mainstreaming strategies, the links between gender, energy and the national objectives for poverty reduction strategies and meeting the MDGs. They identified the specific ways in which gender issues were, or were not, addressed and critical gender gaps in existing national energy policy formulation and implementation. Validation workshops in the three countries helped to reach consensus and ownership of the audit findings within the energy ministries, discussed future recommendations and agreed on actions with specific targets and timeframes that were needed to engender the policies. The final reports produced from the gender audits are considered semi-official documents. The gender audit in Botswana is discussed in more detail in Nozipho Wright's article "The Role of Energy Policy Gender Audits in Addressing the Gender and Energy Access Agenda in Africa: Case of Botswana" in this issue of ENERGIA News.

## Dissemination

In order to encourage the uptake of the outputs of the TIE-ENERGIA programme, dissemination was an integral part of the project's activities. This included the establishment and regular updating

of the TIE-ENERGIA project website (<http://www.energia-africa.org>), presentations at the 14th and 15th sessions of the Commission on Sustainable Development (CSD 14 and 15), in-country multi-stakeholder workshops and press releases. The dissemination activities have strengthened the Network's identity both globally and in Africa, and helped ensure that the project deliverables are valued and used in energy planning and policy activities in the participating countries.

## Notable impacts of the project

- Enhanced resources and capabilities for the integration of gender into the design and delivery of energy projects and policies and for advocacy among a large pool of gender and energy professionals in Africa.
- Distinct changes in perceptions and commitments among decision-makers on the importance of integrating gender concerns into energy policy and practice in Kenya, Senegal and Botswana.
- Instances of change in institutional policies and actions. This has been achieved through the translation of what was learnt during the national training sessions into practice by participants.
- A better understanding of the gender-energy nexus and viable entry points for mainstreaming gender in energy access activities by various stakeholders.
- Strengthening of the Network's leadership in gender and energy access in sub-Saharan Africa.

### A few of the many examples of changes in institutional policies and action:

- Members of the Botswana Gender and Energy Network who participated in the national training are supporting the Botswana Power Corporation and UNDP in integrating gender into the Renewable Energy Rural Electrification Programme.
- Trained staff from the Kenyan Ministry of Energy, together with Practical Action - East Africa, have been involved in mainstreaming gender in the process of updating Kenya's National Rural Electrification Masters Degree.
- Creation of a gender desk at the Ghana Ministry of Local Government, Rural Development and Environment which will be responsible for gender and environment issues.

The TIE-ENERGIA programme can be seen as pioneering in laying the groundwork for mainstreaming energy and gender through a comprehensive, in terms of scope and practitioners targeted, capacity-building initiative across Africa.

## Key lessons

Four key lessons that have been drawn from the TIE-ENERGIA project are:

- **Ensure sustainability:** the majority of the energy policies, programmes and projects in the countries involved are gender-blind and so there is need for longer-term capacity development and support. In order to maintain momentum and translate the development of individual capabilities into institutional capacity for change there needs to be mentoring, tailored technical support, explicit step-by-step guides and contextual advice.
- **Involve Government:** specifically involving government officials in the implementation of the project's activities was paramount in achieving both the initial results and long-term sustainability. Their endorsement of the audits and training will help secure the participation and involvement of the key political actors in the future.
- **Communication is important:** communication problems were a critical administrative constraint with long delays in legal and financial transactions. More time needs to be built into such projects to allow effective liaison and understanding between stakeholders when dealing with 12 different countries across three regions.

- **Draw on gender audits elsewhere:** gender audits had been undertaken in non-energy sectors and these were crucial in raising awareness and providing a critical understanding of why gender matters in energy policy.

## Plans for the future

Based on the lessons learnt and the momentum established from the TIE-ENERGIA project, ENERGIA is receiving core funding from DGIS and Sida as continued support for its capacity building, policy influencing and project implementation actions at national level from 2007 to 2011. These will include:

- The implementation of training workshops in 13 countries to broaden the number of practitioners trained in the use of gender tools for energy project and policy design and delivery. An additional aspect to the training programme will be e-learning modules for pre-training that will introduce the concepts of gender and energy and the general content of the training workshops. Furthermore, coaching support will be provided for participants to implement post-training action plans aimed at putting into practice their newly acquired knowledge and skills.
- Continuing activities aimed at influencing policy. These will include both follow-up activities to the gender audits in Kenya, Senegal and Botswana, as well as implementing gender audits of national energy policies in other member countries of the ENERGIA network.
- A new action within the ENERGIA network will provide technical assistance for mainstreaming gender approaches in a sample of energy projects and businesses in countries that are part of the ENERGIA network. Concrete linkages will be sought with the national training workshops as these provide an opportunity for rural energy project managers and rural energy access providers to upgrade their knowledge and skills on integrating gender approaches into their own energy projects and businesses.
- Integral to the Network's future actions will be the dissemination of results from the Network's actions to assist in advocating for change and for use as best practices in mainstreaming gender approaches in energy access projects and in policy planning and implementation to a wide audience.

The TIE-ENERGIA experiences will also be used to guide the implementation of similar activities within the ENERGIA Asia Gender and Energy Network as part of a South-South knowledge exchange programme. ■

- ◆ For more information on the TIE-ENERGIA project, please contact the ENERGIA Secretariat at [energia@etn.nl](mailto:energia@etn.nl) or visit the website at <http://www.energia-africa.org>.

## References:

- Mensah-Kutin R. 2006. Gender and Energy in Africa: Regional Initiatives and Challenges in Promoting Gender and Energy. Reported developed for the ENERGIA International Network on Gender and Sustainable Energy for the UN Commission on Sustainable Development (CSD 14 and 15).
- UN Millennium Project, 2006, Energy Services for the Millennium Development Goals

1 See [www.energia.org/focal\\_points.html](http://www.energia.org/focal_points.html) for more information about ENERGIA's Focal Points in Africa and Asia.

**This edition of ENERGIA News is focusing on energy access in Africa, and more specifically on equitable access to energy. What is being done in Uganda to increase energy access for the poorer sections of the population, for both men and women?**

The Government is implementing the Energy for Rural Transformation (ERT) programme which is based on the Rural Electrification Strategy and Plan 2001. The ERT is being implemented by the Government of Uganda with the support of the World Bank. It aims at increasing electricity access in rural areas from 1% to 10% by 2012 and to generate at least 70 MW from renewable energy sources. Already, electricity access has increased to 4%.

**When did you get involved in the energy sector?**

I was first appointed by His Excellency the President of Uganda as Minister of State in the Ministry of Energy and Mineral Development in 2002. I have also worked in the Ministry of Trade, Industry and Tourism where energy plays a major role in providing the services required for effective delivery of products that boost economic development. As Minister of Energy in this period, I am pleased that energy has become a sector that other sectors consider as key to facilitating work, service provision and added value in the production of various products for export. Leadership skills are one of the ways through which a contribution to the energy sector can be made.

**What has the Ministry done to address women's energy needs in projects in Uganda?**

Strategies to address women's needs are first of all dealt with by focusing on integrating the policy provisions into the national gender policy and on how these can be incorporated in energy policies and projects. The national energy policy considers gender and women's access to energy as key priorities. The renewable energy policy also considers women to be participants in energy service provision as well as users, and addressing their needs has been a key guide in effective planning of energy programmes and projects.

At the activity level, the majority of women in rural areas use biomass for cooking. The Ministry is promoting the use of improved biomass technologies in rural areas. Women benefit greatly from this programme as the improved stoves reduce indoor pollution which is responsible for smoke-related diseases.

## Meeting Friends of ENERGIA



**Hon. Daudi Migereko**

**Minister of Energy and Mineral  
Development in Uganda**

*Interview by May Sengendo*

**Your Ministry recently organised the Energy Efficiency Week, in which you called on people to "Reduce Your Electricity Bill and Woodfuel Consumption, Use Energy Savers and Efficient Technologies". Which specific strategies would you recommend in such promotions to target women as consumers and producers of energy?**

When women are involved in the planning and promotional activities for TV and radio, it will encourage other women to be part of the programme and contribute to the effort to save energy. Actions related to information and communication, such as the energy promotion activities that were undertaken during the energy efficient week, provide examples that can show real life experiences that reflect on the different roles and needs of women as well as men in the energy sector.

**One of the articles in this newsletter describes a gender audit of Botswana's energy policy and its outcomes. Similar audits were carried out in Kenya and Senegal. Do you see possibilities for similar activities in Uganda in the future?**

It is interesting to hear about these initiatives. The energy policy is not static, and it can be reviewed to embrace any area that needs redressing. Gender can be one of these areas.

**In your view, what could be done to enable gender to become a priority concern in energy policy planning in Africa and at country level?**

Increasing the budget allocation to the

energy sector in ways that provide monetary provisions for gender-related actions is a key area to focus on. There is also the need to develop the gender-focused capacity and human resources required to work on gender-responsive energy policy and project planning and implementation. Consulting women when planning energy policy would help incorporate gender issues since they are energy consumers.

**One of the articles in this newsletter claims that the lack of statistical data on household energy use, and more particularly gender-disaggregated data, is an important obstacle in formulating policies concerning the household energy sector. What are your views on this?**

It is indeed an obstacle, but it is not the only problem we face when formulating national policies. Another problem is the failure to carry out sufficient consultations with all the people the policies are made for.

**You have supported gender and poverty reduction strategies at country level and in international forums. We are thankful for that. Could you give some words of advice to other political leaders and managers in the energy sector development in Africa about what they can do in order to be as supportive?**

Energy needs to be made a priority sector by African governments so that adequate resources are allocated to change the current situation which, in my view, is not sustainable. We need to recognise that unless we improve energy delivery and adopt modern forms of energy in developing countries, we shall not be able to achieve the Millennium Development Goals (MDGs) and the majority of people who will be adversely affected will be women and children. Let us advocate for gender involvement as we tackle energy issues so as to improve the welfare of all our people and especially the women.

**Thank you very much for the support and encouragement you have given to work related to gender and poverty reduction in Uganda and in Africa at large.**

# Gender auditing energy policy in Africa: the case of Botswana

Nozipho Wright

While this article concentrates on the findings related to Botswana, short summaries are provided at the end on the similar findings for Kenya and Senegal.

While females are more amenable to adopting energy efficient technologies, and especially those that ease labour-intensive household chores, in Botswana women have so far not contributed as a stakeholder group to decision- and policy-making in the energy sector. This conclusion was drawn from a gender audit of the Botswana Draft Energy Policy conducted in 2006, which looked at possible strategies to implement and incorporate gender considerations in policy and decision-making processes in the energy sector. The audit was conducted as part of the TIE-ENERGIA project<sup>1</sup> which aimed to increase awareness of gender aspects within energy in 12 African countries through capacity building and gender audits. Members of the audit team were from the relevant ministry's Energy Affairs Division, the University of Botswana, UNDP and BOTEC (Botswana Technology Centre) and were trained in gender analysis before starting work.

The diverse gender roles and the inequalities in energy access by men and women have consequences for energy use, needs and priorities. Although decision-makers may view energy-related choices as neutral, men and women are affected differently by energy policies at home and in the workplace as their roles differ. The audit set out to identify gaps in the policy preparation, formulation and planning stages that will hamper the achievement of the gender-related goals and objectives as laid down in the draft energy policy.

The issues audited were:

- Availability of gender-related energy statistics.
- Organisational management and awareness, and gender mainstreaming in energy-related programmes.
- Gender perspectives in the Botswana Draft Energy Policy.
- Resource mobilisation for gender- and energy-related policies and programmes.
- The role of gender and energy in achieving the Millennium Development Goals (MDGs).

The exercise has shown that gender auditing the energy policy can lead to an expansion of the scope in addressing the national energy access agenda. In the absence of relevant gender and energy case studies in the country, the audits are seen as a starting point in creating awareness in policymakers. The outcome of the audit is a comprehensive set of recommendations which, if followed, would contribute to gender mainstreaming in the Botswana energy sector.

## Analysis of energy sector statistics and gender mainstreaming

The main outcomes of the statistical analysis are that female-headed households are generally poorer than those headed by men, and are less likely to have access to electricity or to take out loans for the installation of a PV system. In male-headed households, it was found that women have little decision-making power when it comes to grid-connectivity, despite being the main users of energy within the household. Women are more involved in decisions made on fuelwood collection, an activity which has become far more time consuming in recent years, with



One of the Rural Industries Innovation Centre energy programmes visited during the audits. (Photo: Nozipho Wright, BOTEC, Botswana)

the average rising from 2.3 hours in 1995 to 3.3 hours in 2000. Few females are employed in energy-related organisations: only 5% of the workforce in the four major energy organisations in the country are women.

Although disparities still exist, Botswana has been making progress over the last ten years towards achieving gender-balance in decision-making positions in both public and private sectors. More women can be found in parliament and the cabinet today, and while only 12% of the permanent secretaries in the public sector were women in 1995, this had increased to more than 30% in 2003. Many women, however, can be found in middle management positions.

Ninety percent of the energy organisations interviewed did not have any gender structures, or gender mainstreaming policies, plans and programmes in place. The Energy Affairs Division (EAD), and to some extent the Department of Vocational Education and Training, had taken positive steps to meaningfully mainstream gender in their policies as well as establish structures and indicators to ensure the incorporation of gender concerns. This could be used as an example to promote gender mainstreaming in energy organisations.

Further findings indicate that most organisations do not have any gender analysis and mainstreaming skills. Over 90% of the staff interviewed across all the organisations had never undergone any training on gender awareness or gender mainstreaming. Officials interviewed had a general understanding of gender as a concept but lacked the ability to incorporate gender when planning policies and programmes. Most of the respondents were willing to improve their knowledge and skills through gender training so as to be able to effectively mainstream gender in their policies and programmes.

## The Botswana Draft Energy Policy

The Ministry of Minerals, Energy and Water Resources (MMWR), through the EAD, has developed a draft energy policy to address the challenges faced and provide direction for future developments in the energy sector. This draft energy policy has a specific objective on gender: to facilitate gender equity. Through this objective, the policymakers are seeking to address women's and girls' needs in the policy. Although the draft energy policy does not have strategies on how different policy objectives would be achieved, it acknowledges that women have to travel far in search of fuelwood for cooking, a burden that could be reduced through increased access to energy services and to an extent also to alternative energy sources.

The policy formulation process was preceded by mini-workshops involving stakeholders from the demand and supply sectors. Seventy-two percent of the 61 stakeholders participating in all the mini-workshops were male. Four-fifths of these stakeholders were engineers and 20% were planners, with little involvement of gender experts. It was noted that the process used to formulate the current policy lacked direct consultation with households, in particular with women who are the major users and managers of domestic energy fuels. Gender aspects were added to the draft policy at the request of the Cabinet indicating that the Government is conscious about, and committed to, addressing gender issues in its policies and programmes.

The audit highlighted the importance of bringing the different energy needs of men and women to the attention of policymakers and planners, especially when planning and implementing household energy programmes. These programmes could then reach out to everyone including the poor in the urban and rural areas, many of whom are women, and thereby increase their access to modern and improved energy services.

### Budgetary allocations for gender and energy

The purpose of allocating budgets to gender- and energy-related policies and programmes is to cultivate, promote and support such policies and programmes at three levels:

- policy formulation level, where resources are needed for creating awareness within government and for formulating relevant national policies;
- strategic level, for building institutional capacity and capability;
- operational level, to implement and sustain policies and programmes.

The purpose of the audit was to determine the extent of the linkage between expenditure and budgets on the one hand and energy and gender on the other. The results show that the budgets for energy projects supervised by EAD between 2000-01 and 2004-05 were P34 million for coal and petroleum development, and P391 million<sup>2</sup> or renewable energy and power development. These budgets were allocated to promote the development of energy sources for socioeconomic development and social equity - and did not specifically address gender-related needs.

It was necessary to extend the audit exercise to other sectors not directly under EAD for two reasons: first to determine the current penetration of gender policies and programmes in government budgets and expenditures, and second to identify leverage points for policy intervention. The expenditure and budgets of the other key ministries reviewed, notably the Ministries of Education, Agriculture, Labour and Home Affairs, and Finance and Development Planning, indicate no or very limited linkage between energy and gender.

The audit shows that financial resource data are not disaggregated in terms of gender at the higher levels of decision- and policy-making, and that there is a lack of financial resources to support gender programmes and policies. The audit also revealed a lack of association at the institutional level between energy services, sustainable development and efforts to achieve the MDGs in the various sectors and public organisations.

### Suggested strategies for bridging the gender and energy gap in Botswana

Based on the gender audits of the energy policy, the following ten strategies are recommended:

- EAD needs to ensure that future surveys present clear situations with regard to disparities between male and female performance in the energy sector and in access to modern energy services.
- EAD, in collaboration with the Women's Affairs Department (WAD), civil society organisations and training institutions should develop an

institutional capacity-building programme involving gender-training programmes for all energy-related institutions.

- Promotion of gender planning, awareness and mainstreaming in energy-related organisations in order to develop long-term gender-sensitive policies and programmes.
- WAD should advocate and request through Cabinet that all departments put in place an institutional structure, i.e. gender committees, gender units and focal officers, with direct responsibility for mainstreaming gender in planning and policy initiatives.
- Civil society organisations, in collaboration with community structures, should sensitise the public to the need to transform negative customary practices and attitudes that affect the education and career choices of girls and boys.
- Mainstream gender in the education curricula at all levels of the education system and train teachers on gender-sensitive language and concepts.
- Lobby, advocate and influence policymakers and other stakeholders to collectively support gender mainstreaming in energy policy and programmes.
- Formulate a policy whose goal is to establish a sustainable funding strategy to support gender-responsive programmes, and develop a strategy for achieving the energy access policy goal through the allocation of public budgets for mainstreaming gender in energy.
- Increase the linkages between gender, the provision of modern energy services and attainment of the MDGs, and in particular target the health, education, agriculture and commercial sectors since most of the MDGs are closely related to improvements in these sectors.
- The current education policy and related strategies should be strengthened by integrating energy services into the infrastructure development concepts and into teaching aids requirements. The education and health sectors, especially in rural areas, are affected by a lack of energy services.

It is believed that the above recommendations, if implemented, would contribute to enhancing the process of gender mainstreaming in energy policies and programmes. By following this path, the energy disparities between men and women would be narrowed by increasing women's access to modern energy services and technologies. ■

This article draws extensively on the report 'Gender Audit of Energy Policies and Programmes: The Case Study of Botswana', to which Peter Zhuo, Elsie Alexander, Masego Kealotswe, Nathan Tlhalerwa, Andrew Obok Opok, Leonard Dikobe and Irene Ramatala greatly contributed.



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◆ Ms Wright, with support from ENERGIA, was instrumental in setting up the Gender and Energy Network of Botswana (GENBO) and is its current chairperson. She coordinates gender and energy inputs into national reports for the UN's Commission on Sustainable Development.

1 More on the TIE-ENERGIA programme can be found on page 7 of this issue of ENERGIA News.

2 At the time of the research, the exchange rate of the Pula was P5.3 = 1 USD

# Energy policy gender audits in Kenya and Senegal

A gender analysis of energy policies and related programmes and projects can provide substantial benefits, both in the direction of existing policies and for future planning. This is because a gender analysis clarifies who has access to, control over and who is positively or negatively impacted by the policy or programme, and how the situation can be improved.

The objectives of the gender audits were:

- Identify gender gaps in energy-related policies, and formulate strategies to address these gaps at the national level; and
- Make gender and energy issues visible to a wide audience through networking and advocacy initiatives in order to influence energy policies, programmes and projects.

The audits in Kenya and Senegal followed the same outline as the one undertaken in Botswana and described above. The main outcomes from these two countries are outlined below.

## Gender audit results and actions in Kenya

The audit in Kenya came to the following main conclusions:

- The limited availability of gender-disaggregated data on energy development and utilisation is one of the constraining factors in engendering energy policy.
- Although there is an increasing awareness of gender at the policy and operational levels, mainstreaming gender perspectives into programmes and activities is yet to be fully embraced by policymakers.
- There is an increase in support from various institutions for gender mainstreaming in general, and in energy policy in particular. The time is ripe to take advantage of this and develop activities geared towards achieving this objective.
- Of all the policy issues concerning energy development, and in the policy measures proposed, only one mentions gender mainstreaming as a cross-cutting issue under human resource development. A truly gender-sensitive energy policy requires much more than this: it has to be supported by plans, budgets and activities whose targets are measurable.

Based on these conclusions and the recommendations made by the audit team, the Ministry of Energy will work in various areas towards:

- Data: creating a relationship with the Kenya Bureau of Statistics to start establishing a database with gender-disaggregated data.
- Policy: ensuring that the action and implementation plans for the policy include activities to start mainstreaming gender.
- Gender awareness: making 'gender more visible' at top management in the energy sector.
- Impact assessment: establishing criteria for assessing the impact of programmes and projects, and monitor their effect on different gender groups.
- Budget/resources: using gender budgeting tools in the energy sector.
- Structuring/mainstreaming: establishing a clear mandate and Terms of Reference for a Gender Officer.
- Energy and gender linkages: coordinate information gathering and analysis to establish links between energy and gender policies/institutions/individuals; set up a forum of stakeholders to encourage the engendering of the energy agenda.

The audit team who carried out the gender audit in Kenya were from the Ministry of Energy and the University of Nairobi and were trained in gender analysis before starting work. A comment from the team, as a result of the exercise, was: *'I now realise that gender is not just about shouting that life is unfair for a woman, it is about improving the situation for both men and women.'*

◆ For more information about the Kenya audit, please contact Daniel Theuri and Lydia Muchiri, Practical Action-East Africa, P.O. Box 39493, 00623 Nairobi, Kenya. Tel: +254.20.2713540; Fax: +254.20.2710083; Email: kenya@practicalaction.or.ke

## Gender audit conclusions and actions in Senegal

The most important lesson that can be drawn from the gender audit in Senegal is that the energy sector in Senegal is failing to effectively take gender into account in policy formulation processes. However, opportunities to correct this exist, especially with the envisaged revision of the energy sector development policy. During this revision process, the assets of the nation and the challenges presented by the elaboration of a gender-sensitive policy should be relevant elements in identifying strategies and energy programmes sensitive to gender.

In order to address these challenges, the actions will consist of:

- Promoting the participation of all stakeholders in the process of preparing energy policies.
- Improving training sessions and technical supervision of energy sector officials.
- Improving the availability of quantitative and qualitative data in the energy and economic sectors.
- Identifying innovative strategies aimed at improving access to energy services for the population at large.

It is expected that implementing the recommendations arising from the audit reports will help deliver effective energy policies, programmes and projects and will therefore increase and improve energy access to vulnerable men and women. In order to achieve gender mainstreaming throughout different sectors in the countries under consideration, gender audits for other sectors and policies should also be carried out.

The Senegal gender audit team consisted of the TIE-ENERGIA project partner ENDA, the Senegalese PRSP team, University Cheikh Anta Diop, the Energy Ministry and the Senegalese Rural Electrification Agency. The team was trained in gender analysis before they set to work on the gender audit.

◆ For more information about the Senegal audit, please contact Yacine Diagne Gueye, ENDA-Tiers Monde, Programme Energie Environnement Développement, B.P. 3370 Dakar, Senegal. Tel: +221.822 5983; Fax: +221.821 7595; Email: enda.energy@orange.sn

# Towards a comprehensive household energy information system in Uganda

Peter Opio

One of the major constraints in developing adequate policy plans for the household energy sector in Uganda is the absence of comprehensive household, gender-disaggregated energy data.

As with most African countries, Uganda does not have an adequate household energy information system. This article argues that in order to adequately plan for the household sector, the most effective means of generating relevant data for planners, policymakers and investors is through an ongoing system of comprehensive data collection that is representative of the population as a whole. Developing such a system will require putting the necessary structures in place through a careful planning process.

The need for a comprehensive household energy information system is crucial for economic and social development at all levels of society. At the household level, we find that women are responsible for meeting the household energy needs, and that this is demanding in terms of their own physical energy, their time and their health. The different roles and responsibilities within a household, but also within communities, result in men and women having different energy needs. Moreover, women generally lack ownership, access and control over resources. These factors mean that men and women will be affected differently by energy policies and interventions. This is why energy policies need to reflect this reality and ensure that women's energy needs and their circumstances are taken into account. More often than not, however, energy policies are gender blind, failing to recognise that men and women do have different needs. It is simply assumed that men and women will benefit equally from a good energy policy, programme or project.

The main focus of the Ugandan government's energy policies and interventions have not been on the household energy sector, but largely concerned with electricity and petroleum fuels. This has resulted in limited availability of data on household energy use patterns, and the usefulness of what is available is reduced by the non-availability of datasets that are disaggregated by social and economic variables such as gender. Further, where such information is available, there is lack of coherence in the data held by the various energy-related institutions.

It is important to have such data at each step of the policy process in order to be able to assess how policy level decisions will differentially affect the various population subgroups and thus come to realistic solutions for energy access problems for all segments of the population. Moreover, Uganda's population is growing at an annual rate of 3.4% and this will strain household energy supplies and necessitates careful planning based on reliable and comprehensive data.

## Challenges facing energy statistical institutions in Uganda

In Uganda, there are three institutions in the energy sector that are involved in collecting energy data: the Ministry of Energy and Minerals Development (MEMD), the Central Statistical Office (CSO) and the National Forestry Authority. These institutions lack an adequate coordinating framework. They all collect information independently, and there is no library or resource centre where information is centrally stored. Whatever information is available is generally hidden in reports and scattered across the different institutions.

In addition, household energy projects or surveys tend to be done on an ad hoc basis and implemented as the need arises. It often happens that surveys overlap or have outputs that cannot be integrated.

Usually the requirement for such surveys is externally driven with the local population having little control, and women's voices are hardly heard. This, of course, affects the value of the data collected and therefore negatively impacts on energy planning.

Attaining and implementing a higher level of planning are prerequisites for the effective and proper use of the limited resources available in the country. To achieve this, capacity building and human resources development in collecting meaningful and comprehensive household energy data, including the collection of gender-disaggregated statistics, are much needed.

## Issues concerning gender data in Uganda

By adopting consistent planning practices and keeping a gender perspective in mind, appropriate methods for collecting and organising household energy data through systematic and comprehensive surveys can be explored. Such planning practices can generate reliable household energy data that is representative of the population and that is suitable for long-term planning.

It is especially in the analysis of the energy needs of households and communities that gender becomes important. Gender analysis includes questions regarding who within the household/community has the power to choose an energy source, how this energy source is used and who benefits from this use. If these questions remain unasked, energy policies will fail to adequately address the needs of a large part of the population, the majority of whom belong to the poorest segments of society.

Often in household energy consumption surveys, however, only the head of the household is interviewed, and this is generally a man. When a woman is interviewed this is often in the presence of a man, and she may let the man respond to questions or remain silent if she disagrees with his responses. Since women are the main household energy users, men may not be able to give reliable energy information and may be unaware of existing problems. This can lead to unreliable household energy data, which in turn can result in inappropriate interventions. Having separate interviews with women can help avoid this danger.

There is a need to genderise household energy information. As an example, "household income" is often seen as an influencing factor in household energy consumption and is used in forecasting. However, the concept of a "household income" is unrealistic in many situations; in practice, there may be a man's income and a woman's income, even when they share a household. Generally in Africa, and certainly in Uganda, there is a lack of "genderised" household energy information and this requires consideration in future undertakings.

## The Household Energy Information System

In response to this failing, I propose a Household Energy Information System that will effectively address the above-mentioned issues that currently prevent adequate energy planning in Uganda. Such a system will require the involvement and cooperation of all energy institutions.

The six key activities to be addressed in the system are:

- Data collection on household energy and its gendered components;
- Data organisation and storage;
- Data analysis;
- Data publication and dissemination;
- Energy policy analysis; and
- Energy policy formulation.

A key aspect of this system is the need for institutions to work together in a collaborative and coordinated manner with a focus on feeding the MEMD, which is responsible for coordinating energy use in the country, with the data necessary for it to formulate, implement, monitor and evaluate policy. The Ministry of Finance Planning and Economic Development (MFPED) can use much of this information in formulating its policies and plans. Each time there is a need to review policies and plans for the household sector, up-to-date household energy data are needed by both MFPED and MEMD. Thus, the proposed system is designed to search out the needed data. Moreover, policy formulation, analysis, monitoring and evaluation should be ongoing activities.

Even though policies exist in the country, they require strengthening in order for the system to work. Some of the policy measures suggested for the system to work include:

- The government should recognise the need for such a system for policymaking and planning.
- The government should ensure that all related government ministries collect and send energy data to the Ministries of Energy and Minerals Development, and of Finance Planning and Economic Development.
- The MEMD should seek legal powers to subcontract the work to other institutions, such as universities, which have capabilities in terms of data-analysis and generic collection methods where the MEMD does not have the capacity to conduct household energy gathering.
- The government should make it mandatory for all energy-related NGOs and private companies, through their registration, to supply it with energy information.
- Appropriate financing mechanisms to support the system should be established. The government should provide funding both directly and indirectly for equipment and for capacity building.
- A mechanism should be set up for the dissemination of household energy information to the key energy institutions.
- Regular meetings between the MEMD and the CSO and relevant institutions are important in order to constantly review the progress of the system.

### Expected constraints on the proposed system

The expected constraints on the proposed system include:

- The possibility of conflicting data arising from data collected under different conditions by different researchers with different objectives and survey methods.
- Failure of data to conform to the required standards may be a problem especially where different units are used in surveys. This may lead to a loss of precision in estimates.
- A lack of focused objectives may lead to the omission of important data or the collection of information that is not required.
- A failure of data collected to be representative especially where sampling method, sample size and sampled population are not indicated in the data presented.

### Applicability of the system in Uganda

The suggested system should be tested by applying it in the current MEMD. A critical analysis of the roles of the MEMD and its capacity to absorb and handle the system is important for analysing the effects of incorporating the system in its activities. It may be that adding the



Female solar entrepreneur of UltraSolar Masaka is explaining how solar energy works to the branch manager of Uganda Microfinance Limited (UML).  
(Photo: Frank van der Vleuten, ETC Energy, Netherlands)

system to the current tasks of the energy divisions within MEMD is inappropriate. Instead, two additional separate units could be created to implement the designed system. One unit could be responsible for household and crosscutting energy issues and coordination with other energy divisions. The second unit would be responsible for energy policy issues. Such units would require competent personnel to be recruited for both household energy issues and policy analysis and formulation aspects.

### Conclusions

Uganda, as many other countries in Africa, does not have adequate data on household energy and gender for effective policymaking and planning. The overall effect is a negative impact on the livelihoods of the population and especially of women since they form the majority of those living in poverty (70%). The livelihoods of the Ugandan population would be much improved if they had access to reliable and affordable sources of energy since energy is of vital importance in satisfying human needs and advancing development. Addressing household energy needs is thus important for the country's overall prosperity.

The existing independence of energy institutions in collecting household energy information requires integration through the development of an institutional framework that is coordinated and focuses collaborative efforts on addressing the issue of inadequate energy data. As was shown in this article, energy institutions cannot currently be relied upon to collect or provide adequate and reliable household energy data.

The creation of additional units within the Ministry of Energy to be responsible for the system will probably be necessary as the existing units already have assigned roles and adding the new tasks would likely make the proposed framework ineffective. Various forms of government support are required for the successful implementation of the proposed systematic framework for collecting household energy information useful for policymaking and planning. ■



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# Access to modern energy services: the gender face of energy technologies

Daniel Theuri

Daily, we encounter a mix of activities that occupy most of our time in doing or delivering the outputs of those activities. This applies to individuals, families, villages and even countries engaging in livelihood chores, leisure and economic activities. People are constantly dealing with problems they face or trying to improve their socioeconomic situation in a world fraught with denied access, marginalisation and competition for resources. Within this scenario, energy increasingly becomes a critical input. Delivery of different goods and services will require various types of energy in given qualities and quantities, and generally in combinations appropriate to the task at hand. Delivering water through a pipe will require a given combination of two or more forms of energy to deliver clean water to the end user. Refrigeration of local vaccines and medicines will require other types of energy, again in specific forms and quantities to meet the desired level of service. Needless to say, access to modern forms of energy services that can deliver the services and products we want more efficiently is increasingly becoming critical in the creation of new wealth and is essential for poverty reduction efforts to succeed. Poverty can be viewed as the lack of access to services such as energy that help people extract livelihoods from their environment and create sufficient wealth to solve other, more complex, problems in their lives.

The problem of poverty is closely intertwined with the lack of modern energy services for the majority of rural and urban populations for both productive use and social welfare. The heavy dependency on traditionally-sourced biomass resources for cooking and space and water heating is exerting excessive pressure on the environment and people's health because of the ecological decay resulting from current resource exploitation that is comparable to mining the resource as opposed to sustainable usage. The traditional uses of biomass are also associated with serious indoor air pollution which contributes to the level of disease.

## Gendered access to energy services

Energy services do have a gender face. As with many developing countries, gender disparity is very evident as part of the energy problem in East Africa. Not only is more the half of the population female, women also make up a large percentage of the poor both in rural and urban areas. They also provide the bulk of the energy balance in the national energy supply matrix. They gather and process close to two-thirds of the total energy used in countries like Kenya. Lack of access to energy and services continues to keep women locked in drudgery and backbreaking tasks that tend to dehumanise them even further.



*A woman in central Kenya using a traditional cookstove. She could benefit greatly from access to modern energy services.  
(Photo: Daniel Theuri, Practical Action East Africa, Kenya)*

Energy systems, seen as comprising of an energy supply system and energy end user technologies, deliver specific benefits to the user. The term energy services is used to describe these benefits which, at the household, industrial or commercial level, lead to increased comfort for users, ease their burden in doing things or increase their productivity. Technology defines the boundary between traditional and modern energy use with low efficiency and low value technologies being seen as traditional.

Modern energy services are the result of combining various technologies, infrastructure, labour in the form of expertise and a given primary energy. They therefore deliver benefits that are valued in meeting social needs and the developmental agenda. The level of modernity is also relative to the existing individual, community or country efficiency levels and the negative impacts of existing energy use and is, thus, symptomatic of the level and complexity of users and the environment in which they operate.

In terms of the delivery of energy services, many people in East Africa are yet to be served or are so severely underserved that impacts are not apparent. The bulk of the underserved and the unserved live in the rural areas, which have historically been neglected by planners and policymakers. The urban and peri-urban areas pose a special challenge and opportunity in that they have relatively high population densities.

## Disparities are reflected in gender-disaggregated data

In Kenya, electrification, with its associated high quality services, serves only 15% of the population. Urban areas, for mainly economic reasons, fair best with a connection rate of 46% compared with only 4% in rural areas. Since it is men that tend to migrate to urban areas

this creates a disparity in terms of gendered access to this modern form of energy. Over 89% of the population still use biomass for cooking and space heating using traditional technologies that are highly inefficient and have negative effects on health, especially of the more vulnerable mothers and young children.

Energy schemes can be designed to address the major issues concerning access to modern energy services by communities and take gender issues into account in the process. Methodologies to allow this are now being developed, especially with the development of a toolkit for analysing gender aspects in planning a project. The new view of energy supply must of necessity address a number of indicators that enable the value of an energy scheme to be assessed. The more-traditional approach often looked only at the supply side and saw this as the panacea to energy supply problems with very little linkage to the end uses of the energy services so provided.

### **Benefits of modern energy technology should be gender-inclusive**

Taking small hydropower as an example, schemes have typically been designed primarily to supply electricity for lighting and a few other uses. Few designers have recognised the potential multi-functional gender-differentiated applications of the small hydro turbine. The energy needs of a community were, in general, assumed to be the aggregated problems of the individual householders. Rarely was a power needs assessment carried out to define the needs in terms of quality and quantity.

The acceptance of the need to understand demand in fine detail is critical in designing a supply scheme with its attendant environmental requirements that can provide a sustainable supply. In the analysis of power needs, gender disparities can be addressed and other non-energy services considered as an overall service package is developed.

In developing a micro-hydropower scheme for a community, for example, it is important to avoid the all too common mistake of assuming that the community will adapt to the new energy systems once the energy source is developed. It is essential, as part of the feasibility study, to conduct a household and community energy needs assessment. This assessment needs to include specific filters or tools to identify important indicators of gendered needs and other issues linked to environmental sustainability.

Traditionally, fetching water is a daily chore for women and children. A sustainable livelihoods analysis carried during the pre-feasibility stage of the Tuungu community micro-hydropower scheme on the eastern slopes of Mount Kenya found that women typically spent 3.5 to 4 hours per day fetching water. A small hydro unit that can be coupled to a generator for power generation could also drive a water pump to deliver water to the local people. In many cases, the energy needed for supplying water will not exceed that required to drive the generator for power generation.

Small hydro units can thus be part of a solution that contributes to increasing access to modern energy services and addresses both energy and non-energy services while addressing gender-specific issues in the process. They are versatile in terms of application and one turbine can drive more than one device (e.g. generator and pump) offering multi-functional applications that can be configured to address local energy needs in a gender-differentiated way more effectively than larger systems that only produce electricity.

For example, a community needing a water supply as its primary energy service could use a small hydro plant as the motive power in a water supply scheme while having the option of grinding grains or generating electricity as secondary applications should community needs dictate.



Boys are charging a battery that is used for lighting a classroom facilitating evening learning for youths. (Photo: Daniel Theuri, Practical Action East Africa, Kenya)

In such ways, small hydropower schemes are a viable option in increasing access to modern services and addressing the gender and energy disparities. In so doing, they can have a positive impact on village-level development. It is important when designing such small schemes to relate the needs of the population with the power supplied to ensure that schemes meet as many priority needs as possible. People often do not care what energy systems are in place so long as their needs are met. Awareness of the types of technologies that can be used and their potential becomes less of a focus; instead developing local capacity for assessment, design, installation, operation and maintenance moves centre stage. In assessing needs, it is important to undertake a gender audit to ensure that gender-specific needs are established and appropriate priorities set.

Lastly, designers of small hydropower schemes could benefit greatly from learning how to mainstream gender when planning energy projects and programmes. The following sites provide rich sources of such information and guidelines for undertaking gender audits of energy policies: [www.energia.org](http://www.energia.org) or [www.energia-africa.org](http://www.energia-africa.org) ■



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# Partnerships foster women's access to energy services: the Ndame Lo Women's Group in Senegal

Mireille A. Ehemba

The living conditions of Senegal's women would be significantly enhanced if they had access to modern, efficient energy services for their domestic chores (cooking, drawing water, gathering wood, etc.). To date, very few women have benefited, directly or indirectly, from sound management of resources and energy services.

In Senegal, women make up 51% of the population and are particularly vulnerable to poverty. Most live in rural areas, where they comprise 39% of the active population but 70% of the workforce at all levels of production.

With no professional qualifications, women have little income and are rarely present in high value-added economic activities. Their activities do not register in monetary terms and their domestic obligations deprive them of opportunities to engage in income-generating activities.

Planning needs to reflect the distinct energy needs of women and men if it is to drive forward rural development in a way that benefits women. Women's initiatives deserve to be supported and women are entitled to better conditions that would allow them to participate in the country's economic and social development. An important way of backing their income-generating activities is through establishing and promoting small- and medium-sized enterprises in appropriate sectors.



One of the members of Ndame Lo is preparing a tray of papaya for drying in the furnace. (Photo: Mireille A. Ehemba, PERACOD, Senegal)

## Initiatives to improve women's access to energy services

One of the initiatives that set out to achieve such goals was undertaken by the women of Ndame Lo village, situated 50 km north of Dakar, who formed Ndame Lo Women's Group in 1980 to build income-generating activities. Initially the group comprised 60 women, but it can now boast 150 members. The women pay a monthly subscription of 100CFA francs (€0.15) while new members pay a joining fee of 10,000 CFA francs (€15). Revenues from the subscriptions go towards a revolving fund, to savings held in a farm credit scheme and contribute to community social amenities.

The group's dynamism and sound organisation, as well as the local availability of fruit, identified the group as an ideal candidate to take part in 1994 in a UNIDO project entitled Integrating women into Senegal's economic development. Within this project, a semi-industrial plant for the solar drying of fruit and vegetables was established. The Senegalese-German Solar Power Project (PSAES) and the Food Technology Institute (ITA) provided technical support to enable the women to get the project up and running. Today, the main income-generating activities of the group are market gardening, fabric trading, sewing and dyeing, mango selling, fruit drying and vegetable growing and processing (making syrups and jam) for selling.

## Versatile and appropriate technology: lessons from a semi-industrial fruit and vegetable solar drying plant

The fruit and vegetable drying plant considered in this article consists of a drier powered by a variety of energy sources (gas, solar, electricity). The plant was built in three phases. The first phase involved the installation of a combined solar and gas drier with a capacity of 75kg of dried produce. The drier is made up of two cabins, which are insulated using polyurethane inside sheet metal. A solar unit is fitted in the roof. It is made up of 10mm thick glass plates set in a metal frame and a black body formed of polyurethane panels. From noon to 4pm, the sun is strong enough to warm the dryer using only the solar panels, and the gas is then used as the sun begins to set.

The women were eager to increase productivity through additional equipment and they had seen that a gas dryer meant they were no longer reliant on climatic conditions. This second phase therefore consisted of the installation of three gas dryers with a total of six compartments and a total capacity of 150kg of dried produce. It was designed to be used with a 6kg gas cylinder but, given the energy crises currently afflicting Senegal, any available cylinder is used (2.7kg, 6 kg and 12 kg). In terms of consumption, four compartments use two and a half 6kg gas cylinders per drying cycle.

To further increase both the output and the quality of their produce, the women decided to equip themselves with a combined solar and electric drier with a capacity of 250kg. The drying cycle lasts from 18 to 20 hours. The women are now able to process a large percentage of the fruit and vegetables they produce.

The Niayes region, where the dryer is located, boasts considerable fruit and market gardening potential. Fruit such as mangos, papaya and bananas which once went to waste are now processed and sold on the domestic and international markets. A similar situation applies to the vegetables that are grown by the women. Through using the dryers, significant value is added to the crops. Several nationwide retail companies buy the produce for sale under their own labels. The women's produce can be found in hotels in the capital as well as in large retail chains such as Leader Price, Select Shell and a range of greengrocers. The group takes part in many national food fairs in order to showcase their produce. They also export to various European countries including Switzerland.

This growth in production and in the number of members of the group has resulted in a division of tasks to improve efficiency. Two eighteen-strong teams were selected from the 150 members to



handle fruit drying activities on a rota basis. The remaining members look after other aspects of the business (market gardening, dyeing, sewing, etc.). Small groups have received ITA<sup>1</sup> training and each woman in the chain has a precise role and has been trained specifically for it. They are supported by two men, who are responsible for accounting, equipment maintenance and product promotion.

Women of the Ndame Lo women's group preparing various fruits for drying. (Photo: Mireille A. Ehemba, PERACOD, Senegal)

## Socioeconomic and environmental impacts of the pilot plant

The project has had discernible impacts on individuals, and the community as a whole, in social, professional and economic terms.

### Social and professional impacts

Several training sessions have built the capacity of the women and improved their management skills and their ability to run the drying plant. They have developed their entrepreneurial capacity and made products that are good enough to comply with international market standards. All of the women are now literate and have certificates to prove their abilities. They can now read work-related contracts, keep accounts and take part in international trade fairs. Almost every woman in the village has joined the group and has thus been empowered.

According to the women interviewed for this article, there have also been many social and communal effects. For example, within the family structure, women's comfort, hygiene and health have all benefited from access to butane gas for cooking and increased electricity connections. Other benefits of the project include:

- Better allocation of their time between domestic chores and economic activities.
- Greater harmony within the household, as husbands welcome the women's initiatives and the fact that they share some of the household's income.
- Before a woman is integrated into the group, her husband needs to be sensitised since her work will involve making several journeys away from home for training sessions, trade fairs as well as the day-to-day activities. It is also important that the woman is presentable, available and has a certain level of training.
- A monthly salary of 30,000 CFA francs (€45) is paid which enables the women to pay their children's school fees and for equipment and other items.

- Greater knowledge and awareness of hygiene conditions, since this is essential for work in the plant.
- At the community level, improvements in many aspects of community life:
  - Financial backing to build community infrastructure such as health clinics, village mosque, school equipment, cemetery.
  - Funding to send two midwives to Thiès for training.
  - In terms of solidarity, support to the most disadvantaged (the sick).
  - Increased right-to-vote in decision-making bodies.

### Economic impacts

The women noted that there is:

- Increased income, both individually and collectively.
- Increased job creation and enterprise development among the community such as the purchase of a mill and an electric de-husker for cereal processing. These are managed by two women, who are paid 1,000 CFA francs (€1.50) per day.
- Greater productivity to meet the demand for dried produce.
- New opportunities with the women's group acquiring 10 hectares on which to grow fruit and reduce the costs associated with sourcing raw materials.

Overall, the project has been successful in addressing women's needs and interests on several levels:

- Practical needs: the project has improved their living conditions and given them greater access to modern energy services.
- Productive needs: it has led to high added-value income-generating activities.
- Strategic interests: it has increased women's participation in community decision-making and improved their (and their families') access to essential services by increasing communal funding capacity.

## Challenges and opportunities

Despite the success of the project, the women have encountered some difficulties relating to product promotion. They sense a need for training in marketing, and access to a larger revolving fund with which to purchase their raw materials.

Inspired by the economic benefits, similar women's groups have sprung up elsewhere in Senegal – there are now ten in total, using either solar-powered or mixed-source dryers. The replicability of such projects is important for any initiative that promotes gender and energy access in Africa. Further, the project demonstrates that energy projects that differentiate between the needs of men and women can achieve a genuine impact on the groups concerned. ■



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# Translating policy into action: alternative income-generation for rural women in Mali

Johanna Togola, MSc.

Mali's forest reserves are reducing. Two-thirds of the country is already covered by the Sahara desert. At the same time, firewood and charcoal represent over 90% of all energy consumption in Mali and most of this wood is supplied by rural people, women and men, to whom the income from wood is crucial for survival. The widespread commercial felling of trees threatens the country's few remaining forests and therefore needs to be limited.

The commercial aspects of wood represent a complex problem, involving producers, sellers and consumers. To resolve the problem efficiently, all three actors need to be addressed but, so far, the actions in Mali have typically concentrated on the consumer side. In recent years, liquid petroleum gas (LPG) has been heavily subsidised and a range of energy-efficient stoves has blossomed in the market. These actions have had some impact on the consumer side, although the concrete impacts are limited to the wealthiest part of the population.

However, these actions, involving the investment of millions of US Dollars, have virtually ignored the other side of the equation - the producers. Fuelwood comes to the cities from the surrounding countryside, supplied by men and women, for many of whom, especially the women, the sale of firewood is their main or only source of cash income.

Two important points that should not be overlooked are:

- People need an income for food, clothes and other everyday needs, and selling firewood has for years been the only way they have known of earning an income.
- If demand was to decrease remarkably, because of new competing energy sources or improved technologies, prices would fall and individual producers would be tempted to cut more wood than before to earn the same income.

The only concrete action by the state targeting producers has been the holding of trials of organised wood markets in the countryside so that the intermediary wood sellers can more easily buy wood, and the producers could obtain a more regular income. However, the success of these wood markets is debatable. Some NGOs have also tried to solve the problem from the producer side. One of these is Mali-Folkecenter Nyetaa which, in cooperation with a Finnish NGO Dodo, is running the Sinsibere project.

## Providing alternative livelihood strategies: the Sinsibere project in Mali

For women near Bamako, Mali's capital, wood cutting for commercial purposes is a common activity. Wood commerce is concentrated in a few communes due to their easy road access. The Sinsibere project was launched in three of these communes, Sanankoroba, Dialakoroba and Bougoula, in 2001. The project stemmed from the Local Environmental Plan (PCE) made in 1999-2000. The plan followed the recommendations of the National Action Plan in the framework of the UNCCD (United Nations Convention to Combat Desertification) in close cooperation with the municipal councils and the local population. Based on the suggestions of the PCE, the goal of the Sinsibere project was to reduce the cutting of wood and ease pressure on the natural resources in the project area. This was to be

accomplished by helping the local women's associations to develop other income-generating activities to replace the selling of wood.

Initially, environmental education was arranged for all 60 villages in the three communes in cooperation with the municipal councils and forestry authorities. This concentrated on the linkages between deforestation, erosion and wood cutting. The consequences for farming and water supply were also discussed. The villagers were also told about the advantages of improved stoves and the importance of planting trees. Activities involving the construction of energy-efficient stoves and planting local indigenous tree species took place in several villages. Problems associated with excessive wood cutting were already familiar to people, and many women indicated their willingness to change as they saw wood cutting as hard and dangerous work. However, such changes were not easy to achieve as they demanded both mental and practical adjustment.



Men and women working together to plant seedlings for their vegetable gardens. (Photo: Tuuli Kaskinen, Dodo, Finland)

## Challenges of the project

One of the advantages of wood cutting, compared to many other income-generating activities, is that it can be done at any time of the year, and the wood can be sold throughout the year. When money is needed urgently during periods when there are no other cash products available, it is easy to take some wood from stock and sell it. Wood is seen as the only secure source of income as it is available even when the other main income sources, nuts from the shea tree and farm crops, are unavailable due to seasonal or climatic factors. It was seen as important to give those people who have for years earned their living by wood commerce enough time to accept the change and to develop activities that could substitute for their old sources of livelihood.

At the same time, it was recognised that, even for simple commerce, the mathematical and literacy skills of the women were inadequate. Most of the women in the villages were illiterate and so it was decided to organise literacy and calculation training for the women. Each year, 25 women participated in six weeks of intensive training, and these then organised further training for other women in the villages. Beyond commercial skills, this training also had a large impact on the operation of women's associations as well as on women's participation in the general decision-making at the village and communal levels.

## The approach

In the Sinsibere project, the development of income-generating activities started with savings and micro-credit training in eight villages. The women learnt how to put money together, and saw how little amounts could accumulate. Monthly membership fees and cooperative work, such as soap production, continuously contribute to the amounts of money available to the groups of women. From this fund, the women could take out micro-loans, which they can use to set up income-generating activities. The biggest impact of the loan system was in the development of small commerce in the villages. Many women used the entire loan, or part of it, to buy various products in the city or from the nearest market, and then resold them in smaller quantities, before or after processing, in their village or at the market. Although this increased the incomes of many women, it was not generally sufficient to compete with the money that could be earned from wood cutting.

However, vegetable growing proved to be a competitive alternative to wood cutting, as the potential income could easily exceed the income earned from wood commerce. At the start of the project, gardening was seen as a man's activity in many villages. This attitude has changed and growing vegetables is now considered to be a suitable activity for women. Most of the women in the project are now putting their efforts into gardening. Women from two villages have completely abandoned wood commerce, and others are following suit. Nevertheless, vegetable gardening has its constraints. Although the ground water is relatively near to the surface in this area, wells can dry out in the dry season, especially if the previous rainy season has not been good. The small amount of money needed to deepen a well can still be considerable for village people. Even if the women's saving groups have large savings, they may not necessarily want to use them for well construction.

Other activities were also tried in the first years of the project including improved soap making, poultry farming and pottery. Soap making on an individual basis did not provide sufficient income to substitute for fuelwood collection, and women were not interested in large-scale production as the market was not secured. Soap production, however, did provide a useful addition to the saving groups' funds. Poultry farming was only tried in one village, but it failed as the chickens did not produce enough offspring for the activity to be profitable. After a training course, pottery developed into an income source for a very limited number of women from one ethnic minority group.

A crucial issue with all the new livelihood strategies is the market for the products. Where will the women sell their products, to whom and when? Currently, they very much depend on buyers from Bamako purchasing their products in the village or from the nearest market. In such exchanges, the buyers can largely determine the price, and this is usually to the detriment of the producers.

A goal of the project is to find more profitable ways of marketing the garden products as well as other products such as shea butter which has been traditionally produced by all the women in the area in those years when shea provides a good harvest. The plan is to establish a cooperative in which all the women from the project villages can participate. The cooperative will be in charge of marketing products and will provide training to its members in order to increase product quality.

## Conclusion

The initial problem of excessive wood cutting for commercial purposes has been tackled in most of the villages participating in the project. However, wood commerce still dominates in many other villages in the area. The approach followed could be replicated in other areas in order to stop the reduction of forest cover and land



*Kadiatou Samake is watering the vegetables in her garden. Before the Sinsibere project, gardening was seen as a man's activity but now it is seen as a suitable activity for women as well. (Photo: Tuuli Kaskinen, Dodo, Finland)*

degradation and, at the same time, have a positive impact on poverty alleviation.

In the energy policy of any country, it is crucial to consider the entire chain of activities from producers to consumers. Concentrating only on consumers can have negative impacts on the lives of poor people living in the countryside. The poor supply energy to the cities in the form of fuelwood and charcoal, and often have very few alternatives especially if information and assistance is not provided.

Poverty alleviation is a necessary component of the process of reducing desertification, limiting climate change and responding to other environmental threats. Such environmental problems exacerbate poverty, and it is very difficult to combat them in areas where people are struggling to sustain their livelihoods.

Gender aspects have to be taken into account, in particular the future role of the rural women who currently supply energy cannot be ignored in the process of developing new energy policies. In order to achieve this, gender-sensitive approaches need to be used when considering energy issues. The activities described in this article show that real change in this direction is possible. ■



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## The gender face of energy: ENERZIA's e-learning tool

As was indicated in the International Programmes article on TIE-ENERZIA in this issue of ENERZIA News, ENERZIA has developed a comprehensive training programme on gender and energy for Africa. This training programme is the foundation of ENERZIA's capacity-building strategy. Current capacity-building activities within the ENERZIA Asia Gender and Energy Network build on this foundation by adding experiences from the TIE-ENERZIA project.

One of the inadequacies identified with the original training programme was that participants to the training workshops felt they lacked sufficient preparation. Also, since the participants would come from a variety of organisations and from different professional backgrounds, a lot of time at the beginning of each training period would be spent exploring the participants' levels of understanding of gender, energy, poverty and the key concepts so that this could be taken into account in determining where to start by the trainers. This meant that training workshops needed to run for at least ten days to be able to cover everything. In Asia, for the upcoming Regional Gender & Energy Training Workshop, it was concluded that participants could not afford the time to attend for more than five days.

For these reasons, a solution had to be found that would better prepare the trainees before the Workshop commenced and would enable the number of training days to be reduced to five. The solution found was to offer the basic concepts on gender and energy as explained in Units 1.1 and 1.2 of the ENERZIA Training Module 1: Concepts in Gender and Energy (<http://energia-africa.org//TrainingModules>) to the participants in advance. This would enable all the participants to arrive at the training workshop with a similar level of understanding and would thus save time at the workshop itself. Trainers will thus be able to spend more time during the training workshop on working with the individual participants in developing their personal

action plans for integrating gender into their own working environment, projects or policies.

Experience has taught, however, that material sent to trainees before a training period is not necessarily read or understood, and therefore not a reliable method for preparation. An investigation into other options open to ENERZIA to resolve this issue led us to e-learning (or electronic learning). Advantages often attributed to e-learning are its flexibility, convenience and the ability to work at any place where an internet connection is available. The online classes can be taken asynchronously, allowing learners to participate and complete the coursework in accordance with their daily commitments.

There are several tools available which offer an environment in which to create online classes. ENERZIA has chosen to build its e-learning modules in a Moodle learning environment. Moodle is a free, open-source, software package that has been specially developed to create an e-learning environment (<http://moodle.org>). The tool permits the inclusion of questions, quizzes and assignments, making the learning a fun experience. Administrators and trainers are able to monitor the progress of the learners, giving ENERZIA the valuable advantage of knowing before the training period commences the level reached by the individual participants.

Figure 1 is a screenshot of the ENERZIA e-learning tool. Like the table below, it shows how the course deals with the gender and energy concepts in project planning and policymaking.



Figure 1: A screenshot of ENERZIA's e-learning course

The lessons contain questions and assignments related to the content, and each course closes with a quiz - an informal test of the learner's understanding of the material offered. At the time of writing this article, the e-learning course is being used for the very first time by the 33 participants for the Asia Regional Training Workshop, which will be held from 22-26 October in Chiang Mai, Thailand. As this is the first time that ENERZIA has developed and used e-learning material in a training workshop, a detailed evaluation will be made involving the participants, the trainers and the ENERZIA International Secretariat. The material will be improved based on the outcomes of the evaluation and used in future regional, and possibly national, gender and energy training workshops. Depending on the outcomes of the evaluation, ENERZIA will also consider making the online courses public and making other modules from the training package available in the e-learning environment. ■

◆ For more information, please contact Anja Panjwani or Karin Kauw at the ENERZIA International Secretariat.

Category	Course	Lessons
Gender and Energy Concepts	What is gender?	Gender & concepts related to gender The complexity of gender Analysing gender roles and relations
	What is energy?	What exactly is energy? The energy ladder Gender, energy and poverty
Gender in Energy Planning	The significance of gender in energy interventions	Energy planning and the energy services approach Gender in energy planning and projects
	Energy projects and women	Including metabolic energy Taking gender relations into account

Table 1: Outline of ENERZIA's e-learning module

# The Bulletin Board

## CALLS FOR PROPOSALS

### Lighting Africa – Development Marketplace Grant Competition

The World Bank Group and its partners are pleased to announce a Development Marketplace (DM) competition for the design and delivery of low cost, high quality, non-fossil-fuel-based lighting products targeted at low-income consumers in sub-Saharan Africa. The DM is part of the broader Lighting Africa programme managed by the World Bank Group which seeks to reach 250 million customers with modern affordable lighting by 2030. The DM is a competitive grant programme that will support private enterprises in developing and delivering a wide array of modern lighting products that are not available in the marketplace today for poor households and businesses. Deadline for submission: October 31, 2007. For more information and registration, please visit: <http://www.lightingafrica.org>

## ASHDEN AWARDS 2008

The Ashden Awards for Sustainable Energy are seeking entries from local sustainable energy projects from Asia, Africa and Latin America that have radically improved the lives of local communities and can demonstrate significant environmental benefits through the use of renewable energy and/or energy saving measures. Winning schemes must be exemplary and have the potential to expand and be replicated elsewhere by others. The awards reward past achievement. The funding which they provide is for clearly defined future plans for expansion, replication or dissemination. Deadline for application: November 13, 2007. For more information and application details, please visit: <http://www.ashdenawards.org>

## TRAINING

### Gender & Energy Training of Trainers, 22-26 October 2007, Chiang Mai, Thailand

This Asia Regional Gender and Energy Training of Trainers workshop will be organised by ENERGIA, in collaboration with the UNDP, as part of its capacity building strategy. For the first time, such a training course will bring together energy project practitioners and trainers. To prepare for the workshop, the participants will follow an e-learning course, developed by

ENERGIA, on the major concepts in gender and energy. For more information, please contact Soma Dutta, ENERGIA Regional Network Coordinator for Asia, at [abhisoma@gmail.com](mailto:abhisoma@gmail.com), or Ana Rojas from the International Secretariat at [a.rojas@etcnl.nl](mailto:a.rojas@etcnl.nl)

## RELATED ACTIVITIES

### Formation of a Gender & Climate Change Network in Africa

The network was formed as an initiative to provide an engendered perspective in the climate change debate. The three topics that were chosen for immediate focus were biofuels, forestry issues such as offsets and avoided deforestation, and the need to gather local case studies that document the impacts of climate change on women. It was agreed that the initial focus of the network should be on a small number of strategic meetings, and concluded that the UNFCCC-COP, CSD and African Union Climate Change Action Plan events were priorities. For more information, please contact Rachel Nampinga from Eco-Watch Africa at [nrachelk@yahoo.com](mailto:nrachelk@yahoo.com)

## PUBLICATIONS

### Where Energy is Women's Business: National and Regional Reports from Africa, Asia, Latin America and the Pacific. Gail Karlsson (editor), ENERGIA, February 2007

This publication is a compilation of regional reports and national gender and energy papers, commissioned by ENERGIA in preparation for discussions on access to energy at CSD 14 & 15. By presenting this publication at CSD 15, ENERGIA provided an opportunity for representatives of various countries to present their views on gender and energy concerns, and their recommendations for country-level energy policies and international action. The publication can be downloaded from the ENERGIA website at [http://www.energia.org/csd\\_book.html](http://www.energia.org/csd_book.html)

### Mother Earth: Women and Sustainable Land Management. UNDP, August 2007

This publication, based on a review of the portfolio of UNDP-Global Environment Facility projects, provides guidance on mainstreaming gender considerations in sustainable land management and provides examples of women's participation in new

sustainable agricultural practices. To access and download the publication, please go to [http://www.undp.org/gef/05/documents/publications/Women&SustLandManagement\\_web.pdf](http://www.undp.org/gef/05/documents/publications/Women&SustLandManagement_web.pdf)

### Monitoring and Evaluation in Energy Projects. Monitoring and Evaluation in Energy for Development (M&EED) International Working Group, December 2006

This guide proposes a step-by-step approach for building project-specific monitoring and evaluation procedures. The guide is intended for projects for which a M&E approach has not already been stipulated by a project donor or stakeholder. With ENERGIA's support, Dr Wendy Annecke of Gender and Energy Research and Training, South Africa has provided gender and energy inputs for the Group's work and for the guide. The document can be downloaded through the GVEP website at <http://www.gvepinternational.org>

## RESOURCES

### Gender Mapping for Selected ENERGIA National Focal Point Countries

This Gender Map was developed by Indira Shakya from CRT-Nepal, which hosts the ENERGIA Asia Regional Secretariat, as an advocacy tool. The tool was developed for, and used at, CSD 15. This resource can be downloaded from the ENERGIA website at [http://www.energia.org/resources/gendermapping\\_nfp.pdf](http://www.energia.org/resources/gendermapping_nfp.pdf)

### WEDO Gender & Climate Change Resource List

The Women's Environment and Development Organization (WEDO) offers a number of resources concerning gender and climate change on their website. These include policy documents, statistics and newspaper articles. To look at these, please go to <http://www.wedo.org/campaigns.aspx?mode=plantendorsements>



Female solar entrepreneur running the "Solar Energy East Africa" business in Lyantonde, Uganda. She was able to expand her business to selling clothes and household linen. (Photo: Frank van der Vleuten, ETC Energy, Netherlands)

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ENERGIA is an international network on Gender and Sustainable Energy, founded in 1995 by a group of women involved in gender and energy work in developing countries. ENERGIA's objective is to "engender" energy and "empower" rural and urban poor women through information exchange, capacity building, research, advocacy, and action aimed at strengthening their sustainable energy development.

ENERGIA's approach is to seek to identify needed activities and actions through its membership, and then to encourage, and if possible assist, members and their institutions to undertake decentralised initiatives. ENERGIA News is the principle vehicle for this approach. The focus is on practice, with a conscious effort to interpret and learn from this practice.

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