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Documentation and evaluation of cases studies of energy interventions will highlight women's specific energy needs and how they can be attained. (Photo AIWC, India)

## News from the Editors

### Policies, Projects or the Market - enabling Women's access to Energy

**In the coming eighteen months, the international stage will see some important events relevant to women and sustainable energy.**

**These include the UN Special Session** in June this year on Women 2000: Gender Equality, Development and Peace for the 21st Century (also known as Beijing +5); the World Summit for Social Development (also known as Copenhagen +5) and the UN Commission on Sustainable Development Meetings (on Energy and Transport in April 2001). *ENERGIA* aims to be active in the preparatory processes which lead up to these meetings as well to

contribute to events around the main plenary sessions. To assist in our advocacy we have been reviewing what has been happening with women and energy at both the field and policy levels. As is well known, there has been a general policy shift in all development co-operation away from public sector projects to private sector, more market-based, initiatives. This raises important questions: which is the better mechanism for assisting women in meeting their energy needs, and do policies support those processes?

#### Policies on women and energy

**At the international level,** the topic of women and energy now appears more frequently on the agendas of international conferences than it did a decade ago. The >

> policies and programmes of multilateral agencies are responding to the advocacy in these conferences and other forums. For example, the UNDP Energy and Atmosphere Programme has a programme called *Energy and Women: Generating Opportunities for Development*. This type of initiative is to be welcomed. However, if our goal is mainstreaming women in energy, then we still have a long way to go. Why does addressing women's special needs in the energy sector not match developments in other sectors, such as water and forestry, despite commitment at the international policy level to the Beijing Platform for Action to gender mainstream in all sectors of the economy? International agencies require their own gender expertise in order to be able to assist governments in the South with their efforts to mainstream gender. Developing this capacity clearly takes time.

**At the national level**, many rural households still do not have adequate energy services. When women's energy needs are addressed, this tends to be restricted to household energy, which is equated to cookstoves, and even then wood energy and improved cookstoves receive relatively little attention compared to other energy sources. As a consequence, the household energy sector has been under resourced and increasingly marginalised.

**What can be done** to improve the situation? Policies can be analysed for their lack of gender perspective and proposals made for policy development. The number of people currently active in gender and energy is small (but growing). As part of building up this capacity, more women should be encouraged to work in the energy sector, not only with renewables but also with conventional energy systems.

**Formulating more women-friendly energy policies** needs accurate gender disaggregated data, including data on the effects of particular policies (or lack of them) on women. This requires the application of appropriate tools. It is possible that decision-makers do not know either about the availability of gender tools or how to use them.

### **Have projects failed women?**

**Women's energy needs** have in the past been primarily addressed by externally funded projects. These projects seem to have developed a bad reputation as a sustainable mechanism for meeting women's energy needs. Too often pilot projects are discontinued and new projects started up without assimilating the lessons learnt from previous experiences. This type of criticism is common and is often linked to the short time horizon of donors. Projects have been unsustainable, not only financially but also institutionally, sometimes relying on the enthusiasm and drive of one individual (often an outsider). Another reason for project failure is a lack of consultation with women. Women's priorities have been neglected, their indigenous knowledge of natural resources left untapped, and their potential contribution to solving their own energy problems disregarded.

**Support is increasing** for income generation projects. Certainly providing women with access to cash resources can be viewed positively if it allows them to determine their own priorities and make choices about the energy forms they want. However, entrepreneurial activity needs more than a good idea to succeed. The energy inputs are often overlooked, as are appropriate markets for products and the transport to reach them.

**There have been** a number of micro-credit projects aimed at providing women with access to funding denied by the

commercial banks. On the surface, at least, micro-credit systems do appear to be welcomed by women. However, do they really provide sufficient levels of funding to move women out of poverty? Do they enable women to develop as entrepreneurs?

**The current trend** with energy projects is the promotion of electricity. What are the implications for women? Although electricity has many benefits, it does not help address the major energy problem facing most poor women, meeting daily cooking needs. Cooking with electricity is not cheap, running costs are significant and a stove has to be purchased.

### **Will the market serve women better?**

**The trend in the energy sector** at present is to allow the market to deliver energy services. Is this necessarily bad for women as end-users? Some modern marketing strategies would take gender differences into account when analysing the potential clients. Advertising would sell products to men and women in different ways. A company could promote their new products through imaginative training programmes that are client-centred, taking into account availability and skills. The company could arrange financing for its products.

**The negative side** is that the market might not be interested in targeting poor households if the firms concerned feel that the returns would be negligible. Since many poor households are headed by women, it might be considered that the market approach does not benefit women.

**Market approaches would** probably address gender issues on an efficiency basis. Enabling equity or empowerment is not a market objective. However, these objectives might be achieved indirectly. For example, women entrepreneurs would certainly be empowered and possibly would move towards greater equality in their family through the increased status gained from contributing to household income.

### **Where do we go from here?**

**These are clearly** exciting times in women and energy. Practical projects are increasing women's access to energy and allowing them to become energy entrepreneurs. Networks are starting at the regional level (for example in Central America), at the national level (for example in Tanzania and India), and based around sectors (for example the Oil and Gas Sector Women's Network in Pakistan), to provide support and exchange ideas. We need to document success stories, evaluate and build on the lessons learnt. This material could support advocacy work, it emphasises women's specific energy needs and how these can be sustainably attained, and it highlights the important role that women play in the energy sector. In the coming months, Energia intends to make the development of case studies one of its major objectives. ■

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*This article is taken from a paper presented at a recent workshop sponsored by ENERGIA on "Policies, projects and the market: Empowering women?". A full copy of the paper can be obtained by writing to Joy at the address above, or by e-mail to [j.s.clancy@tdg.utwente.nl](mailto:j.s.clancy@tdg.utwente.nl), or fax +31-53-4893087.*

## Meeting **ENERGIA** Members



**Sheila Oparaocha**  
**ENERGIA Secretariat  
Coordinator**

To begin with, I would like to wish you all a happy millennium. My name is Sheila Oparaocha and I have the pleasure of introducing myself as the co-ordinator of **ENERGIA** Phase Two. I joined the **ENERGIA** team on the 18th October 1999 and I now work at ETC International in the Netherlands.

I was born and raised in Zambia where I completed most of my education, finally graduating in 1993 with a Bachelors degree in Veterinary Medicine from the University of Zambia. Immediately after my graduation, I began working as vet in one of the leading veterinary practices in the country. In 1996 I married, and accompanied my husband to Thailand for the second half of his contract with the Food and Agricultural Organisation. Leaving my home for the first time was a difficult experience but I am grateful to have had the opportunity to travel to Asia. For instance, I was amazed to discover that even though Asia was in many ways new to me, how easily I could relate to different aspects of the social structure and family/cultural obligations.

During my 3-year stay in Bangkok, I had the privilege of meeting my mentor,

Dr Govind Kelkar, who later supervised my MSc in Gender and Rural Development Studies at the Asian Institute of Technology (AIT). After completing my Masters, I continued to work as a research associate in the Gender and Development Program at AIT.

It has always been my opinion that one of the principal entry points to development in the Third World is active networking between individuals and institutions in the South. AIT, being a regional institute and a melting pot for technical and development specialists in Asia, gave me the opportunity to learn and share with other Southerners not only from Asia but from all over the globe.

While living in Thailand I also had the opportunity to travel and conduct research in Lao PDR, Bhutan, India, Nepal and Malaysia. At the end of 1997, my husband and I left Asia to travel to his home country, the Netherlands, where we are currently living.

Being an African, and a citizen of one of the world's least developed countries, the reality of gender and energy issues in the everyday lives of women is one I can identify with. My experiences in Africa, Asia and in Europe have also shown me that women are energy managers the world over – from a rural child who learns early in life which firewood or charcoal to select for cooking, to an urban mother who has to pay the monthly household electricity bill. Working within an international network such as **ENERGIA** gives me with the opportunity to raise awareness on the important role that women play in sustainable energy development.

Finally, in my role as co-ordinator, I would ask that **ENERGIA News** readers come forward to share with others their ideas and experiences in the gender and energy sector, through letters, articles and case studies.

I look forward to hearing from you.  
**Sheila Oparaocha.**

## Letters to **ENERGIA**

I am a Nigerian Female studying at the Imperial College of Science, Technology and Medicine, London. In September this year, I will be receiving a Masters Degree in Environmental Technology with a specialisation in Energy Policy. My MSc course has strong emphasis in energy economics, energy policy, planning and assessment, energy law and regulation, energy use and efficiency, renewable options for energy generation, environmental management assessment and a range of technique workshops to prepare me as an energy analyst.

I am particularly interested in your network on women and sustainable development and would like to be part of this group. I wonder how I can

get membership? My current research interest is to research on how Nigeria can use Biomass as an efficient source of fuel in rural areas to eliminate the drudgery of gathering firewood by women and help ensure rural electrification as well.

**Mercy Ibifuro Arinye**  
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A few weeks ago you sent me a full set of the **ENERGIA** magazines. I have now received the

latest issue. First, let me say the magazine is wonderful! Exactly what I have been looking for. I have shown it to current students of mine whom I know to be interested in certain gender-energy topics, and they are very enthusiastic too. I now plan to use certain articles as case studies for the 'new' students (who are just starting the MSc in appropriate Technology and management - ARTES - at the University of Flensburg in Germany). I will be running a Gender seminar in November with them.

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# International Programmes: Focus on

## Energia: The Second Phase

By Sheila Oparaocha

**“We may have been out of circulation for some time - but we’ve still been busy. This article lets you know about some of the events that have taken place between the previous issue of *ENERGIA News* appearing and this one arriving on your desk.”**

The first phase of *ENERGIA*, a global network of people and institutions interested in gender and sustainable energy, which officially ended in December 1998, has been successfully completed. During this period the network has received increasing credibility and status, and has therefore in turn contributed to increasing the recognition of gender issues in energy planning. Building on these achievements and on the ongoing need to support those who are trying to ‘engender energy’, a second phase was initiated in July 1999, in which *ENERGIA* will work towards its original objectives in a broader and more comprehensive way. Two important changes that took place between the phases were the replacement of one of the original founding organisations, TOOLConcult, by ETC International (a non-profit making consultancy group specialising in development programmes) and the appointment of a full-time co-ordinator (see article on page 3).

### ENERGIA Objectives

For this three-year second phase, *ENERGIA*’s overall objective continues to be to “engender” energy and to “empower” women so that they can play an active role in energy planning and decision making, through the promotion of information exchange, training, research, advocacy and action aimed at strengthening the role of women in sustainable development.

Through these activities, *ENERGIA* aims to integrate gender issues into energy policies and planning.

### ENERGIA Newsletter

*ENERGIA*’s approach is to seek to identify needed activities and actions through its network, and then to encourage and assist members and their institutions to undertake decentralised initiatives. *ENERGIA News* is the principle vehicle for this approach. The newsletter also provides a forum to collect, analyse, discuss and disseminate information and experiences. It relies for articles on contributions from people working in the field directly focussed on women and energy issues. Seven issues were produced in the first phase, and in the second phase a total of twelve issues of *ENERGIA News* are planned. Issues are distributed to over 1000 addresses, of which two-thirds are in

the South. An Internet Website is also under development to play a similar role in facilitating the communication of information between people interested and practising in the area of gender and energy.

### Advocacy and Advisory Services

In connection with its advocacy and advisory objectives, *ENERGIA* has already played an important role in raising the visibility and credibility of gender issues in international energy programmes. Individuals that support *ENERGIA*’s objectives have represented *ENERGIA* and raised gender and energy issues in energy conferences and advisory groups, and have supported regional networking. A number of programmes, such as those of the UNDP/Energy and Atmosphere programme, have started projects on gender and energy



Participants at the 2-day November *ENERGIA* International Workshop in the Netherlands. From left to right: Rekha Dayal (World Bank, India), Leah Ndekuka (TaTedo, Tanzania), Dorothy Lele (CIDA Consultant, Canada)

following inspiration from *ENERGIA*. Others such as OLADE, ADB, UNIFEM and Winrock International have sponsored workshops for which *ENERGIA* has provided links to national and regional energy and gender networks, and information. In the second phase advocacy activities are expected to include: presenting *ENERGIA* work at international energy meetings; consciousness raising in key institutions; producing basic information materials; assisting network members in promoting gender in energy issues; and enabling its Southern members to attend meetings.

## Resource Centre

A **Resource Centre** is being established which will focus primarily on generating information that will be made available to members of the network, mainly through the use of the rapidly developing electronic information systems and the increasing amount of information available via the Internet. Through the Resource Centre, *ENERGIA* aims to raise the awareness and the level (quality and quantity) of information available to individuals, decision-makers and organisations on the gender issue in energy. However, *ENERGIA* will not forget that while many in the South have access to email, access to the Internet is less reliable and more expensive. Therefore information will also be made available in a printed form whenever necessary.

## Regionalisation

As a **decentralised** network, an important strategy of *ENERGIA* is to encourage and support the development of regional and national networks by its members. National *ENERGIA* networks are currently being established in Zimbabwe and Tanzania at the initiative of local members, and a Central American network, working closely with *ENERGIA* but not using the name, is active.

Of particular importance to the impact of *ENERGIA*'s regionalisation activities, will be the ability of the network to bring the issue of gender and energy onto the agendas of organisations that influence energy in the South. *ENERGIA* will shortly hold a workshop in Africa, aimed at bringing together individuals and representatives of organisations working in gender and energy who are interested in developing an action plan on gender and energy for Africa, and which can lead to the establishment of a regional African network. Moreover, through the promotion of international activities such as the November 1999 international workshop hosted in the Netherlands, *ENERGIA* aims to



Participants at the 2-day November *ENERGIA* International Workshop in the Netherlands. From left to right: David Woolnough (DFID, UK), Maggie Foster (The Schumacher Centre for Technology and Development, UK), Suzanne Roddis (Worldbank RPTES, USA), Rekha Dayal (World Bank, India).

further strengthen the linkages between national and international networks.

## Capacity Building

One of the most important functions of the *ENERGIA* Network is to increase worldwide capacity to deal with the gender and energy issue. There are very few energy experts with knowledge and skills in gender analysis, and very few organisations that can offer these services. The aim is therefore to increase the capacity of both individuals and organisations. Training is seen as the most suitable vehicle for capacity building in individuals, and networking and support of local networks as the primary means of supporting organisational capacity building. In furtherance of this objective, a training manual on gender and energy has been prepared and published by the Technology and Development Group of the University of Twente. The following package of measures are also planned: the assessment of training needs of different target groups - policy makers, energy planners and potential gender and energy specialists; the revision and preparation of new training materials to meet the needs identified; and the promotion of networking through inter-network visits.

## Research and Development

*ENERGIA*'s intention in terms of research and development is to increase the number and variety of case studies that bring to light the reality of the gender and energy issue, and to make these accessible to practising energy planners. In the past, *ENERGIA News* has been used as a

catalyst for generating case studies. More direct intervention is anticipated by *ENERGIA* under Phase 2 in terms of: the development of concept papers on women, gender and energy, that will provide a framework for the production of critical, analytical and reflective case studies; and the support of research in the South into energy projects and programmes and their impact on and involvement of women in order to generate case studies of sufficient quantity and variety. ■

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## From Women to Gender

We are thinking of changing our name from "*ENERGIA* International Network on Women and Sustainable Energy" to "*ENERGIA* International Network on Gender and Sustainable Energy". Five years ago when we started gender was an unfamiliar term. Today, however, gender is beginning to be heard more frequently. Is now the time to make the change? Write and send us comments, which will be published in the next issue.

# Networking Around the World

## Central American GENES Network

Katja Winkler, *Fundación Solar*  
Lisa Büttner, *Winrock International*

### International recognition of the

importance of gender roles is spreading in the global renewable energy arena. Many experts agree that gender roles can have a significant impact on the effectiveness and equity of energy-related projects. However, the application of this knowledge in field projects is still minimal. This problem has spurred several groups into pushing for greater information exchange, including case studies, lessons learned and overall gender awareness. The *ENERGIA* network is one of the pioneers for information exchange of this sort.

### The idea of building a Central

American regional network, focused on gender and sustainable energy, emerged in the context of the renewable energy related activities being implemented by Winrock International and its Central American REPSO within the *Fundación Solar* in Guatemala, and similar efforts in Brazil. Workshops in 1996 and 1997 initiated the process of raising gender consciousness among grassroots organisers and NGOs right through to government decision-makers and donors. This laid the groundwork for establishing an NGO network in the Brazilian Amazon and a multi-institutional, cross-sector network in Central America.

### In October 1998, the Central

America Gender in Sustainable Energy Network, (GENES) was formed with the consensus of over 50 organisations ranging from women's co-operatives to agricultural producer associations and national energy agencies. This network resulted from a workshop on the gender and energy nexus held in Antigua, Guatemala, co-ordinated by Winrock and the *Fundación Solar*, with the support of the Dutch HIVOS and USAID.

For most participants, this was a unique eye-opening event: never had they participated in a forum that brought women and men together to address the different roles that each plays in energy use and management. Just as women are traditionally left out of critical decision-making, men are rarely invited to join discussions on topics involving women's empowerment. The broad range of

perspectives — from women, men, technicians, energy specialists, feminists, anthropologists and other development specialists — generated lively and fruitful discussion, and ultimately led to a consensus on the need for an ongoing forum for dialogue and capacity-building on these issues. Enthusiasm for the idea was high, and the workshop culminated in the signing, by all organisations present, of a “Declaracion de Antigua”, formally establishing the regional network. Participants voted to appoint the *Fundación Solar* as the acting Secretariat for the network's first two years, and elected one organisation from each of the countries present to serve as National Co-ordinator.

The GENES Network aspires to improve the effectiveness, longevity, and equity with which energy projects address development priorities by advocating the importance of addressing gender distinctions and including women, as well as men, in project planning and implementation. In the long-term this will ensure the rational and equitable use of energy resources and will catalyse the process of sustainable development.

The first National Co-ordinators' Meeting was held in Managua, Nicaragua, in May 1999, to discuss the goals of the network and to produce a strategy for advancing its primary objectives, including:

- regional information exchange through

the distribution of a periodic bulletin;

- increased awareness and capacity of all member organisations in gender and energy issues;
- access to a database of member profiles, including needs and capabilities in gender and/or energy;
- acquisition of funds to facilitate exchanges, training opportunities, and the implementation of selected pilot project proposals from the network;
- increased awareness and interest among policy makers of the importance of gender in energy and development planning.

### Key issues for GENES

#### Recognising social inequalities

within an institution is important before gender issues can be effectively addressed outside the organisation. Development of gender sensitivity and social equity cannot be achieved through a few workshops; rather, gender awareness starts with a basic education that allows the institutions and its employees to address social inequity *within* the office.

#### Addressing gender issues in

fieldwork in rural areas starts with a series of evaluations and community assessments. These surveys reveal the sexual division of labour, which allows the host institution to address the needs of both women and men. Socio-economic and energy-related statistics need to be disaggregated by gender to enable accurate



Members of the GENES Network



channelling of effort in project development.

## PV Project Evaluation in Guatemala

The **Fundación Solar** has taken steps to gather gender-disaggregated data. In 1999, Fundación Solar evaluated the first PV project for domestic rural electrification in Guatemala, five years after its implementation. The technical part of the evaluation examined the geographic conditions, and the quality of the solar system components such as the panel, the battery, the regulator, and the lamp. The second element of the evaluation examined the larger social context of the project, such as community organisation and gender issues, as well as the efficacy of credit programmes.

The **evaluation showed** firstly that easier maintenance, simplification of technology, community organisation, and economic know-how of residents in the communities led to longer sustainability of the PV systems. Secondly, it was determined that women are the main users of the installed PV systems. However, women remain under-represented in energy projects. Since women were discovered to be the main users of the PV systems, it can be concluded that training of women is paramount for success of solar energy development projects. The Fundación Solar's experiences suggests that all GENES members committed to applying gender concepts will need to focus strongly on capacity-building.

**Some of the** GENES members have already taken the first institutional steps required to initiate the ongoing process associated with adopting gender sensitive projects and policies. Because of the difficulties associated with changing attitudes and organisational structures, any attempt at discussing – and perhaps changing – gender roles, is a long-term commitment. Engaging in an ongoing dialogue on gender is particularly challenging in culturally complex societies (such as Guatemala's), where the majority of the population is indigenous. Western concepts on gender are often foreign to much of Central America's populace, and must be framed within the local cultural context to be relevant and effective. Because of these challenges, socially appropriate capacity-building (related to both gender and energy issues) should play an increasingly important role in energy projects.

**A key challenge** for the network is to undertake training for all of its

members similar to that carried out by the Fundación Solar. Proper training in gender issues is the first of a series of steps needed to address development needs in rural areas. A great deal of time and effort is required to initiate attitude changes.

**Other challenges include** the lack of access to technology such as computers, email and the Internet which significantly inhibits communications; insufficient staff time within member NGOs to engage in GENES activities on top of daily responsibilities; and the high start-up costs for basic network operations (e.g. clerical support, travel expenses), which few donors are eager to cover.

**Unlike short-term development** projects, the GENES network is not a development project in itself. Rather, it is a process, a long-term vision with the goal of increasing access to energy services as a means of equitable social empowerment of both women and men. This long-term institutional commitment provides motivation for GENES members to participate in an equitable development process. The GENES agenda aims to respond to the real needs of the Central American populace, rather than use development formulas imposed from the top down. GENES works at the local level to unite development organisations and define local priorities in order to catalyse grassroots participatory development. It is in fact demand-driven in the sense that energy use and demand differ greatly between the sexes and that this fact needs to be addressed properly, making support by people in the field indispensable.

## Activities undertaken by GENES

### Communications

**The first tangible** result of the network was the distribution of two GENES bulletins, which provide information about the network's ongoing activities, its members, as well as news on energy and gender issues in the region. The bulletin was defined by the network co-ordinators to be a dynamic forum by and for all its members, and as such can evolve to suit the members' needs. As this information exchange is considered essential to the network, Fundación Solar is reaching out to all co-ordinators in order to understand and overcome barriers to participation in the bulletin which have become apparent with the initial issues. Information on the different activities of the network, such as the first co-ordinators' meeting in Nicaragua and gender-training experiences and exchanges, is included in the GENES bulletin, which can be obtained by Energia

members and others that are interested in their work by sending a request to Katja Winkler at Fundación Solar: [funsolar@guate.net](mailto:funsolar@guate.net). Several of these documents will become available on the Internet in 2000, through the Winrock International website.

### Exchanges

**In June 1999**, two member organisations initiated the first of two planned exchanges. ANDAR, an NGO from Costa Rica, sent four technicians to Honduras to receive technical training on Photovoltaic (PV) System design and installation from ADESOL, a Honduran NGO established by Enersol Associates; ANDAR, in turn, will host ADESOL staff for gender training. This exemplifies the kind of network exchanges from which all members could benefit.

### Information Dissemination

**In July 1999**, Fundación Solar, currently the Regional Co-ordinator of the GENES Network, hosted a meeting of all Guatemalan members to present the outcome of the Nicaraguan Co-ordinator's Meeting where the network's strategy was revised. The purpose of this follow-up meeting was to facilitate greater general understanding of the network's goals amongst its national members. ADESOL and ANDAR-CR have organised similar in-country member meetings.

### Local and Internal Gender Capacity-Building

**The leading institution** of the GENES network on gender and energy issues, the Fundación Solar sees gender training as an integral part of the development process and has made a commitment to mainstream gender in its institutional policies. Thus, in the second half of 1999, Fundación Solar undertook three gender workshops to introduce basic gender concepts and information on one of Fundación Solar's PV projects. Field workers discussed what was needed to ensure a gender-sensitive community needs assessment. Also discussed were the possibilities of PV training for women, which would enable women to become educated users of renewable energy technology.

**During an internal** workshop for technical staff, held in October at the Fundación Solar, regionally developed gender tools for the environmental sector were presented. The new, gender sensitive, methodology includes training on how to conduct a needs assessment for rural communities and on how to develop project proposals that specifically address women's needs. Previously, project analysis >

focused primarily on quantitative data. With the new gender-sensitive data, attempts are made to analyse qualitative data taking into consideration how women's roles in the community might change after a project is implemented. Although the strategies addressed gender and environmental issues, rather than gender and energy, the model proved useful as an initial introduction to gender tools for the Fundación Solar staff.

#### National gender policy

**Honduras:** ADESOL is participating in a seminar series organised by UNDP, entitled "Gender and Public Policy", which is engaging in dialogue on ways to make key Honduran laws more gender-sensitive.

**Guatemala:** Fundación Solar is currently participating in a multi-institutional effort to develop gender-sensitive environmental policies through contributions to Guatemala's National Environment Commission (CONAMA). CONAMA has begun to collect input from environmental NGOs and other organisations. Experience gained from this process could be used by Guatemala's National Energy Sector to develop a gender-sensitive policy for renewable energy. Fundación Solar is also involved in a dialogue on the gender issues in renewable energy with the Ministry of

Energy and Mines. The current ministry has begun to communicate with the renewable energy sector to find ways of introducing alternative energy sources into rural electrification efforts.

#### Fundraising

In September 1999, Winrock and Fundación Solar submitted two proposals on behalf of the GENES network, seeking support for a range of start-up activities envisioned by GENES network members. While donor bias is often for concrete projects, over less measurable capacity-building, these proposals have taken a holistic approach, requesting assistance for: basic infrastructure to enable improved information exchange; gender and energy capacity-building; regional exchanges; and ultimately the implementation of pilot projects to raise awareness and demonstrate the application of a gender approach to achieve equitable and successful provision of energy services.

#### GENES' plans for the future

In the future, the GENES Network hopes to influence the development of more equitable and sustainable energy policies. Consolidating the network by means of fluid inter-institutional coordination and communication, regional

exchanges, and pilot projects will be the key to achieving its goal of expanding and gaining a presence in regional energy policies.

**Equity can lead to successful rural development in Central America.** Development must include the empowerment of rural women as a means to improve the communities' quality of life. Development also includes raising awareness of gender issues amongst workers – both men and women – and providing equal access for women to decision-making processes in order to improve energy project design and humanise policies. This must be the path we follow if we are to arrive at a more equitable, fair, and integrated society with equal opportunities for both women and men. ■

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## Internet Resources



#### A brief list of Renewable Energy and Women Web Sites

The CSD NGO Women's Caucus is a working group created as part of the CSD NGO Steering Committee which is facilitating input and participation by non-governmental organisations into the United Nations Commission on Sustainable Development (CSD). The Women's Caucus welcomes participation of both women and men who are interested in, and working towards, the recognition of, and adequate decisions on, gender-related aspects of sustainable development issues. To subscribe to the internet list server, send a message to [women-csd-subscribe@egroups.com](mailto:women-csd-subscribe@egroups.com) or visit the e-group's homepage at <http://www.egroups.com/list/women-csd>

**ECOWOMAN**, is a loose collective of professional women scientists and technologists and grassroots women involved in science in the Pacific, including activities related to women

and renewable energy (solar ovens, cement stoves, and solar lanterns).

<http://www.wigsat.org/ofan/activities/ecowoman.html>

#### FAO Sustainable Development Dimensions

on the Food and Agricultural Organisation of the United Nations' site has interesting links to renewable energy and women's sites. Log on at:

<http://www.fao.org/WAlcent/FAOINFO/SUSTDEV/Welcome.html>

The Horizon Solutions Site home page links to a page that displays renewable energy case studies, including three from Nepal and Kenya that have a gender focus. Log on at: <http://www.solutions-site.org/default.htm>

#### The Household Energy Development

Organisations' Network (HEDON) is an informal consultative forum of diverse organisations working in this field. The site offers access to an electronic network, chance to comments on circulated papers written by members working in household energy and information on and links to many useful internet sites. Some links and the circulated papers featured have a gender focus. <http://www.energy.demon.nl/hedon/docs.htm>

**ITPublications**, Intermediate Technology's London publishing arm provides the opportunity to order books and gives access to their quarterly periodicals. <http://www.oneworld.org/itdg/publications.html>

**Solar Sisters:** On the web site of the Himalayan Light Foundation, it makes solar technology available to people involved in income generating activities and educational programmes that benefit the community and the poor by focusing on bringing solar power to Nepali women <http://www.panasia.org.sg/nepalnet/hlf/home.htm>

The Women Watch website provides information on the Beijing +5 global forum to be held from 5-9 June 2000 at the UN Headquarters in New York. <http://www.un.org/womenwatch>

◆ The above list excludes sites that have already been listed in earlier issues of **ENERGIA News**. Most of the additions are courtesy of the REPSource Newsletter, produced by Winrock International. The **ENERGIA** webpage (<http://www.energia.org>) has a link to a page of links that lists these and others links previously listed.



# Case Study:

## Women producing electricity from renewables: from “project” to “market”: The “Windfang” project in Germany

Christiane Delfs

**The installation and use of grid-connected wind turbines in Germany became common in the early 1990s. The breakthrough followed a new federal law on private energy input into the national grid, which remunerates private owners of windmills or photovoltaic plants at the rate of some 0.08 Euro/kilowatt hour. Soft-loans for investments in environmental friendly technologies enabled individuals and companies to invest in electricity generation. It was now possible to make a profit: wind- power became an interesting alternative to conventional investment, not only for a few ecologists but also for market-oriented investors.**

### A Man's World

The increasing number of wind-power plants led to professionalisation: jobs were created in electricity companies, in factories and sales offices for windmills (initially mostly in branches of Danish manufacturers) and some of the early enthusiasts started to work as wind energy consultants. However, in spite of the associated increase in jobs in the renewable energies, generally considered “soft technologies” - a characteristic more ascribed to women than to men, from the beginning the wind-energy sector was male dominated and women remained where they were: on the unpaid side of the scene.

Female engineers and scientists continue to face difficulties in finding jobs in the renewable energy sector. Unless a woman graduate has the good fortune of being in a supportive working atmosphere, surrounded by progressive male colleagues, she most probably will have to make a choice in her professional career between two extreme strategies: either to “fight” - within the existing structure or “flight” - to look for alternatives outside the existing structure. For example, by becoming self-employed or setting up a joint enterprise with other female colleagues.

The first strategy “fight” is best suited to women who first and foremost are career-oriented and do not aspire to venture into new types of interdisciplinary work or technology critique -

both of which are important subjects that include made (not only) by women's assessments of modern technologies and their impacts on the environment and society. The second possibility may sound attractive to ambitious female students but it is quite difficult to realise. Self-employment requires not only skilled competence but also a sound working experience. Once in the market, a woman engineer has to competitively sell her skills and services. Most of her customers are men, who often hesitate before accepting that women are competent enough to operate in a field classically thought of as being a male reserve: “Every new customer or colleague treats me like a beginner, a male colleague of my age would never have to defend his competence.” or “More often than necessary, I have to explain why I am working in this ‘exotic non-female field’.” These are typical experiences.

This article describes women's activities in the German renewable energy sector with its focus on *Windfang*, a co-operative that finances, builds and operates solar and wind electricity plants.

### Women in the field of energy

In Germany, there were several women's groups who were pioneers in developing the second strategy. These include (1) “Energiefrauen” (Women in Energy), a national informal network of more than 150 women students and professionals who, through the organisation of seminars and excursions, have been successful in overcoming the isolation of women in the energy field. (2) a group of non-expert women in Hamburg who have built a 5 kW photovoltaic plant as a practical step towards developing an environmentally-friendly technology and (3) the *Windfang* co-operative.



Women members are actively involved in the *Windfang's* photovoltaic project activities (Photo: Stromschnelle, Germany)



Women members actively involved in Windfang's photovoltaic project  
(Photo: Stromschnelle, Germany)

## The starting point

*Windfang* was born out of the dreams and aspirations of three women working in different energy enterprises and projects, who chose the middle path between the two extreme strategies of "fight" and "flight" described above. The principle was simple: "if men prevent us from achieving our goals, then we will go ahead without them". The three women proceeded to organise a seminar on wind energy that was targeted explicitly at the female public in Hamburg, Germany. Participants discussed technical information, energy policy; and the idea of a "female-owned" wind power plant was presented. Over time the group grew larger and, in 1992, the "*Windfang* Women's Co-operative Association" was founded.

At present the co-operative comprises more than 200 members, all of whom are women. Although most of the founding members were technically oriented, the group is now multidisciplinary and has members of all ages; from students to

women from disciplines such as theatre and economics, and so not every member has an exclusively professional motivation. Of common importance to most of the members, is the peer support gained from working within a group of women, and the self-gratification from pragmatically working towards a clean environment.

## Co-operative structure

One of the group's first priorities was to take a decision on the legal status of the project: unlike most other wind energy projects in Germany the group rated the formation of a democratic structure higher than the effectiveness of a normal, jointly-owned commercial company. Thus the choice was made for a co-operative structure, which offers the rights of participation in the decision-making process (e.g. regular election of the steering committee and board, decisions on larger issues through the general assembly) and the financial transparency needed for the shareholders and the banks through an annual audit. In this way *Windfang* has been able to combine a market-orientated, cooperative structure with a bottom-up decision-taking process.

New membership is mainly through inter-personal contacts, word-of-mouth or newspaper articles. One article in a fashion journal led to 30 new members, whereas articles in newsletters for female engineers have never been followed by any significant rise in membership.

## The Objectives

With the exception of a few non-profit groups, mainly involved in information and policy making, most German energy projects use renewable energy technology as a profit-making enterprise (where knowledge is kept within the bounds of the project management). *Windfang* on the other hand, has chosen a balance between profitability, eco-technology through the promotion of renewable energies, and the development of women's technical capabilities by increasing their work experience in energy projects and thus their chances of a better job. All of which is intended to be an environmentally sound investment for women.

## The everyday work

Owing to the economic attractions, *Windfang's* projects focus mainly on photovoltaic and grid-connected wind power but may sometimes be extended to other fields such as heat and power cogeneration (CHP). The planning of a wind energy plant requires a number of technical and administrative decisions: finding a good site, selecting the turbine and getting the necessary permission are only the starting points. Wherever possible the cooperative involves female experts at almost all the

Year	1995	1996	1997	1998
Technology	Wind turbine	Photovoltaics	Wind turbine	Wind turbine
Site	Northern Germany, coast	City of Bonn, Women's Museum	Northern Germany, inland	Near Hamburg (inland)
Rated power	450 kW	4.5 kW	600 kW	600 kW
kWh/year	950,000	3,500	950,000	1,100,000
Investment	€540,000	€39,000	€635,900	€770,000
Subsidy	€37,500	0	0	0
Investment per kW	€1,117	€7,977	€1,060	€1,283
Sales price 1999	0.085 €/kWh	1 €/kWh	0.085 €/kWh	0.1366 €/kWh

(€1 = 1.05 USD)

planning steps through contacts facilitated by the “Women in Energy” network. Working groups comprising of both members and non-members plan the projects. This allows women who cannot afford to buy shares to be actively involved in the activities. Thus knowledge can be transferred from experts to other women interested in participating, one of the objectives stated in *Windfang's* statutes.

**The creation of jobs** within the co-operative was not one of the original purposes of the association, which considered itself too small for this. However, since the current turnover from the plants is sufficient, all work is paid for and routine management is remunerated on an hourly basis. In principal, the “unattractive” and unqualified routine work should be first paid for and, whenever an order has to be placed, it is preferably given to a member.

## The projects

**The philosophy behind** the implementation of *Windfang* projects is: “whoever consumes energy should also feel responsible for its environmentally-sound generation - holding a share in a wind power plant should ideally be as uncomplicated as owning electrical appliances.” In 1995, armed with this principle, approximately 15 women actively worked in the planning of the first phase of a project to establish the first “female-owned” 450 kW windmill to be built to the north of Hamburg, Germany, in a village near the North Sea. The construction of two other wind turbines and a photovoltaic plant has since followed.

**In addition to** loans from the bank, four hundred co-operative shares were sold to women both within and outside Germany at a price of €1538<sup>1</sup>, in order to finance the investments in the wind power and photovoltaic plants. Each share is “producing” the electricity for approximately one household. After the usual start-up difficulties, aggravated since 1996 by a change in the economic situation and the rising competition in the wind market, the shareholders are now beginning to realise returns on their investments. In reality, the financial risk for the *Windfang* members is minimal: long-term wind data has been the basis of technical and financial planning and the German climate allows for a steady revenue from the wind turbines. Meanwhile, several of the founding members have set up their own businesses or found jobs in the field of renewable energies. Their activities in the *Windfang* group have undoubtedly contributed to these achievements.

## Lessons Learnt

**The contribution of *Windfang*** to “sustainable development” can be seen in two main respects: raising awareness amongst women on the presence and advantages of renewable energies, and providing empirical evidence of the possibility of practising democracy in a profit-oriented sector.

**The women also** experienced - not for the first time - that sometimes working with a group of women is anything but free from conflict. Some members, who essentially had their own careers in mind, found that the democratic structures and the large number of women involved were not the ideal situation for achieving their individualistic aims. This was especially so for those members whose expectation of the co-operative prioritised income-generation over the transfer of know-how.

**The co-operative members** also found that their working experiences with men changed: as investors and as suppliers of energy they were taken much more seriously. by male customers.

## Replicability

**This case study** appears fascinating: women in direct control of a predominately male technology and making it work. So why not replicate it wherever there is wind? This would not be as easy as it might sound, even in Germany - let alone in countries that do not yet have a booming wind-market. The project has been successful mainly because the socio-economic context of the early nineties provided a favourable environment:

*In the wind energy sector:*

- The technology was commercially available to launch such a project; it did not require technology entrepreneurs, pioneers.
- What started as an eco-niche whose has become a sector for large-scale investment. In the starting phase of a new development, it is normally easier to be “exotic”. Projects were small and thus required less start-up capital. Nowadays, even in some developing countries, most wind projects begin on a larger scale.
- Reliable electrical grids existed near the windy sites, the electricity-feed law guaranteed connection and the purchase price - owners of wind turbines did not really need to market their product.

*Amongst women:*

- *Windfang's* core group was sufficiently qualified to realise the projects through “learning by doing” - and they were in a position to invest a large amount of their own time.
- The positive feedback in the mass media made the project well known: technically qualified (thus “exotic”) women investing in large machines, far removed from the usual solar-cooking housewife which tends to be the dominating cliché associated with women and renewables.
- The market: women had money to invest, access to information and decision-making power over their money. At the time, many women were interested in investing in an environmentally sound technology, which allowed them to combine different objectives in a single project: ecology, return on investment and capacity building.

## The future

**Renewable energy plants** have an expected life span of more than 20 years. *Windfang* has to ensure that in the year 2017 people will still be available to look after these plants. The assumption is that this will be done by members working as freelancers. Today's profile with its emphasis on qualification may have changed by then, but the plants will be there and the founding activists will have used the experience from *Windfang* for their personal and professional development. ■

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<sup>1)</sup> average household income of a 4 person family (1994, net): €2300 per month



# Gender and Wood Energy in Lao PDR

Ms. Bandith Prathoumvanh

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Located in South East Asia, more than 80% of Lao PDR's 4.5 million inhabitants reside in rural areas and depend on agriculture for their livelihoods. It is estimated that the forest area of Lao PDR covers 47% of the total land area, one of the highest rates of forest cover in Asia. In comparison to its neighbours, access to fuelwood energy is not yet a serious problem, however the Ministry of Agriculture estimates an average loss of 20,000 hectares of forest each year.

In August 1999, with support from the FAO Regional Wood Energy Development Programme in Bangkok, the Lao Women's Union (LWU) Gender Resource Information and Development Centre (GRID), organised a 2-day workshop in Vientiane on Gender and Wood Energy. In preparation for the workshop, the GRID centre collected qualitative data in 4 villages - one village near each of the four GRID locations. At the workshop the results of the survey were presented, and policy and planning officials and development workers were invited to share information and exchange experiences. To the knowledge of the LWU, this was the first time that gender and fuelwood energy issues were discussed at a national workshop. This article presents a brief overview of the findings of the GRID survey on women and energy issues in Lao PDR.

A 1995 census conducted by the National Statistics Centre, found that 97% of the households in Lao PDR relied on fuelwood for cooking. Specifically, 94% of the households used wood, and 3% used charcoal. The State Planning Committee estimates fuelwood usage as 1 cubic metre per person per year, or a total of 4.5 million cubic metres every year. GRID's own research shows approximately the same annual rate of fuelwood use as the State Planning Committee, approximately 6 cubic metres for the average sized Laotian family. Most of this wood comes from natural forests since the use of waste wood from logging and manufacturing has not yet been developed. The value of this wood is estimated at \$88 million per year. For the past two years the State Planning Committee has been working with the Ministry of Agriculture and Forestry on fuelwood issues and, in 1999, it conducted a pilot study on wood energy planning.

## Women and Fuelwood Collection

Similar to other Asian countries, most wood energy users and suppliers in Lao PDR are women. Within the communities included in the GRID survey, women had the sole or at least the primary responsibility for gathering fuelwood, a task they performed two or three times a week. Additionally women were found to perform other household activities - cooking, water collection and child care, and often had to travel with their babies and small children when collecting water or fuelwood. Most of this wood was harvested from community forests and carried in shoulder bundles or in back baskets. A typical load of wood weighed 15 - 20 kilos. On average a woman collecting wood

for her family, carried 120 - 150 such loads per year. In ethnic communities where the division of labour was very strict, when women became incapacitated due to an illness or from childbirth, the security of the household's energy supply was threatened - evidence of the important role gender aspects play in wood energy management and planning in Lao PDR.

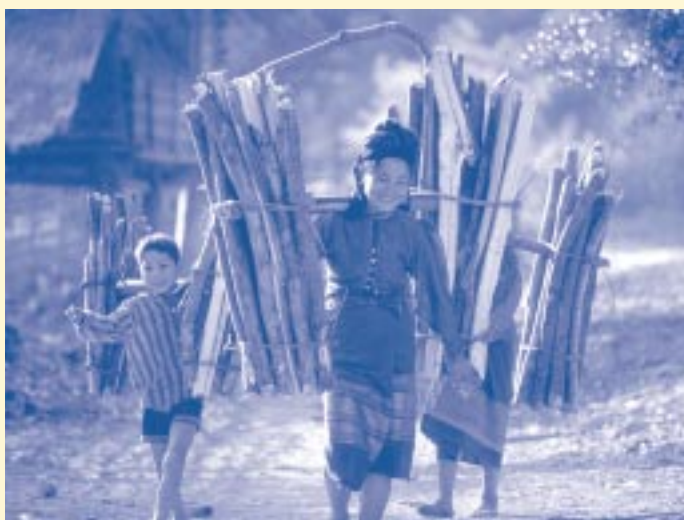
As households are not homogenous entities, the role of women in fuelwood collection was found to vary with economic status. Changes in the Lao economy, which have encouraged women to increase their traditional cloth-making activities to satisfy the growing demand for handicrafts both within the country and abroad, have brought with them positive shifts in the allocation of domestic responsibilities. The survey showed that when women became more active contributors to the family income through activities such as weaving and sewing, the division and pattern of family labour between husband and wife changed. Men became more involved in domestic tasks such as cooking, collecting firewood and collecting water, tasks that were traditionally the reserve of women. Often such families bought carts both the men and the women could use to transport heavy loads, which made it possible to plan collections as a group, so that families were able to gather larger quantities of wood that were sufficient for 6 -12 months.

Women involved in income generating activities were also more interested in energy saving stoves as a means of saving time and labour. These stoves are now being produced and marketed in Lao PDR and training on how to construct the stoves is available. However the women have not been completely satisfied with the stoves. Some complain that they are unable to use the stoves to prepare specific Laotian recipes such as 'jeow'. Empirical studies have shown that problems such as these could be avoided if women were more involved in all stages of the stove technology development process.

Moreover, there are still many parts of the country where it is very difficult for women to become involved in income generating activities. The market opportunities that have been provided for some have had little effect on women living in less accessible rural areas. Poor transportation and communication infrastructures have limited rural women's ability to buy inputs and to sell their commodities. These sorts of constraints retard the economic progress of the rural family production unit from one of subsistence agriculture to an enterprise that produces a surplus. With these constraints, rural women must work extremely hard just to provide the essentials - food, water, firewood etc - for their families. This heavy workload limits women's economic activities and girls' education. In fact the survey showed that women living in poor rural areas are the ones most in need of labour saving options such as firewood plantations close to their homes and fuel-efficient stoves, but that they lack the money or the information to be able to invest in these options. Development efforts and resources from organisations and the government that are directed at poverty alleviation need to address these issues if they are to benefit poor women and their families.

## Production and Preference of Fuelwood

In order to improve the family economy and reduce pressures on the primary forest, the Department of Forestry has



Most wood energy users and suppliers in Lao PDR are women (Photo: LWU - GRID Centre, Laos)

been promoting the planting of “useful trees” around homesteads. Generally the trees planted are either fruit trees or trees with a commercial value. Although in some communities there has been a tradition of planting “firewood”, the concept of cultivating trees specifically for fuel, either in the natural forest or on fuelwood plantations, is still new to the majority of the Lao. Most villagers rely on the community forest for their fuel and the Department of Forestry has begun to organise village-level Forest User Groups, given the mandate to put into effect regulations aimed at protecting community forests. During the GRID study it was observed that, in general, women did not participate in these groups.

**Organisations such as RWEDP** warn of the probable consequences to projects/programmes if gender issues are excluded. It reports<sup>1</sup> that several tree planting programmes, which were aimed at increasing fuelwood supply, failed because not enough attention was paid to gender roles and needs. Women are usually the ones responsible for planting trees. However planting and taking care of the trees is an extra workload for which they may not have the time. When the women do plant trees the wood may not be available for fuelwood because the men decide to sell it for cash. Also in the choice of tree species gender plays a role, men generally prefer trees that can be sold as timber, while women prefer (fast-growing) species that provide them with fuelwood. The GRID studies found that village women were very selective in their firewood collection and had a strong preference for certain types of wood that gave off less smoke<sup>2</sup>.

## Commercialisation of Fuel Wood

**In urban areas**, such as Vientiane the capital city of Lao PDR, fuelwood is a commodity, sold and purchased on the market. Interviews with individuals, conducted during the GRID research, revealed that the majority of people involved in the commercial trade of fuelwood came from poor families, for whom this was the best option for making a living. A trader would gather wood from open land and bring it by cart to sell at the marketplaces. However, traders did not have guaranteed access to land and in some cases were collecting wood illegally from restricted forests. Data from the GRID study showed that although it was clear that there was a market for firewood in

<sup>1</sup>) RWEDP Internet Web Site Report “Wood Energy and Gender” at [www.rwedp.org](http://www.rwedp.org)

<sup>2</sup>) A fast-drying hardwood called *maikhom* [*zizyphus cambodiana*] was the most preferred firewood, acacia was also commonly mentioned.

urban areas, interventions such as the allocation of land rights for firewood plantations and training on how to run a micro-enterprise would be necessary in order to overcome some of the constraints that hamper poor fuelwood traders - in particular women - from developing this income earning opportunity.

**Market-based approaches to energy issues** would also need to address the lack of business knowledge and skills amongst retailers. For instance, interviews with stove producers in the provincial areas of Lao PDR revealed that they were reluctant to sell their products at the real market price suggested to them by the organisation that had trained them. The producers feared that the recommended price was too high and that no one would buy the stoves. The stoves were therefore sold for a price only slightly above the costs of the production materials, hardly enough to make a profit from which the business could develop and prosper.

**At the policy level**, the lack of consideration given to gender issues could have disproportionately negative impacts on women. There is a risk that, if it is not restricted, large-scale commercial forestry will encroach on to land areas close to villages, thus forcing women to go further away to plant family gardens and to collect fuelwood. At the household level there is also a risk that, as fuelwood trade becomes more commercial and competitive, women’s access to economic resources in general will become even more limited through the abrogation of their traditional user-rights and ownership of land, and that their role as decision-makers in the family production system will be reduced. Dangers such as these were highlighted by the director of the Lao-Asian Development Bank Plantation Forestry Project, at the August 1999 LWU workshop. The Bank’s policies for a teak plantation project insist that the husband and wife discuss the associated issues together, and that they both sign consent forms before receiving a loan to develop a plantation. ■

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## AWARDS

### Developing Countries Prize: Women in Development

**The Justus-Liebig-University** Giessen, with the support of the Kreditanstalt für Wiederaufbau (KfW), has bi-annually awarded a Developing Countries Prize set at DM 100,000. For the years 1999/2000, the prize will be awarded for qualified scientific or outstanding practical work covered by the topic “Women in Development”. Applications should be submitted to the following address:  
 Justus-Liebig-University Giessen  
 Entwicklungslanderpreis  
 Ludwigstraße. 23 D-35390 Giessen Germany.  
 Deadline for applications is April 30, 2000.  
 Further detailed information is available at the homepages:  
[www.uni-giessen.de/jlupreise/entwick/](http://www.uni-giessen.de/jlupreise/entwick/) and  
[www.uni-giessen.de/zeu](http://www.uni-giessen.de/zeu)

**Regional Workshop on  
WOMEN AND SUSTAINABLE  
ENERGY IN AFRICA**

ENERGIA, the International Network on Gender and Sustainable Energy, the Environmental Liaison Centre International (ELCI), UNIFEM and Winrock International have joined forces to organise a workshop on Women and Sustainable Energy in Africa. The workshop took place in Nairobi, Kenya from March 13 to 15. This workshop has the objectives:

- a) To promote the full participation by women in the design and implementation of energy policies and programmes.
- b) To strengthen the capacity within the Africa region to carry out environmentally sound and gender sensitive energy projects and to advocate for policy change.

The outputs of the workshop are expected to be:

- a) The establishment of a regional network on women and sustainable energy in Africa.
- b) To promote networking, information exchange and action by individuals and organisations in the area of women and sustainable energy.
- c) To identify potential case studies.
- d) To develop a Regional Action Plan on Women and Energy.

**Each country participating** in the regional workshop was asked to organise a one-day national consultative meeting. The aims of these meetings were to identify priority needs and to exchange information and to document the knowledge and experiences about gender and energy within each country, which would form inputs into the Regional workshop. Participants in the consultative meeting were to include Community-based Organisations, NGOs, research institutions, universities, advocacy networks and government bodies. The national consultative meetings were also asked to produce case studies of successes and failures in women and energy projects. The consultation was also to identify a national focal point from amongst these institutions and select delegates to participate in a regional workshop, one of whom is the national focal point, one a community representative and one from a research institute, university or government institute.

# The Bulletin Board

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**World Solar Cooking and Food  
Processing Strategies and  
Financing**

**The World Solar** Academy organised an international conference in Varese, Italy from October 3-6, 1999 entitled "World Solar Cooking and Food Processing Strategies and Financing" under the auspices of the Director General of UNESCO, the President of the Province of Varese and the European Commission. It was attended by more than 300 professional experts from the field and research institutions as well as policy makers and private producers from 64 countries. The main focus was on assessing the present status of solar cooking and food processing technologies and to discuss future dissemination and financing strategies for widespread dissemination of these innovative technologies. The most important output-oriented part of the conference were the seven working groups.

**The working group** on Women and Solar Cooking found that, in the past, solar cooking efforts were concentrated on technical and economic aspects with too little attention being given to user needs and social and gender concerns. The group emphasised that while research and development must continue to improve the quality of the products, equal opportunities and resources should be allocated to non-technical aspects. It further pointed out that the promotion of solar energy for cooking and food processing must be seen as complementary to other available energy efficient technologies and systems. It called upon UNESCO to encourage and support member states to introduce energy saving cooking strategies into all school curricula, to assist in the production of the necessary training materials, and to encourage women as primary users to become more involved in technology development and adaptation. The essence of these recommendations is contained in the 'Varese Declaration' which should be available shortly.

**World Bank - Gender and  
Energy**

**This is to let** you know that a summary of our gender work in Senegal has been published in a short newsletter (Findings) for Bank distribution - "Senegal: The Role of Women in the Traditional Energy Sector - Gender Inclusion in an Energy Project". I will send you some hard copies for distribution but am wondering if you have an email list of Energia contacts who might wish to read it on line or they can ask me to send them a hard copy. It will be posted at this site: <http://www.worldbank.org/afr/findings/english/findtoc.htm> (February issue #152)

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**Gender & Renewable Energy  
Newsletter**

**Recognising a need** for greater awareness and information-sharing on women, gender and energy issues among its global network of Renewable Energy Project Support Offices (REPSOs), Winrock International dedicated a recent issue of its REPSO newsletter to gender. In recent years Winrock has begun to draw on its extensive experience, building women's leadership in Africa and the NIS, and is applying some of these lessons to its renewable energy programme. REPSO Vol. 4, No. 1, features articles from the field on REPSO income-generating activities involving women and energy; workshops on gender and renewable energy; impacts of involving women in project development; and the establishment of a regional network with the Central America REPSO in Guatemala (within the Fundación Solar). The newsletter highlights an interview with Elizabeth Cecelski of the ENERGIA network, and provides a list of contacts for other organisations that address the gender and energy nexus.

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# Next Issue

The theme for the next **ENERGIA News** will focus on new approaches to household energy, especially multi-sectorial development approaches. The deadline for articles and case studies for the next issue is 7<sup>th</sup> April 2000. Your contributions - articles and/or case studies (1500 - 2500 words) - are most welcome.

**ENERGIA News** plans to update the **ENERGIA** directory of the names and contact addresses (postal address, telephone and fax number, email and web site address) of all subscribers. The directory will also be posted on the **ENERGIA** web page. If for privacy reasons you do not want any part of your address listed in this directory or posted, please let us know before 1st April 2000.

**ENERGIA** is an international network on Women 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 women", through the promotion of information exchange, training, research, advocacy and action aimed at strengthening the role of women in 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.

**ENERGIA News** is produced jointly by Energy, Environment and Development (EED, Kurten, Germany), the Technology and Development Group (TDG, Enschede, the Netherlands) and ETC Energy (Leusden, the Netherlands) which houses the secretariat. The focus is on practice, with a conscious effort to interpret and learn from this practice.

Subscribing to **ENERGIA News** is free of charge but we do ask our subscribers to contribute to the newsletter by sending their own articles, letters, publications, reports, notes, resources, announcements, photos news and events in exchange. To become a subscriber to **ENERGIA News** or with any queries please contact:

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## Themes for future **ENERGIA News**

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