



Contents

Gender, Energy and Social Development <i>Editorial</i>	1
News from the Secretariat	3
International Programmes: Focus on... UNEP	4
Internet Resources	5
Meeting <i>ENERGIA</i> members <i>Minu Hemmati</i>	6
Networking Around the World	7
Energy as an Instrument of Women's Economic Empowerment <i>K.V. Ramani</i>	8
Women's Action for Development in Namibia - A Women's Self-Help Organisation's Approach to Solving Energy Problems <i>Veronica De Klerk and Dorothy Murithi</i>	10
Gender: The Missing Link to Energy for Sustainable Development <i>Fatma Denton</i>	12
Women Using Solar Energy as a Strategy to Fight Poverty and Deforestation. <i>Caaguazu, Paraguay</i> <i>Martin Almada</i>	13
Resources: Book Review. Toolkit on Gender Indicators in Engineering, Science and Technology <i>Tahira Syed</i>	14
Bulletin Board	15
Next Issue	16



Increasing evidence points to the fact that access to energy, including the impacts of energy use, affects women in different ways than men. This has resulted in the implementation of various initiatives, both at the research and practical pilot project levels, such as the dissemination of these energy saving stoves in Bhutan.

(Photo: Courtesy of UNEP/DEPD)

Gender, Energy and Social Development

Moving Towards the WSSD

This issue is being published in the midst of one of the busiest, and most important times on the development calendar: during the preparation for the World Summit on Sustainable Development (WSSD), to be held in Johannesburg in August 2002.

In spite of the omission of energy from Agenda 21, significant progress has been made since Rio in highlighting the critical linkages between energy and sustainable development. For example, the climate change debate under UNFCCC has put energy issues squarely on the international agenda, and at the ninth meeting of the Commission for Sustainable Development (CSD9) in April 2001, energy and transport were the topics on the agenda.

Also prominent has been the debate on access to energy by the poor, especially

women, the majority of whom reside in rural and poor urban areas. In the past ten years, practitioners in the energy and development sector have strived to highlight the need for gender-differentiated approaches in all areas of energy. Increasing evidence points to the fact that access to energy, including the impacts of energy use, affects women in different ways from men due to the different roles that they play in society. These efforts have resulted in the implementation of various initiatives both at the research and practical pilot project levels. These projects have had varied amounts of success, for example, increased access to microfinance for project implementation, use of renewable energy technologies for poverty alleviation, and increased awareness of the need for economic empowerment as a prerequisite for exercising energy service options. The articles that are featured in this issue demonstrate some of this progress, and also highlight the major work that still lies ahead.

K.V. Ramani's article about Project ENSIGN (Financing Energy Services and Income Generating Opportunities for the Poor) offers an analysis of the importance of economic empowerment as a key requirement for meeting energy access targets. As we move towards the WSSD, and as the Chair of the WSSD notes in his letter to participants at PrepCom (<http://www.johannesburgsummit.org/>), it is important that, for all our implementation plans, we identify targets, timeframes, and potential sources of resources. Even though such resources can be harnessed at the project level as demonstrated in Ramani's article, it is also equally important that a resource framework for energy access be agreed upon at the international level. The WSSD offers an opportunity to economically empower local communities, particularly women and other marginalised groups, for increased access to energy, both for household and productive purposes, thereby contributing to development.

The role renewable energy plays in addressing poverty has long been debated and, in this issue, Celestina Perez De Almada demonstrates how women in Paraguay are using solar energy as a strategy for fighting poverty and deforestation. The article clearly demonstrates the resources, coordination, and partnerships that are required for the successful implementation of gender-based renewable energy projects, as well as the multiplicity of areas that can be positively impacted upon by such projects. However, the positive impacts can only be realised if an integrated approach is adopted for such projects.

In this issue, some of the challenges faced by the solar energy subsector are presented and highlighted in a conference report on the International Solar Energy Society (ISES) Conference that was held in Adelaide, Australia, from 25-30 November 2001. It is gratifying to note that for the first time, ISES - which tends to have a heavy bias towards technical issues - had a special session on gender and sustainable energy. However, the main question of how to increase energy access by women and the poor remains unanswered.



◆ Dr Hespina Rukato holds a PhD in Environmental Management Standards: ISO 14001, from the University of the Witwatersrand. She has worked in the environment, energy and development field for ten years. Her work in the past few years has focused on energy and climate change. Dr Rukato worked for the Minerals and

Energy Policy Centre (MEPC) as Energy Programme Manager before she joined the Department of Environmental Affairs and Tourism in 2001 as Director of the WSSD Policy Unit. She is a member of the *ENERGIA* Consultative Group and she edited this issue in her personal capacity. Dr Rukato can be contacted at:

Tel: +27.(0)82.563.4149, Email: hespina@hotmail.com

Tahira Syed reviews a toolkit developed by UNESCO on Gender Indicators in Engineering, Science and Technology. Her review highlights the importance of using indicators to measure development, with a specific focus on women's participation in the scientific and technological fields. The aims of the toolkit are to sensitise policy makers to the benefits that sex-disaggregated information can bring to policy-making, and move them to action at the national level. This is urgently needed in the energy sector where there is a lack of good gender-disaggregated data. Policy makers and planners are becoming increasingly aware of the need for these data but are often left wondering what tools to use. UNESCO's initiative is timely.

From Namibia, Veronica De Klerk and Dorothy Murithi discuss the role of one grassroots organisation, Women's Action for Development (WAD), in uplifting the socioeconomic and sociopolitical lives of rural Namibian women. In this article, the authors show that many of the points made by Ramani, about the importance of both economic and political empowerment of a community as prerequisites for the success of self-help projects in Asia, are equally valid in Africa. This point is well demonstrated through the paper brick-making project, one of WAD's activities. It also highlights the potential success of using women's grassroots institutions such as WAD in the dissemination of energy technologies.

In this issue, we feature an interview with Minu Hemmati. Minu has worked very closely with the CSD women's caucus, and has been involved in many gender-related activities at the international level. Minu shares with us her views on the WSSD, with particular focus on the possible outcomes regarding energy. She also offers her views on how far the gender and energy debate has evolved since Rio, starting from the Beijing+5 process, and some of the issues that arose during the CSD9 sessions. This interview should energise us all in our preparations for the WSSD, a real opportunity to make a difference in development.

It is my hope that the outcomes of the WSSD will provide the necessary frameworks and resources for the mainstreaming of gender and energy programmes and initiatives on a sustained basis, and not only on a pilot/demonstration level. This will only happen if an integrated approach to dealing with gender, energy, and development is adopted by governments, the private sector, civil society, and all the major groups both during the preparatory process, and at the Summit itself. ■

ENERGIA is grateful to Dr Hespina Rukato, the Guest Editor for this issue, who worked jointly with Elizabeth Cecelski and Joy Clancy of the *ENERGIA* Editorial Board.

Correction

The *ENERGIA* editorial team wishes to apologise to Fatma Denton and Tieho Makhabane-Theoha for failing to acknowledge them as the authors of respectively the report on: the ENDA-RPTES Gender and Energy Workshop; and the SAGEN Planning Meeting, summaries of which appeared under Networking Around the World, page 5, *ENERGIA* News 4.4.



News from the Secretariat

ENERGIA Phase III Planning Workshop

From 18-22 February 2002, ENERZIA held a planning meeting in Soesterberg, the Netherlands, to discuss the third phase of its programme. Twenty-five people representing key stakeholder organisations and networks involved in gender and energy from Asia, Africa, Latin America, and Oceania attended the meeting.

The primary aims of the meeting were to provide a forum for the stakeholders to contribute to the development of:

- the content and components of a proposal for the next phase of ENERZIA; and
- the future structure of ENERZIA.

The meeting included an overview of ENERZIA activities to date, including a review of lessons learnt, opportunities and limitations from the earlier phases, and the results of the mid-term evaluation, leading to the:

- identification/revision of objectives and concrete areas for activities in the next phase;
- roles and responsibilities of the various stakeholders in delivering the outputs of the next phase; and
- definition of the relationships and linkages among the different stakeholders and how/whether these should be structured and formalised.

The participants critically reflected on the different areas of activity that ENERZIA is currently involved in: advocacy and advisory services; capacity and capabilities building; ENERZIA News; research and case study development; and the Resource Centre. They then defined what should be the aims and objectives, activities, expected outcomes, target groups, indicators, and assumptions for the next phase.

The discussion related to the organisational structure of ENERZIA for the next phase, centred around three main topics:

1. questions about membership;
2. questions about the organisational status (project versus formal entity); and
3. questions about participatory decision-making in a global set-up.

The participants visualised ENERZIA becoming a formal entity in the future, but due to the magnitude and



Divided into working groups, the participants of the ENERZIA Phase III Planning Meeting critically reflected on the areas of activity that ENERZIA is currently involved in. (Photo: Courtesy of ENERZIA)

complexity of the ground preparation needed before such a change could be effected, they decided that Phase III should continue as a project. This third phase could, however serve as a transitional phase to a formal structure.

No final decisions were made with regards to membership, what the organisational structure should look like, or decision-making. The participants felt the subject needed a much more comprehensive examination before any conclusions could be reached. The process for arriving at a final organisational design for the Network should however be transparent and include the participation of members.

One of the major reasons for convening the planning meeting was to increase the voice of key stakeholders in the ENERZIA network, especially from the South, in determining the network priorities. The next step will be the development of the proposal. The participants unanimously gave the Secretariat the mandate to produce such a proposal, and representatives were selected from the regions to form an Advisory Committee to provide comments on, and input to, the draft proposal.

Inputs to the World Summit on Sustainable Development

The World Summit on Sustainable Development (WSSD) will take place in Johannesburg in August-September 2002. The Johannesburg Summit follows the 1992 Earth Summit in Rio de Janeiro where the international community adopted Agenda 21 as a global plan for action pursuing sustainable development. The Johannesburg Summit intends to create an opportunity to

identify concrete targets for the better implementation of Agenda 21.

ENERGIA actively contributed to the needed emphasis on the importance of gender and energy at CSD9 and other related forums, and active participation has been pursued to "genderise" the energy debate (for more details refer to ENERZIA News 4.3).

ENERGIA, mainly through inputs from Ticho Makhabane of the Minerals and Energy Policy Centre - MEPC (Focal Point for the Southern African Gender and Energy Network), and Gail Karlsson (member of the ENERZIA Consultative Group), has also been active at the Third Preparatory Committee Meeting (PrepCom3) to WSSD held in New York from 25 March - 5 April 2002, with the objective of lobbying for the integration of specific language on gender and energy in the outcome document. Acting as the second substantive preparatory session, this meeting had the mandate to reach an agreed text for a document containing the results of the review and assessment of the CSD consultations and outcomes of PrepCom1 and 2, as well as conclusions and recommendations for future action.

Further to this background, and with the similar intention of drawing attention to the importance of gender and energy issues in the forthcoming Fourth Preparatory Committee Meeting (PrepCom4) to WSSD (due to be held in Bali, Indonesia, from 27 May - 7 June 2002), and for the WSSD in Johannesburg itself, ENERZIA has submitted a proposal for funding. A working group of interested parties, that includes representatives from the Africa, Latin America, and Asia and Oceania regions, has been formed around the proposed activities. The group consists of experts in the field of gender and energy. Apart from its advisory role, the group will also participate in the implementation of the proposed activities which include advocacy and lobbying at PrepCom4 and WSSD, preparations of regional summaries and a booklet around the theme of gender and energy, and hosting of exhibitions and side events at WSSD. As WSSD will be hosted in South Africa, MEPC, which is based in South Africa and is the Africa Regional Coordinator for the aforementioned group, will have an important role in the coordination of all the local arrangements. ■



International Programmes: Focus on

United Nations Environment Programme on Gender, Energy and the Environment

When you talk about climate change, air pollution, or deforestation and desertification, you will probably be looking at energy production and use as the causal factor. In fact, one can go further and look at human health, especially the health of women and children in developing countries, and in countries with economies in transition. The United Nations Environment Programme (UNEP) has prepared in-depth reviews of the health and environmental implications of various forms of energy production and use as one of the tools for providing advisory services in key areas of capacity development and technical co-operation in member states.

Being the lead UN agency on environmental issues, UNEP focuses on major groups such as women and youth, and seeks to involve these in its activities. Governing council decisions have required the Executive Director to engage and increase the involvement of women in providing leadership in caring for the environment so that future generations are not deprived of their right to life.

To understand how UNEP operates, it is important to know how its catalytic function in capacity development is achieved through the development and testing of guidelines, the identification and dissemination of best practices and success stories, and through pilot projects. Pilot projects further serve to develop and test guidelines for replication on a larger scale by UNEP's partners as well as by other organisations actively involved in environmental conservation management.

Why Women, Renewable Energy Technologies, and other energy-saving options?

As mentioned earlier, women are one of the major groups for UNEP. Further, they are prime movers in all aspects of civil society, another area that UNEP is currently

focusing on, as well as key decision-makers on the use of energy related products. It is unfortunate that world energy data on transport does not include the energy used by women in carrying loads on their heads/back when delivering produce to markets, fetching water, and collecting firewood etc., all of which can involve distances of many kilometres. Women are also the most vulnerable to effects of pollution and climate change. At the household level, women suffer due to smoke emitted from poorly constructed stoves burning inappropriate fuels. At a higher level, climate change leading to desertification for instance, increases the pressure on women's efforts to provide for the family (and the country since women are the food producers). At the same time, women are the primary educators, essentially defining the future lifestyles of children.

UNEP's Initiatives on Gender and Energy

UNEP Pilot Global Seminar on Women Leaders and Uptake of Renewable Energy Technology (RET)

As a contribution towards improving women's awareness of sustainable energy resources, and helping them to better access and utilise such resources, in June 2001, the Environmental Education and Training Unit of UNEP, with support from the Swedish Government, initiated a seminar on "Awareness and educational programme for women leaders on uptake of renewable energy technologies", of which the Global Seminar in Perth, Australia, was intended as a kick-off event. Thirty women leaders from 23 countries in Africa, Asia, and Latin America, attended a seminar on the uptake of renewable energy technologies (RETs) to discuss issues related to women and RETs. The seminar held in Perth was organised by UNEP in collaboration with the Australian Cooperative Research Centre on Renewable Energy (ACRE) and *ENERGIA*. (A review of

the seminar by one of the participants can be found on the *ENERGIA* Web Site.)

During workshop sessions, participants presented and discussed their experiences, and developed draft action plans for regional and sub-regional follow-up activities to the UNEP Seminar.

Planned follow-up activities resulting from this seminar included a national symposium in the Philippines, and follow-up seminars in Africa in 2002 in collaboration with *ENERGIA* and other NGOs in the region. In Latin America, contacts are being established with various key people in industry and government in order to plan for sub-regional activities on RETs.

Mega-Chad Biodiversity Conservation and Renewable Energy Technologies Project

This project started in November 2001 and will run through to late-2003. It aims to empower communities in four major countries of the Lake Chad basin (Chad, Nigeria, Cameroon and Niger) in West Africa to actively and effectively participate in sustainable development. The project, being implemented by the Centre of Arid Zone Research, University of Maiduguri, Nigeria, and the Lake Chad Basin Commission, is drawing upon and replicating successful experiences from an earlier pilot project in Nigeria on a model village practising sustainable use and management of energy and water. The project is applying a holistic management approach to natural resources, realising that the current energy and water requirements of the communities in this region directly result in a loss of biodiversity and eventual desertification, as these resources diminish with over-utilisation linked to human population growth.

Special attention is being given to community participation in the uptake of renewable energy technologies emphasising the need for the self-sustainability of the project. Women and men will be appropriately exposed to policy issues, technical and capacity building activities, as well as to related opportunities in RETs such as business openings in manufacturing (fabrication), sales, maintenance, book-keeping and management.

Youth groups will also form part of the target audience for environment and RET awareness through UNEP's Eco-school programmes, as these offer excellent opportunities for this future generation on both gender and environmentally sensitive energy issues. It is hoped that, through the Environmental Action Learning (EAL) programme using the Eco-schools approach, the Mega-Chad project will increase the participation of women and youth in information sharing as well as in the actual





The photograph shows a power generation utility in Nepal. It is part of the UNEP/ICIMOD pilot project, aimed at increasing the capacity of women in the rural areas of the Himalayas. (Photo: Courtesy of UNEP/DEPI)

uptake of renewable energy technologies; opportunities include fabrication and sale of energy efficient stoves, construction of biogas digesters to serve schools and clinics, and the efficient use of biomass in various forms. It is hoped that the lessons learnt from this project will help other countries and communities to implement similar projects.

Project on Incorporating the Energy and Water Needs of Women in the Rural Areas of the Himalayas

Poverty, increasing populations, and inappropriate development interventions in the hill and mountain areas of developing countries over the years, have led to adverse environmental (degradation of forests and water resources, decrease in soil fertility, land and air pollution) and socioeconomic impacts (most importantly, migration and consequent social dislocation).

Women have an intricate relationship with natural resources owing to their gendered roles and responsibilities, which require them to gather food, collect water, and meet the energy needs of their households. Most of the energy and water related institutional and technological interventions in the past have failed to consider women as primary beneficiaries, even though women are primarily responsible for managing energy and water requirements at the household level. Hence, strategies aimed at alleviating water and energy scarcity need to be sensitive to prevailing gender-based inequities.

The use of mechanical rather than manual technologies, and the changes in the form of energy used and water management practices (e.g. biogas and solar-powered energy systems instead of wood fuel in the cooking and processing of agricultural and forest products, indigenous renewable energy technologies, water harvesting technologies), can drastically reduce both the time involved and the drudgery of women's work. This will

further contribute to improved health through the reduction of drudgery and fuelwood smoke-related ailments, as well as to the conservation of biodiversity. Use of solar technologies and micro-hydropower for cooking, heating, and motive power applications (agro-processing, water pumping) will also reduce greenhouse gas (GHG) emissions by replacing the use of fossil fuels. Any new intervention for women should, therefore, aim to: a) reduce the number of hours of work; b) reduce drudgery; c) minimise the hazards and risk to health and life; d) increase productivity; e) enhance equity in the sharing of work and benefits; and f) widen the options for productive work through the saving of time and energy.

This UNEP pilot project (2002-2004) is being implemented in three countries in the Himalayas (Nepal, Bhutan and India) in collaboration with the International Centre for Integrated Mountain Development (ICIMOD) Kathmandu, Nepal. The project aims at increasing the capacity of women in the rural areas of the Himalayas, through training and the implementation of pilot projects in energy and water management. As with the Mega-Chad project, the lessons learnt from this project will be used to replicate this project on a larger scale in the Himalayas and the wider sub-region.

Other planned activities

Depending on the availability of donor funds, UNEP plans to implement two more regional pilot projects (during 2002-2003) on Gender, Energy and Environment; one in the Pacific Islands on solar water pumping and purification, and the other in the Caribbean on biomass energy and RETs. ■

◆ For more information on UNEP's activities on Gender, Energy and the Environment please contact: **Chief, Capacity Building Branch, Division of Environmental Policy Implementation (DEPI), United Nations Environment Programme (UNEP), P.O. Box 30552, Nairobi, Kenya;**
Tel: +254.(0)2.623891/3634,
Fax: +254.(0)2.624249 or the Focal Point for the programme in DEPI, UNEP at: **elizabeth.migongo-Bake@unep.org**

Internet Resources



The Himalayan Light Foundation website presents their Solar Sisters programme, which focuses on improving women's livelihoods by providing affordable solar lighting systems to community buildings used for handicraft production, educational programmes, and community meetings. Read more at: <http://www.hlf.org.np/solsis.htm>

SELCO (Solar Electric Light Company) Vietnam has worked with local women's groups to secure low interest loans with repayment schedules. It has also introduced a "Solar Electricity in Support of Women in Rural and Remote Areas" programme. Visit the website at: <http://www.selco-intl.com/index.htm>

Light Up the World proposes to bring low energy consumption lights to developing countries, to help improve literacy, especially of girls. The organisation is preparing a "Socio-Economic Impact Study on the use of Pico Power Lighting in Nepal". For more information, please visit: <http://www.lightuptheworld.org>

Proceedings of the Women in Energy Ministers' Conference of December 2000 Winrock International and ESMAP present the proceedings of this Conference, held in Durban, South Africa, from December 11-15, 2000 at: http://www.worldbank.org/html/fpd/esmap/pdfs/wew_Proceedings_eng.pdf

ENERGIA recently added to their website: "A Workshop on Women and Sustainable Energy in Africa", the final report of the regional African workshop, held in Nairobi, Kenya, March 2000, and its follow-up activities. The report can be found at: <http://www.energia.org/resources/publications.html>

Tell us a bit about yourself, and how you came to be involved in gender and energy activities?

My background is in psychology, and I did a doctorate in environmental and organisational psychology. Shortly after attending the Habitat II UN Summit on Human Settlements in Istanbul in 1996, I started to work as an independent consultant. Most of my work has been with the Stakeholder Forum for Our Common Future (formerly UNED Forum), focusing on women/gender and sustainable development issues the participation; and collaboration of stakeholder groups; information tools; and capacity building.

I am currently focusing on preparing Stakeholder Forums for the Earth Summit 2002, and in particular the 'Implementation Conference - Stakeholder Action For Our Common Future' (IC), to be held during August 2002, in Johannesburg. This process is developing joint stakeholder action plans on freshwater; energy; food security; and health.

What has been your involvement in the CSD, particularly CSD9 with respect to energy issues, and what energy-related activities are you involved in during the run-up to the WSSD?

I have followed the CSD process since 1997. From 1999 until 2001, I jointly coordinated the CSD NGO Women's Caucus. In 2001, we adopted a new structure and now have a group of organisations that take on various tasks. I remain responsible for the caucus' website and its list server, which serves as an information and consultation forum for about 600 organisations and individuals around the globe.

With CSD9, I worked with the *ENERGIA* team, advising on how to most effectively participate in the CSD process. *ENERGIA* lobbied very successfully for the inclusion of gender-specific considerations and decisions in the CSD9 outcome document. I must say that the *ENERGIA* team lobbying activities were well-prepared and based on a well-defined constituency.

In the run-up to WSSD, my work on energy issues is mostly concerned with the preparations for our IC. We have also decided to strive for each possible outcome of the IC process to be checked for its contribution to poverty eradication, social inclusion and empowerment, good governance, and gender equity.

What should be the role of gender and energy practitioners in the planning and preparations for the WSSD?

Energy issues feature high on the Summit agenda – not necessarily as a distinct chapter of the intergovernmental agreements, but

Meeting *ENERGIA* Members



Minu Hemmati

Stakeholder Forum for Our Common Future

Interview by
Hesphina Rukato

addressed in the context of poverty eradication, sustainable production and consumption, conservation of natural resources, health, and special initiatives for Africa and the Small Island Developing States. The first draft of the text was weak on gender mainstreaming – there is a need for lobbying to improve this situation, and build on the successes of CSD9.

The Summit offers great challenges. For example, a lot of space is being created for contributions by the business community, and gender and energy practitioners will need to keep a close eye to ensure that these contributions are complemented by those of other stakeholder groups, such as NGOs and women. Events, exhibitions, publications, etc. can help to bring gender and energy issues 'to life'. *ENERGIA* has a lot to offer in terms of good practice analysis and examples that can be brought to the fore to inspire Summit participants – governments, stakeholders, and the media.

What kind of energy projects and/or activities should be showcased at WSSD?

The focus should be on viable solutions and their success factors; those strategies that do indeed improve women's access to sustainable energy sources, particularly in rural areas and in poor urban areas. What is going on, what is working, what have we learnt, and how we can replicate, multiply, scale-up the good practice.

What are some of the key areas in relation to gender and energy that should be highlighted at WSSD?

Key challenges concern the equitable access to sustainable energy sources. In this context, there is a need to educate policy makers and donors as to how gender mainstreaming can effectively work, and which tools can be used and what difference they can make.

Another major issue is, of course, the lack of resources and the need for Overseas Development Assistance (ODA). There is a widespread tendency by many developed country governments to focus on foreign direct investments, particularly large investments, and we need to become clearer on the conditions under which these work, and when and where there is a clear need for ODA. It should be highlighted that resources do indeed exist, but that they are being invested in areas such as military and defence projects rather than in sustainable development.

Many women might find it intimidating to participate in a meeting of the size of WSSD. You clearly have mastered the skills needed! What advice can you offer to women who would like to participate in WSSD to enable them to both achieve their goals and enjoy the experience?

My first encounter with a UN meeting was indeed a bit intimidating, but also a great joy. It is an exceptional privilege to be able to contribute and participate in this way. A few things help: 1. Be part of a team or group in preparation and at the event. Meet every morning, for example, to review the previous day and plan next steps together. 2. Be clear about your objectives before you go and formulate your goals realistically. For example, participating in Johannesburg will allow very little space for impacting the outcome document, but it is a great opportunity for learning, exchange, and networking (see *Briefing for Participation in Earth Summit 2002* at www.earthsummit2002.org). 3. Allow yourself the time to adjust to the situation and make free time for yourself during the meetings. 4. Be aware that most people you meet are newcomers, too (even if they do not let you see that!). 5. Plan for some time to "digest" after you come home. Plan to share your experiences with your community/network at home. ■

◆ For more information, please contact:
Dr Minu Hemmati, Stakeholder Forum for Our Common Future, 3 Whitehall Court London SW1A 2EL, UK;
Tel: +44.(0)20.7839.1784,
Fax: +44.(0)20.7930.5893,
Email: minush@aol.com,
URL: www.stakeholderforum.org

Networking Around the World

ISES Gender and Sustainable Energy Workshop

Makereta Sauturaga

The International Solar Energy Society (ISES) 2001 Solar World Congress held from 25 to 30 November 2001 in Adelaide, Australia, provided an opportunity to share experiences on the use of renewable energy and, more importantly, to demonstrate clearly that renewable energy will play a key role in the sustainable energy future of any society. This was the first time that ISES had a special session on gender and sustainable energy.

Gender and Sustainable Energy Workshop

Why Gender and Energy: Getting the Message Across

The Gender and Sustainable Energy Workshop was held over two days had three sessions, the first of which was a panel discussion, chaired by Donnella Bryce of APACE. Dr Joy Clancy delivered the keynote address for this session speaking on "Gender and Energy – South North Perspectives." The panellists* were requested to speak on the theme "Energy is a fundamental tool for improving women's status and quality of life. How do we get the message across to the policy makers, planners and industry?" from their own project experience.

I looked at the question from two perspectives. Firstly, from that of a Government's energy planner. If energy policies are to highlight the importance of having a gender dimension in sustainable energy development, one will need to: identify the problem; establish goals; identify evaluate and select alternative policies; implement, and then monitor and evaluate policies. In this process, many discussions will be held with the relevant stakeholders in both public and private organisations.

Secondly, from the perspective of someone outside of the Government. To be able to get the message across to the policy makers, planners, and to industry, it is important: to know the appropriate forums in which to voice one's concern and use these forums accordingly, to understand the linkages among the other relevant stakeholders including the Government, to understand the Government decision-making process and the priority areas of Government. Government has to set an enabling environment for industries and the private sector to participate on women and gender issues. An important aspect is to carry out awareness training programmes on women and gender issues. International pressures have also affected national energy policies to some extent.

During the discussion session, questions and comments raised included: what is wrong with the use of paraffin? Why grid-connected? Lights are not needed for studying at night – school children need to sleep at night. How can dead batteries be replaced? How can we encourage women to move into the engineering field? How can we improve women's status in terms of energy? It is perhaps not surprising that the first three questions/comments came from male participants and the remainder were from female participants. A well-defined and targeted public awareness programme, through information dissemination and including awareness training programmes for all sectors and at all levels, is crucial in order to fully spread an understanding of the importance of sustainable energy, and its enabling role to move women out of poverty and subsequently improve their status and quality of life.

Best Practices and the Way Forward

The second session of the workshop included presentations of practical case studies demonstrating positive gender inputs and outcomes. Bob Lloyd from ACRE chaired the session. Three papers were presented:

- Gender and Sustainable Energy in Fiji: Makereta Sauturaga
- APACE Village First Electrification Program: Nixon Silas, Solomon Islands
- Solar Cooking Project: Maryann Green

The group discussion held afterwards enabled us all to become more aware of projects being undertaken in other countries and what are the lessons to be learnt from executing such projects. The importance of involving the local communities, particularly women, in any energy-related project was evident.

The third session, which was chaired by Joy Clancy, was essentially a group discussion on "Practical Ways Forward". Networking was found to be an important way of sharing information with others, however, it was felt that some financial support would be required to further this aspect.

Conclusions and Observations

- It is encouraging to note that there was a good gender mix of participants in all three sessions of the workshop.
- The organisation of each session was well prepared, in terms of what was expected to be achieved, and explained prior to each session. However, because of the dynamics of the sessions, one tended to lose the focus on the main themes under discussion.
- There was not a keynote address on gender in the main conference, and the possibility of including one in similar conferences in the future should be pursued. ■

* Dr Monica Oliphant (ISES 2001 Congress Convenor), Dr Paul Bryce (APACE President, Australia), Dr Joy Clancy (ENERGIA Board Member), Maryann Green (University of Natal, South Africa), and Makereta Sauturaga (Department of Energy, Fiji).



◆ Makereta Sauturaga has been involved in a variety of energy activities at the Department of Energy (DOE) for the last 12 years. She is currently managing a GEF/UNDP-funded project on promoting the sustainability of renewable energy technologies and renewable energy service companies in Fiji. She is also Office Manager of DOE and coordinator of the Department's energy conservation programme. Ms Sauturaga has a BSc (1990) from the University of the South Pacific, Suva, Fiji; and in 1998 was awarded a Master of Engineering degree in Energy Planning and Policy by the University of Technology, Sydney, Australia.

◆ For more information, please contact: **Makereta Sauturaga, Project Manager, Office for the Promotion of Renewable Energy Technologies, Department of Energy Fiji;**
Tel: +679.(0).386885, Fax: +679.(0).386301, Email: msauturaga@opret.gov.fj

Energy as an Instrument of Women's Economic Empowerment

K V Ramani

The Energy-Poverty-Gender Nexus

The role of energy in enhancing the socioeconomic prospects of people has been articulated for many years. However, it is only of late that the significance of this role has begun to be grasped in the context of the poor, especially the women among them.

The reason is simple. Faith in the ability of growth-oriented economic strategies to eradicate poverty within a predictable time frame has been increasingly eroded by the persistence of the problem. The majority of developing countries continue to grapple with the issue without appreciable success. As a result, development strategies are being redirected to tackle poverty head on. By extension, the search is now on for a more people-centred approach to energy, one that is capable of reaching out to the economically disadvantaged with a heightened sense of urgency.

If energy has a close relationship with poverty, it has an even closer and special relationship with the status of poor women because it is they who feel most acutely the scarcity of energy for a host of day-to-day needs. The vast majority of rural households have little or no access to modern energy, and what they can afford meets only a narrow segment of their needs at a subsistence level of consumption. These women, along with millions of their counterparts in urban settlements, continue to rely on traditional fuels and rudimentary technologies that waste resources and injure health. The extent of physical hardship imposed on poor women in acquiring and using energy for the most basic survival needs is an enslavement that denies them vital opportunities to escape their state of deprivation.

Energy is not the central cause of either poverty or the marginalisation of women. However, it can, and should, play a distinct role in resolving these interrelated problems. The simplest, and the most telling, manifestation of this potential is the substitution of human labour by an energy-using appliance or device which performs the same task at more efficiently and releases valuable time for other activities that are essential to self-development. There are numerous other instances in which a modern energy intervention could bring about profound changes in the lives of poor women.

How Can Energy Contribute to Women's Economic Empowerment?

Mainstream gender literature is full of stories of poor women who have grasped the slenderest of livelihood opportunities to enhance their family incomes and, in the process, acquired a new sense of purpose in their lives. In a typical example from Sri Lanka, Rajapakse (2000) draws on several cases of successful rural women entrepreneurs who were able to provide a better education for their children, send them to tuition classes or to learn other skills, buy sewing machines or other productive equipment, live in better houses, acquire furniture and household appliances, and enhance their living conditions in scores of other ways that would not have been possible on their husbands' income alone. Equally importantly, these women realised their self-worth and gained self-confidence, many finding new opportunities to contribute to their communities.

Across the developing world, there are countless similar stories of the ability of women to make a difference and escape from poverty. Their central message is this: *For the poor to escape their socioeconomic deprivation, it is necessary to create wealth since this is the only enduring solution to poverty.* Anything else might make poverty less intolerable, but it cannot extricate the poor from the trap they are in, a trap that often crosses generations. Raising the economic status of women is, thus, crucial to eradicate poverty as such. This is where energy can become an instrument for women's empowerment.

Unfortunately, most energy initiatives for the poor have been based on a welfare approach involving price and/or capital subsidies for basic needs' applications such as cooking and lighting. While there are obvious social benefits from these measures, they have little or no impacts on the economic status of poor families. These conventional approaches to energy interventions have largely missed the point, which is to free people from poverty by placing, in their hands viable means to earn income and build assets.

Energy services must focus far more on the livelihood opportunities for poor women to enhance their self-reliance, since this will invariably lead to an improvement in their social conditions. The reverse is not true. What this implies can be summed up in a nutshell. Since most women's income-earning activities are based on human labour, greater attention should be paid to energy services that can directly substitute or reduce the labour content of production — meaning specifically efficient fuels/electricity and related equipment/appliances for process heat and motive power. Such a strategy will improve product quality and increase production volume, with a potential for significant breakthroughs in income levels.



ENSIGN showed that if energy services focus on income-earning activities for poor women, that this will invariably bring about an improvement in their social conditions, as is perceived by these women beneficiaries of the project. (Photo: Courtesy of K.V. Ramani)

Proof of the Concept: Project ENSIGN*

The notion that energy can enhance the economic status of poor women was put to the test in a UNDP-sponsored pilot project implemented by the Asian and Pacific Development Centre (APDC) during 1996-1998. Project ENSIGN (Financing Energy Services and Income-Generating Opportunities for the Poor) was carried out in India, Indonesia, Mongolia, Myanmar, Nepal, Philippines, Sri Lanka, and Vietnam with the primary objective of employing energy to reduce poverty. The project was based on the following hypotheses:

- Only by enhancing their purchasing power can the poor meet the high costs of modern energy services.
- Access to such services can be facilitated by credit facilities with a grassroots outreach, the capacity to manage small-volume loans, and the ability to assemble small retail loans into larger packages that can attract upstream financing.
- Energy services can be made affordable by coupling them to income-generating activities. This will ensure close complementarities between energy and poverty eradication, and improve the poor's acceptance of energy projects.
- Such an integrated financing model needs energy-intensive microenterprises, which can have a higher success rate and replication potential than conventional stand-alone energy projects.

Project ENSIGN was centred around the idea of extending microloans to poor households/communities for energy-intensive microenterprises. In the event, 85% of the eventual borrowers of such loans turned out to be women. As a result, the project acquired a strong gender dimension and its outcomes have a direct bearing on the status of women and the implications of this as discussed earlier in this article.

Pilot loans under the project were co-financed by a regional revolving fund and national institutions in the participating countries, namely, SEWA Bank (India), Foundation of Technology for Development (Indonesia), Poverty Alleviation Programme Office (Mongolia), Yoma Bank (Myanmar), Lalitpur Financing Co., Pvt. Ltd. and Agricultural Development Bank (Nepal), Technology and Livelihood Resource Center (Philippines), and Regional Rural Development Bank (Sri Lanka). Contributions from the regional fund amounted to 36% of the total costs of the microenterprises financed, with national financing institutions covering 50%, and borrowers' equity accounting for the remaining 14%. Loans to very poor borrowers had no equity component, while a few loans that involved high cost equipment contained as much as 50% equity contribution.

The rate of interest charged on the co-financing component from the regional fund was one-third of the normal lending rate of the national financing institutions, with both the principal and interest

accrued subject to reinvestment in new loans. The interest rate to borrowers was thus somewhat below prevailing market rates, typically ranging from 15% in Indonesia to 20.5% in Myanmar. A concessional rate of 6% was applied in Mongolia since the microenterprise there was operated by a predominantly blind and disabled group of women.

Repayment periods for the loans ranged between two and six years, with longer repayment schedules, and grace periods of between six and twelve months, for projects with a renewable energy component. Amounts loaned averaged about US\$350 per household. Barring a few instances of delay, loan repayments were made according to the schedules set in all countries within the duration of the project.

In all, 36 energy-intensive microenterprises, involving 219 households, were implemented through the loans. They covered a wide variety of activities, such as garment making, embroidery, felt and leather goods manufacture, copper welding, utensils manufacture, baking, cold storage, rubber stamp making, beauty salons, grain grinding, threshing, fish drying and powdering, soybean processing, rice-husk charcoal briquette manufacture, battery-charging, manufacturing of rice- husk cookstoves, spice drying, beedi wrapping, cinnamon peeling, and rice processing. Urban microenterprises were based mostly on grid electricity in combination with efficient appliances, whilst rural microenterprises employed renewable energy sources (solar photovoltaic, solar thermal, and rice husks as biomass) as well as coal briquettes and diesel. In the majority of enterprises, process heat and motive power proved the primary applications for energy, with lighting playing a supporting role.

Project ENSIGN resulted in an average income growth of 124% in the households covered (see table). Variations in income growth were influenced primarily by the type of microenterprise activity, and the market for associated products/services. Exceptionally high-income growths were experienced in community-based, rather than household, enterprises; the former offering greater potential for higher capacity production equipment and labour-sharing. In some instances, owner-borrowers of community enterprises were able to offer employment to other households in the community.

Consistent with experiences with mainstream microfinancing, women borrowers under Project ENSIGN proved to be enterprising, innovative, and crucially, creditworthy. This provides a powerful argument in support of targeting women in ENSIGN-type initiatives. Apart from its economic impact, the project generated a range of positive social impacts, which mitigated the hardships faced by women. The most common social benefit for women was a reduction in their labour for household activities and in existing

Income Growth in ENSIGN Microenterprises					
	No. of Households	No. of Beneficiaries	Type of Microenterprise	Energy Source Provided *	% Increase in Income
India	28	139	Household	Grid electricity	54.5
Indonesia	33	132	Community	Coal briquette, kerosene, passive solar, diesel genset	66.3
Mongolia	32	120	Community	Grid electricity	137.5
Myanmar	5	25	Community	Solar PV	61.0
Nepal	25	150	Community	Solar PV, solar thermal	9.0
Philippines	30	210	Community	Grid electricity, rice husk	233.0
Sri Lanka	66	330	Community	Grid electricity, solar PV, rice husk	306.0
<i>Total/Average</i>	<i>219</i>	<i>1,106</i>			<i>124.0</i>

*Does not include efficient end-use appliances provided, especially using electricity.

enterprises that operated without electromechanical equipment. This enhanced their time available for childcare, recreation, and social interaction. It also raised their self-confidence as a result of their new or improved abilities to contribute to the household income and their greater control over self-generated finances.

In Conclusion

The outcomes of Project ENSIGN suggest that future actions should concentrate on establishing and strengthening the linkages between energy, gender, poverty eradication, and microfinance. This will require key policy changes and institutional innovations to bring together the various disciplines that have generally pursued their own agendas independent of one another. The results further suggest that these linkages should be centred on energy-intensive microenterprises, operated by women, and facilitated by local NGOs who can play the role of business intermediaries.

The overall conclusion is well expressed by Mirai Chatterjee, coordinator of the SEWA Social Security Team (Chatterjee, 2000): "As has been demonstrated time and again, assets in the hands of women form one of the most powerful tools to fight poverty in all of Asia. Investing in women is the best investment, is not only a popular slogan but a widely held belief among those engaged in issues of poverty and development. In country after country, investing in women has meant investing in the whole family's future." ■

References

- APDC (1998), 'Project ENSIGN National Reports and Regional Synthesis', Asian and Pacific Development Centre, Kuala Lumpur.
- Rajapakse, Srivani (2000), "Empowering Women Through Enterprise Development: The Case of Sri Lanka", in Asia-Pacific

Development Monitor, Vol. 2, No.1, Asian and Pacific Development Centre, Kuala Lumpur.

- Chatterjee, Mirai (2000), "The Gender Agenda for Asia-Pacific Countries in the 21st Century", in Asia-Pacific Development Monitor, Vol. 2, No.1, Asian and Pacific Development Centre, Kuala Lumpur.



◆ K.V. Ramani is Senior Coordinator of the Energy-Environment Programme of the Asian and Pacific Development Centre (APDC), Executive Secretary of the Asian and Pacific Energy-Environment Planning Network (APENPLAN), Executive Secretary of the Association of Development Research and Training Institutions of the Pacific and Asia (ADIPA), and Editor of the Asia-Pacific Development Monitor. Since 1982, Ramani has worked on policy and applied research projects and capacity-building programmes relating to energy policy, planning, and management. His recent work has focused on the environmental implications of energy, rural energy development, the role of energy in poverty alleviation, and the gender impacts of energy. He is currently engaged in work on the environment-trade-poverty nexus, South-South cooperation, and evolution of the knowledge society. ■

◆ For more information, please contact: APDC, Mr K.V. Ramani, P.O. Box 12224, Pesiaran Duta, Kuala Lumpur, 50770 Malaysia; Tel: +60.(0)3.651.2543/651.1088, Fax: +60.(0)3.651.2541, Email: kramani@pc.jaring.my

* Based on national reports and regional synthesis arising from the project — APDC (1998).



Veronica
De Klerk

Women's Action for Development in Namibia



Dorothy
Murithi

A Women's Self-Help Organisation's Approach to Solving Energy Problems

Grassroots women's organisations in Africa are frequently an effective channel for mobilising and improving the living conditions of rural women, at both the economic and political levels.

They are seldom involved in energy planning and implementation, however, even in household energy programmes. Sometimes it seems as if women's organisations and energy agencies are speaking two different languages. This article describes the economic and political empowerment efforts of a nationwide women's organisation in Namibia, Women's Action for Development (WAD), and their application in an energy initiative on paper-brickmaking launched by WAD. It throws some light onto why women's

organisations are effective at the grassroots level, and why they could be invaluable partners in disseminating energy technologies.

WAD's Approach

WAD is a self-help organisation that aims to uplift the socioeconomic and sociopolitical situation of, primarily, rural Namibian women. It is funded by the Konrad-Adenauer Stiftung and a number of other international and national donors. WAD operates in six regions, and presently has a membership of over 3,000 women and men. The organisation attributes its success to: its holistic approach to development; its record of good financial management; the fact that it has training centres, coordinators and trainers in the most remote areas, equipped with four-wheel drive vehicles; the continuous upgrading of staff skills; and the close monitoring and guidance by management and staff of activities; as well as to its "male-friendly" approach which can include men as project members.

Socioeconomic empowerment is based on skills development in marketable products and services, and savings clubs. Churches, schools, traditional authorities, and local decision-makers, are contacted to reach the women in the regions. Groups of women are first expected to undergo basic training in hygiene, nutrition, family planning, child care, AIDS awareness, etc., before they move onto marketable skills development training. WAD then assists with one-off donations of equipment or material to kick-start various projects, and WAD staff assist the project members on a daily basis with further training to guide them towards self-sustainability.

Special emphasis is placed on training in how to start a savings club, using inexpensive Post Office accounts. The group opens one account, but the members each have their own savings book with different colour stamps representing savings and withdrawals (since many women are illiterate). For example, a yellow stamp represents 50 Namibian cents, and a red stamp N\$1. Savings clubs have made it possible for groups to purchase equipment that would not have been possible for an individual. An unexpected spin-off has been the sensitisation of women to the advantages of smaller family size, since they quickly see that a woman with only two children can save much more than one with eight.

About 3,000 members have attended training workshops, and about 1,000 are currently participating in projects. Projects with energy-related aspects include wire-making (to curb the felling of trees for wooden fencing around homesteads), marula jam production, marula and rosella juice making, sunflower oil production, various bakery projects, and maize milling projects. Other projects include silk painting, needlework, butchery, gardening, rabbit production, computer literacy, and the production of linen shopping bags. Some projects are quite large-scale: for example the Spitzkoppe community-based tourism project hosts 400-700 people per month, and 80,000 linen shopping bags have been produced and sold. In this project, illiterate rural women are able to earn the same salary as a domestic worker in the capital.

Men participate in many groups, and women are starting to be trained in non-traditional activities such as welding, brick making, bricklaying, and carpentry. Many projects have development and ecological spin-offs - for example the incidence of malaria dropped by 40% in communities where mosquito nets were sold, and there is a campaign to replace plastic shopping bags with the linen ones.

Sociopolitical empowerment is a unique focus of WAD, through its assistance to members in establishing "Women's Voice" bodies in their regions. Communities choose their own bold and assertive female or male representatives to act as their official mouthpiece in the regions. Seven of these representatives from each of the six regions make up the "Women's Voice", and this body then addresses social problems within their communities, by making use of decision-makers, community leaders, and traditional authorities to assist in solving problems. For example, the Hardap Women's Voice, in the south of Namibia, successfully lobbied their authorities to establish a much-needed mortuary at one of the small villages in the region. Today the mortuary is a symbol for the community - that if they stand together with a sense of purpose, they can achieve anything they want.

Women's Voices also lobby appropriate authorities, and their communities, on educational and health problems, drug abuse, alcoholism, AIDS awareness, and to secure local jobs for local people. Examples of problems addressed include: lack of adequate sewerage and other infrastructure, the increased number of pedestrians being knocked down by vehicles, opening hours for health clinics, violence against women and children, late pension payouts, the lack of an ambulance.

Women's Voices identify and encourage women to stand as candidates in elections (though WAD itself is nonparty-political). WAD trains the Women's Voices in lobbying and advocacy skills. WAD members are continuously sensitised to making informed choices when they go to the polls to elect their leaders. They are encouraged to scrutinise the candidate lists of political parties to see the number of women included, and to study party positions on, for example, education and health before making their choice. Other political empowerment activities include training Women's Voice's members as paralegal advisers in the regions, through the Legal Assistance Centre of Namibia; and training community members to package their own radio programmes for broadcast.

Paper-brickmaking as a WAD activity

Namibia is the driest country in the subcontinent, and consequently firewood for domestic fuel is in short supply. Rural women, who traditionally collect firewood for cooking, find it increasingly difficult to find wood, and have to walk several kilometres and spend numerous hours on that chore alone. Some local entrepreneurs with vehicles at their disposal charge exorbitant prices for firewood. In the north, fencing around homesteads competes for the use of wood with cooking fuel, and further depletes the forests.



This women's group in Namibia is making bricks from paper to serve as a substitute for firewood. (Photo: Courtesy of WAD)

Paper-brickmaking was identified by WAD as a potential way of addressing these problems, as well as a means of reducing the urban environmental problem of unwanted paper. A paper-brick mould from South Africa was used to investigate a cheap way of compressing shredded and soaked newspapers into an easily transportable paper brick. The mould squeezes out the water from the pulp and simultaneously shapes it into the form of a brick that takes only a few days in the Namibian sun to fully dry out. WAD tested the paper bricks and found that a litre of water could be boiled with a quarter of a brick, within 15 minutes if used in the locally available energy-efficient Tso-tso stove. It was also found that the bricks burned better when broken in half lengthwise, and that the shiny advertisement paper, often included in newspapers, gave a bad odour to the bricks.

Paper-brickmaking, it was thought, could not only be a solution to the environmental problems cited above, but their manufacture might also be a business venture appropriate for rural women. Paper-brick moulds were ordered from the South African suppliers and supplied to all WAD training centres across the country.

Unsold newspapers are available free of charge since Namibia does not have a large paper recycling industry. Transport of unsold newspapers is provided by WAD field staff, who usually have

sufficient space in their pick-up trucks on their homebound trips. Newspaper editors have also expressed a willingness to transport unsold newspapers to the regions on their outward journeys to deliver new daily editions of their newspapers. Of course, if a large-scale paper recycling industry was established in Namibia, this source of raw material would evaporate; but this does not seem likely at present.

The bricks were initially introduced to women at all the WAD training centres to try out at home, to establish their acceptability as an alternative to wood. Field staff regularly demonstrate cooking with the bricks during large gatherings and meetings of WAD, as well as at media briefings, training centre activities, and so on. There is an ongoing education process. At this stage, the WAD training centres largely use paper bricks for cooking, and provide them free of charge to housewives. If the paper bricks become indispensable to cooks, as hoped, they could be sold to generate some income.

Acceptability of the paper bricks has been mixed since paper bricks are not a traditional fuel. Traditionally, people sit around an open wood fire that provides heat from coals long after the wood has burned out; paper bricks do not provide this congenial atmosphere. Namibians also prefer meat to be grilled on coals, a part of their national culture. Paper bricks also fall short in this regard. However, "potjiekos" - stews cooked in iron pots - have become quite popular in Namibia, and here paper bricks can be used effectively during cordial get-togethers.

The introduction of paper-brickmaking at the Omitara Informal Settlement is a special case that illustrates WAD's unique approach. During an explosive stand-off between white commercial farmers and residents of the settlement - mainly evicted former labourers - who were accused of illegally entering private land to gather firewood, WAD intervened to focus media attention on the residents' desperately needy situation, and to rapidly initiate a number of concrete actions. The paper-brickmaking initiative was one of these, aimed at providing a much-needed solution to the domestic fuel problem. A welcome spin-off was the zeal with which the community members produced and utilised the bricks for household fuel, portraying a more positive image of the Omitara residents who had previously been pictured as a nuisance and a bunch of thieves and trespassers on private property. In the process, WAD trained the women of Omitara in various needed areas, such as needlework, hygiene, nutrition, AIDS awareness, and child development care, using the WAD regional approach.

Lessons for introducing new energy technologies through women's organisations

Women's Action for Development carries out, among many other initiatives, a number of energy-related income-generating activities involving women and men in (mainly) rural Namibia. It has successful approaches and mechanisms in place for working effectively with rural women in groups, and in particular, for widespread dissemination of new technologies that could improve the energy efficiency of women's work and increase their incomes. To date, however, it has only carried out trials with energy technologies and energy efficiency approaches independently, without any assistance from energy organisations. The potential for mutually beneficial synergies and increased cooperation here would seem great.

The paper-brickmaking project is only one of the ways that WAD seeks to make rural women more self-reliant. The hope is that, in the longer term, paper-brickmaking can effectively reduce household expenditures, and the time that women spend on less productive chores, and make more time available for quality inputs into the raising of their families. This fits well with WAD's overall objectives of empowering rural women - to shake off the burdens of

under-development and ignorance that make them easy prey for oppression and exploitation by men. ■

◆ Veronica De Klerk is the executive director of Women's Action for Development (WAD), a founder member of various women's development organisations, and in 1997 was appointed as a member of the President's Economic Advisory Council (PEAC). Veronica has a strong commitment to improving women's status in society, and leading rural women to full emancipation. She attended a training course on the "Promotion of Women's Self-Help Activities in Developing Countries" in Marburg, Germany, and was also trained for television and radio. Veronica attended several international conferences on women's issues.

◆ Dorothy Murithi is the National Projects Coordinator of Women's Action for Development (WAD). Dorothy holds a Masters degree in Public Administration and Management, a Diploma in Development Policy, and a Bachelors degree in Education. Before joining WAD, Dorothy lectured at the Nazarene University in Kenya in Public Administration, Development Aid Policies, Community Aid for Development, Management, Finance, Education, Skills Development, and Political and Socio-Economics.

◆ For more information, please contact:

Women's Action for Development, P.O. Box 370, Windhoek, Namibia; Tel: +264.(0)61.227630, Fax: +264.(0)61.236372, Email: wad@mweb.com.na

Gender: The Missing Link to Energy for Sustainable Development

Fatma Denton

Enda Tiers Monde, with financial assistance of the World Bank, is putting together the publication "Gender: The Missing Link to Energy for Sustainable Development". The book will be launched in August 2002 at the World Summit on Sustainable Development (WSSD). Enda has therefore brought together a group of African experts to rethink gender and energy dynamics and constraints, by identifying policies and strategies to engender energy, reduce poverty, and empower poor men and women. Gender equality is fundamental to the achievement of sustainable development. Energy remains a useful link that can bring about a qualitative difference, and provide essential services, to both urban and rural poor. In spite of abundant data from gender studies and the successes in mainstreaming gender, the burning question is how far have we come in resolving some of the very complex problems with regard to the interface between gender and energy.

The figures are well known. Institutions like the World Bank persistently refer to the recognised 2 billion people, mostly in the South, who are without access to any form of modern energy. Biomass remains the commonest source of energy, representing almost 90% of energy resources in some of the poorest countries of the developing world. International conferences and seminars over the past two decades have rehearsed gaping gender inequalities that exist despite women's significant contribution to crucial production sectors such as agriculture.

Development policies and strategies, including gender issues have tended to be moulded outside of Africa. Most models and solutions have been grounded in Western realities, all too often with

Continued on page 15

Women Using Solar Energy to Fight Poverty and Deforestation-Paraguay

Martin Almada

The headquarters of our programme, Caaguazu, an area of 11,474 square kilometres, which was once the most heavily forested region in Paraguay, has a population of 400,000, of whom 72% are rural people. However, these people are now losing their traditional agricultural way of life due to the intrusion of timber merchants and livestock farmers.

Even though previous governments were responsible for maintaining conservation programmes for the forests, these programmes have been continuously undermined by the very same government agencies. This has occurred despite the fact that these agencies receive international financial assistance that requires them to undertake feasibility studies and environmental impact assessments for all development projects. The rural population in Caaguazu have no access to electricity, and have to resort to cutting down trees to meet their heating and cooking needs.

In an effort to reverse the damage caused by heavy felling in the forests, and the concomitant damage to the environment and traditional lifestyle; as well as to improve the quality of life of surrounding communities, a new initiative has been launched. The initiative is aimed at enabling women to successfully manage small, self-sustaining, businesses (begun with microcredit) using safe solar energy. It is the women who bear the main burden of providing and using biomass energy for cooking. A situation made worse by fuel scarcity; and negative health and safety impacts.

Other activities include improving the health and nutrition of the community, combined with providing training in basic literacy for women to run small projects such as using solar energy for water purification, cooking, drying, and the preservation of local foods and herbs. The British Government recently (February 19, 2002) donated equipment to be used to generate electricity for a school; to light 23 dwellings; to run a freezer, solar cookers and driers; and to purify water for bathing, cooking, washing, etc.

In addition to the above activities, our organisation has recently embarked on planning a "Solar Village" in the town of Bahia Negra. This plan is aimed at promoting self-sufficiency, self-empowerment, and mutual support for women. Specific project activities include education on the management of microcredit to sustain productive work, and providing greater access for women to technical information to facilitate their increased participation in decision-making on issues that affect the economy and the protection of the environment.

Programme Activities since 1994

Our first campaign to raise the public awareness of solar energy began in 1994. With assistance from Amnesty International, Basel, Switzerland, and the NGO ULOG; an engineer Jean Claude Pulfer was posted to Paraguay to provide workshops on the construction of solar ovens and solar cookers, solar driers for tropical vegetables and fruits, and ecological garbage disposal for schools. This project involved participation by community organisations and cooperatives in Paraguay, Argentina, and Uruguay. The overall title of the project was "Solar Energy, A New Paradigm". Course titles

included "Young Rural Women: Self-employment with Solar Energy", and "Women: Health and Food with Solar Energy".

Then, in October 1997, with the authorisation of the Ministry of Education of Paraguay, and the participation of several government and non-governmental organisations, the Foundation "Celestina Perez de Almada" began running the "Center for Solar Energy" (CEDESOL). Here, solar ovens and cookers, food dehydrators, and solar water heaters are used for various projects that include: producing food both for sale and home consumption, the manufacture of ecological paper from banana stems, and the drying of medicinal herbs for home use and sale. During one week in November 1997, various leaders of the Professional Association of Solar Artisans, Villa Seca-Vicuna, instructed more than 50 young rural women on the preparation of foods using solar equipment.

Running parallel to these processes has been our project, "Microenterprises for Young Rural Women Using Solar Energy". The direct beneficiaries are 70 young rural women, who traditionally would have been destined to move to urban centres for domestic labour, or face unemployment. Indirectly, the project has benefited 350 rural families. In addition to the solar processed foods and medicinal plants, and the production of ecological paper, this project also undertakes activities such as family gardens and the manufacture of ecological textile products such as shirts, pyjamas, and linens.

In 1999, we conducted an experiment in a primary school 80 kilometres from Asuncion in an organic banana-producing area. Before our experiment, the situation was that 60,000 tons of bananas went to waste each year due to the lack of preservation and marketing means, while at the same time children were suffering from malnutrition. With aid from the Swiss government, we installed ten solar driers and made dried bananas available to the pupils, their teachers and families. Some of the fruit is set aside for sale in the capital's market, where it is much in demand. One hundred small banana producers and 300 pupils benefit, and the mothers of these children play an important role in supervising these activities.

Conclusion: Poverty is Not Destiny

Since 1994, the Project in Paraguay has demonstrated the benefits of increased access by women to renewable energy resources, such as solar energy, as a way of combating poverty. Further, the Project has demonstrated that women can play a fundamental role in participatory community research, and the dispersion and use of solar energy in ways that lead to the improvement of the quality of life for rural communities. Paraguay's experiment in the use of solar energy can serve as a model for other rural women in the South and give tangible support to their basic human rights and economic empowerment. ■

◆ Dr Almada worked for UNESCO in Paris for 15 years from 1977-1992 before joining the Foundation Celestina Perez de Almada.



◆ For more information, please contact:
Maria Stella Caceres, Executive Director of the Foundation, or Dr Martin Almada, President of the Foundation.
E-mail: fundacion@rieder.net.py,
or malmada@rieder.net.py

Resources: Book Review

Toolkit on Gender Indicators in Engineering, Science and Technology

Authors: *S. Huyer and G. Westholm*
Published by: *UNESCO/GAB*
Review by: *Tahira Syed*

“The status of women has improved considerably in most developing countries in the past quarter of a century. Yet, in no region, do women enjoy equal legal, social, and economic rights” – how many times have we heard, read and referred to such statements. Although, these statements provide a ray of hope to those who have women’s empowerment close to their hearts, they are devoid of any clue to what exactly has changed, for how many women, and how do these women value the change.

Information on women’s contributions to development is far from comprehensive. Unfortunately, even when available, this information is not sufficiently utilised as a tool by planners and decision-makers in formulating sustainable development plans. To bridge the information gap, and understand the national and international patterns of women’s participation in scientific and technological activities, and their potential role, UNESCO has developed a toolkit to promote the collection of gender-disaggregated data in engineering, science and technology fields related to national and international policy.

The toolkit presents a method which will ensure the systematic collection of gender-disaggregated data in engineering, science and technology related areas, with the hope of convincing policymakers of the value of mobilising the contributions women can make to sustainable development. The basic premise for developing this toolkit is that “in order to ‘engender’ national and international data collection, it is necessary not only to understand and indicate statistically how women’s roles and situations differ from those of men; but also to understand how men may be differentially represented in science and technology, and are affected by its implementation.”

While recognising the fact that, as in other scientific systems, local knowledge systems influence technology and management practices, and can improve the quality of life for people; the toolkit also alludes to some of the limitations in collecting local knowledge, especially concerning women. The reason given for the difficulty in extracting local knowledge from women is given as – “...the primary social differentiation among adult, economically active members of a society is based on gender, specific spheres of activity become the domains of different genders as they increase their knowledge and skill over time. As a result, local knowledge and skills possessed by women often differ from those held by men.”

The toolkit presents some general trends in identifying specific indicators of human resource development and management in various fields of engineering, science, and technology, and these provide useful insights for developing gender indicators in development programmes geared towards capacity building and human resources. Historically, much of the resource material on gender indicators for sustainable development has remained focused on specific sectors such as agriculture or education. While the UNESCO toolkit attempts to address the issue of gender indicators in what have traditionally been identified as informal sectors – engineering, science, and technology, it still leaves a gap for addressing these sectors collectively.

From an overview perspective, the information and resources available, on the World Wide Web and from other organisations, on gender indicators in the energy sector, include three categories of indicators; namely 1) non “gender-specific” basic measures of energy sources such as “quantity/use of gas stoves” and “% of population using traditional fuels”, 2) women’s access to alternative or improved energy sources, and 3) women’s involvement in energy planning and implementation. The UNESCO toolkit makes only an indirect, albeit valuable, mention of these as part of a discussion on statistics and indicators of development resources in various engineering fields. Unfortunately, no specific case study or example is provided on gender and energy indicators. However, some very useful references and resource links are provided in the list of sources for gender-disaggregated data in engineering, science, and technology.

The toolkit comes at an opportune time, as there already exists an increasing demand for gender-specific statistics at the national and regional levels, from researchers, academics, women’s groups, and non-governmental organisations (NGOs), all of whom are interested in addressing various socioeconomic development issues and participating more actively in decision-making on such topics. The main purpose of this publication is to sensitise policymakers to the benefits that sex-disaggregated information can bring to policy-making, and - as the main recipients and seekers of such information - move them to action at the national level. In this capacity, policymakers possess the ability to actively influence both the production and the quality of information. ■



◆ Tahira’s background is in social sciences and research. She has been working in the development sector for the last six years. Her work with the CIDA-funded Pakistan Environment Programme (PEP) includes the provision of technical support and coordination to the PEP partners. She is also responsible for overseeing the implementation of the gender integration strategy for PEP, and the strategies of the individual partners. Recently, she has been involved in developing a National Gender and Environment Strategy for the Ministry of Environment, and in gender sensitisation within the Pakistan Planning and Development Division for the Government of Pakistan.

◆ For more information on this review, please contact:
Tahira Syed, Deputy Manager/Gender Coordinator, Pakistan Environment Programme (PEP), IUCN – Pakistan Programme, House #38, Street 86, Sector G-6/3, Islamabad, Pakistan;
Tel: +92.(0)51.2270686, Fax: +92.(0)51.2270688,
Email: tahira.syed@isb.iucn.org

◆ If you wish to obtain a copy of the book “Toolkit on Gender Indicators in Engineering, Science and Technology”, please send your requests to:
Sophia Huyer, WIGSAT/OFAN, 623 Brimley Rd. N., Grafton, KOK 2G0, Ontario, Canada; Email: shuyer@wigsat.org
The publication can also be downloaded through the Internet at:
<http://gstgateway.wigsat.org/ta/data/toolkit.html>

The Bulletin Board

CONFERENCE INFORMATION

Regional Workshop on Household Energy, Indoor Air Pollution and Health, 9-10 May 2002, in New Delhi, India

The workshop is being organised by the World Bank and Tata Institute (TERI). It aims to disseminate recent studies, findings and practical lessons, and provide a forum for discussing current activities and future needs to address IAP issues in India and the rest of Asia. The workshop is linked to the completion of a multisectoral study "India: Household Energy, Air Pollution and Health", undertaken by the World Bank with the support of UNDP/ESMAP. Gender will be one of the focus areas of the workshop.

◆ For more information, please contact: **the Secretariat for the IAP Workshop, TERI Energy Research Institute, Darbari Seth Block, Habitat Centre, Lodi Road, New Delhi 110003, India;**
Tel: +91.(0)11.4682100,
Fax: +91.(0)11.4682144/45,
Email: IAP@teri.res.in,
URL: <http://www.teriin.org/indoor/iap.htm>

Proposal for Women's Tent at the WSSD, 24 August to 5 September 2002, in Johannesburg, South Africa

The WSSD Women's Caucus proposes to organise and facilitate an All Women's Voices Tent at the WSSD in order to offer women from all parts of the world a place and common ground to voice their concerns and strengthen their networks, partnerships, and activities. The activity should promote women's empowerment, contribute to

engendering the WSSD, and result in a series of practical follow-up activities.

◆ For more information, please contact: **Rebecca Pearl of WEDO at: rebecca@wedo.org**

◆ To learn more about the CSD Women's Caucus activities, please check the website at: <http://www.earthsummit2002.org/wcaucus/csdngo.htm>

PUBLICATIONS

European Commission: Gender in Research: Gender impact assessment of the specific programmes of the Fifth Framework Programme – Energy sub-programme.

By: *Joy Clancy, Jenny Gregory and Deborah Cornland. Final Report. October 2001*

In June 2000, as part of its action on Women and Science, the European Commission launched a series of gender impact assessment studies to assess the way in which gender issues are being addressed within the Fifth Framework Programme. This study considers the implementation procedures of the energy programme and the research agenda set in this area of the Fifth Framework Programme.

◆ For more information about this publication, please contact: **Nicole Dewandre, European Commission, Rue de la Loi, 200 (SDME (5/85), B-1049, Brussels, Belgium; Tel: +32.(0)2.2994925, Fax: +32.(0)2.2993746, Email: nicole.dewandre@cec.eu.int**

ARECOP: GLOW, Vol.25, October 2001
This edition of GLOW features two articles describing gender sensitive participatory

monitoring and evaluation, which can be used for improved cookstove programmes. The ARECOP secretariat is working with resource persons to improve the guidelines and tools, based on participants' feedback. Further development will be done through lessons gained from pilot projects in Indonesia, Cambodia, and the Philippines.

◆ For more information, please contact: **Christina Aristanti, ARECOP, P.O. Box 19, Bulaksumur, Yogyakarta 55281, Indonesia; Tel: +62.(0)274.885247, Fax: +62.(0)274.885423, Email: arecop@ydd.org**

VACANCIES

Multiple Openings at the World Bank

In the context of the Energy Business Renewal Strategy, the World Bank's Energy Department is making a significant recruitment effort to align its skills mix with current and future needs. The World Bank is looking to fill the following positions:

- Rural Energy Specialist;
- Sector Reform/Regulatory/Private Sector Participation Specialist;
- Energy and Infrastructure Economist; and
- Global Environment/Climate Change Specialist.

The closing deadline was 5 April 2002, but this is an ongoing strategic recruitment process and applications may be considered beyond this date.

◆ For more information, please contact: **Etorre@worldbank.org**

◆ For information on the World Bank's Energy Programme, please visit: <http://www.worldbank.org/html/fpd/energy>

Continued from page 12

imported prescriptions and models on how to "fix" the problem. It is equally important to reconstruct the general study from an African perspective and thereby allow researchers across Africa to evaluate progress and examine current approaches and policies that have been formulated within the realms of gender and energy in particular, and development in general.

Pertinent issues are analysed, resolving some of the above concerns and enabling policy makers to become more than just passive observers. How do the poor define their own situation? Are gendered power dynamics necessarily predicated along adversarial lines between men and women, or is it really a question of complementarities and division of labour within the village context? Should we limit the debate to just energy issues, or should we widen the focus and exploit synergies with other development sectors to include constraints that men and women have to contend with regarding food security, water and sanitation, environmental hazards, and most importantly poverty?

The publication will include conceptual analyses, practical case studies, and possible solutions and gender issues for future trends. Part 1 will explore a whole host of issues from sustainable development, poverty and livelihoods, gender and energy, and policy issues; to case studies on linkages between gender and energy, transport, agriculture, and water and sanitation (Part2). Part 3 will look at possible solutions such as microcredit schemes, renewable energy technologies, energy services, and income-generation through networking activities; and the sensitisation of energy technologies and awareness-raising through information, research and training. With the approach of the WSSD, this is a timely opportunity to take stock of development approaches and paradigms, and to identify strategies that could help the marginalised and poorer sections of communities break away from the constraining fetters of poverty, define their own development choices, and embrace more viable and sustainable alternatives. ■

◆ For more information, please contact: **Fatma Denton, Project Coordinator, 18 Russell Rd., Hall Green, B28 8SE, Birmingham, UK; Email: fatma@africainformation.net**

Next Issue

ENERGIA News 5.2, due in August 2002, will be a special issue focusing on women and sustainable energy in Asia. Your contributions, articles, and/or case studies (1500-2000 words) are most welcome. The deadline for submitting contributions for the next issue is 15th May 2002.

Using material from **ENERGIA News**

Any information from **ENERGIA News** may be copied or reprinted, subject to the condition that it is properly credited and cited.

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" 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, University of Twente, 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 in exchange that our subscribers contribute to the newsletter by sending in their own articles, letters, publications, reports, notes, resources, announcements, photographs, news and events. To become a subscriber to **ENERGIA News** or with any query please contact:

◆ **ENERGIA** Secretariat
c/o ETC Energy
P.O. Box 64
3830 AB Leusden
The Netherlands
Tel: +31.(0)33.4326044
Fax: +31.(0)33.4940791
Email: energia@etcnl.nl
Website at: www.energia.org

Themes for future **ENERGIA News**

Women and Sustainable Energy in Asia: Volume 5 > Issue 2 > August 2002

Deadline for submissions: 15th May 2002

Special Issue on EnPoGen, a World Bank Energy, Poverty and Gender Project: Volume 5 > Issue 3 > November 2002

Editorial Team



Elizabeth Cecelski
Energy, Environment and Development (EED)
c/o ETC Energy, Postbus 64
3830 AB Leusden, The Netherlands
Tel: +49.(0)2268.901200, Fax: +49.(0)2268.901230
Email: ececelski@t-online.de

Joy Clancy
Technology and Development Group (TDG)
University of Twente
P.O. Box 217, 7500 AE Enschede, The Netherlands
Tel: +31.(0)53.4893537 / 3545, Fax: +31.(0)53.4893087
Email: J.S.Clancy@tdg.utwente.nl

Margaret Skutsch
Technology and Development Group (TDG)
University of Twente
P.O. Box 217, 7500 AE Enschede, The Netherlands
Tel: +31.(0)53.4893538, Fax: +31.(0)53.4893087
Email: M.M.Skutsch@tdg.utwente.nl

Anja Panjwani-Koerhuis
c/o ETC Energy
P.O. Box 64, 3830 AB Leusden, The Netherlands
Tel: +31.(0)33.4326044, Fax: +31.(0)33.4940791
Email: a.koerhuis@etcnl.nl

ENERGIA News

Design

Kon. BDU Grafisch Bedrijf bv

English Editing by
Englishworks, Hengelo

Printed on environmentally
friendly paper by
Kon. BDU Grafisch Bedrijf bv

Sponsored

ENERGIA News is sponsored by the
Directorate General of International
Co-operation (DGIS) The Netherlands