



Contents

The WSSD and its Results Regarding Gender and Energy <i>Editorial</i>	1
News from the Secretariat	4
Networking Around the World	6
Meeting ENERGIA Members <i>Phumzile Mlambo-Ngcuka and Heidemarie Wiczorek-Zeul</i>	8, 9
International Programmes: Focus on... Global Village Energy Partnership	10
Saluting Women's Space while Struggling for the Inclusion of Gender in the Summit <i>May C. N. Sengendo</i>	11
Differences and Similarities: a North-South Comparative Analysis <i>Ulrike Roehr</i>	14
Improving Energy Services for the Poor in Africa – A Gender Perspective <i>Stephen Karekezi, Khamarunga Grace Banda and Waeni Kithyoma</i>	16
A Case Study in the Brazilian Amazon Region: a Gender Approach to Energy Supply <i>Adélia de Melo Branco</i>	19
Gender and Energy in Southeast Asia <i>Rachel V. Polestico</i>	21
Climate Justice and Gender: the Need for Capacity Building <i>Gotelind Alber</i>	23
Next Issue	24



World Summit on Sustainable Development Johannesburg, August/September 2002. ENERGIA Coordinator, Sheila Oparaacha, consulting with a member of the Women's Caucus, before the multi-stakeholder dialogue session on energy held during the plenary meeting at which ENERGIA represented "women as a major group".

The WSSD and its Results Regarding Gender and Energy

*Adélia de Melo Branco
Ulrike Roehr*

Expectations in the run up to the World Summit on Sustainable Development (WSSD), held in Johannesburg, South Africa, from 26 August through to 4 September 2002, were high.

The main goal of the WSSD was to agree on ways and actions to combat poverty and promote sustainable development around the world, with particular attention to the South. Although much was discussed, the accomplishments were limited when it came to decisions and agreements towards

action. However, the discussions on the five thematic issues (Water, Energy, Health, Agriculture, and Biodiversity) were of great importance as these offered a unique opportunity for the exchange of ideas and experiences between members of governmental and non-governmental organisations from all over the world. The inclusion of sustainable energy marked significant progress since the Earth Summit held ten years earlier in Rio de Janeiro, Brazil, where it was inexplicably not on the agenda. Moreover, in Johannesburg, it was one of the most important negotiating issues at the Summit.

Accounting for gender differences and focusing attention on women, youth, children, and vulnerable groups, are

highlighted in the introduction of the WSSD Plan of Implementation (PoI) as important outcomes of the Summit. Gender equality was also considered a basis for sustainable development. Nevertheless, these ideas failed to follow through into any of the discussions on the specific themes being addressed by the Summit, with the disappointing consequence of a PoI that is weak in addressing gender and energy questions. This issue of **ENERGIA News** focuses on the WSSD as it relates to gender and energy, and highlights some of the issues that the PoI could have tackled such as policies to facilitate the uptake of appropriate energy technologies that would mitigate the poverty experienced by women, who as a group make up the majority of the world's poor.

In spite of the shortcomings of the PoI, it is fair to say that the need for gender-sensitivity in energy planning and policy has become much more widely recognised and accepted (see box). This is due largely to the efforts of organisations such as **ENERGIA**, *Enda Tiers Monde* – Senegal, and UNDP that engaged in lobbying and advocacy activities at UN meetings leading up to the WSSD, including the Ninth Session of the UN Commission on Sustainable Development (CSD9) which focused on energy issues (see **ENERGIA News** 4.3 for more information on the integration of gender and energy in CSD9 and an explanation of the processes and jargon).

Highlights of Progress Made in Integrating Gender and Energy Linkages into WSSD Plan of Implementation

Energy and poverty linkages: paragraph 8 in the PoI calls on governments to improve access to reliable and affordable energy services sufficient to facilitate poverty alleviation. Women, who make up 70% of the 1.3 billion people that live on less than one dollar a day, would directly benefit from such a strategy.

Energy and education for girls: improved education for girls is a theme which is mentioned several times in the PoI such as in Paragraph 6(g), Paragraph 109 (b) and Paragraph 113. Improvements in energy access to reduce the burden of household subsistence tasks are especially important for freeing up girls' time to allow them to attend school.

Energy and Health: paragraph 49(d) of the PoI firmly acknowledges that women and children are disproportionately affected by the current rural energy situation, and calls for special efforts to address their situation.

With support from Swedish International Development Assistance (Sida), **ENERGIA** undertook a leadership role in mainstreaming gender and energy at WSSD. As part of this initiative, **ENERGIA** was able to bring together an impressive group of gender and energy experts and advocates, such as the regional and national focal points for the Africa gender and energy network including, South Africa's Minerals and Energy Policy Centre (MEPC) and the East African Energy Technology Development Network in Uganda (EAETDN-U) as well as **ENERGIA** partners in Asia, Latin America and Africa: Indira Gandhi Institute of Development Research (IGIDR) in India, Xavier University in the Philippines, Joaquim Nabuco Foundation in Brazil, and Dikepolana Resources Ltd in South Africa. The primary focus of the **ENERGIA** group attending the Summit was to achieve a wider recognition of gender and energy linkages in the energy negotiations at the WSSD, and to incorporate a gender perspective into new activities initiated as outcomes of the WSSD. The representation at the Summit of gender and energy issues from four different regions served to strengthen the legitimacy and credibility of **ENERGIA's** message.

The ENERGIA group was able to make strong representations on the importance of gender sensitivity in energy planning, decision-making and project implementation at a variety of events such as the Implementation Conference (August 24-26) organised by the Stakeholder Forum for Our Common Future, and at a UNDP-sponsored workshop on gender and energy at the Ubuntu Village venue. In collaboration with the Women's Environment and Development Organisation and two European women's groups (Women in Europe for a Common Future, and LIFE/Women's Environmental Network, Germany), the **ENERGIA** group organised a discussion on gender and energy issues at the Women's Tent in Johannesburg during WSSD, with the Minister of Minerals and Energy from South Africa as the keynote speaker. Related to its lobbying activities, the group presented language on gender and energy which was accepted by the Women's Caucus for WSSD and incorporated in the statement delivered by the Caucus to the UN plenary. A representative from the group was also called upon to represent "women as a major group" in the discussion on energy during the UN plenary session. A report on **ENERGIA's** activities at WSSD will be posted on the **ENERGIA** website at www.energia.org.

An article written by one of the group members, May Sengendo, provides a very thorough and insightful reflection on the challenges to incorporating gender at the WSSD, by pointing out the difficulties women and men had to face in ensuring that gender was included as a priority in the negotiations. In May's view, the achievements women have enjoyed in previous UN Conferences such as the United Nations' Fourth World Conference on Women held in Beijing, and its follow-up Beijing +5, have not been enough to guarantee them the political space for presenting their demands and concerns. There is still a need for advocacy, and capacity building in conducting advocacy, since many women feel overwhelmed when participating in large international forums.

An important outcome of the WSSD was the recognition of the need for partnerships among different stakeholders in the development process; with the UN and its daughter organisations, governments, businesses, and civil society coming together to increase the pool of resources to tackle global problems on a global scale. Despite the fact that the success of these partnerships cannot be guaranteed, they certainly represent a major development in commitments to mobilise action for sustainable development when compared to the limited success so far in implementing the objectives of Agenda 21, the Plan of Implementation from the Rio conference. The importance of partnership building with particular reference to the energy sector is dealt with in this issue's article on the Global Village Energy Partnership (GVEP). GVEP was launched at the WSSD by UNDP and the World Bank Energy Sector Management Assistance Programme (ESMAP). The presence of **ENERGIA** in the GVEP planning process at WSSD represents a window of opportunity through which advocates for gender-sensitivity in energy policies and planning can work to influence the process of designing new approaches to energy use and availability, and to be involved in the implementation of those plans.

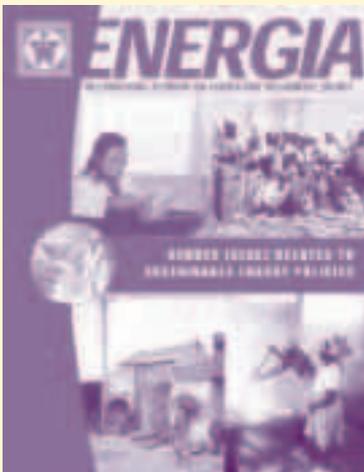
The interview with the South African Minister of Minerals and Energy, Phumzile Mlambo-Ngcuka, which was conducted before the WSSD, provides an interesting comparison between the aspirations for WSSD as expressed by the Minister, and its outcomes as discussed in this issue of **ENERGIA News**. The interview reflects some of the Minister's thoughts on the constraints at the institutional level within the UN system, caused by the omission of energy in the implementation of Agenda 21. The Minister emphasised that because energy was to be addressed as a separate chapter in the WSSD, this would ensure increased attention and interest in energy projects and energy as a whole, and would also attract additional sources of funding for energy projects.

Also featured in this issue is an interview with the Federal German Minister for Development, Heidemarie Wieczorek-Zeul. Her Ministry launched, during the Summit, a five-year programme to support renewable energy and energy efficiency in developing countries. The interview presents the Minister's view on the importance of adopting a gender perspective in programmes by donor agencies designed to improve access to energy by the most destitute, as well as the importance of accounting for gender differences within such programmes.

Further to the global interactions of issues, reflected at the WSSD, Ulrike Roehr's article presents an overview of similarities and differences in gender and energy in the South and in the North. Roehr shows that some of the critical energy situations faced by women in the North are similar to those faced by women in the South: for example, the weak participation of women in the decision-making process in the energy sector. Therefore, co-operation between women from the North and the South is valuable to promote changes in the structures and instruments in the energy sector and, consequently, to contribute to gender justice.

With a focus on translating the attention given to gender and energy into practice, Adélia de Melo Branco shares with us a case study on the use of PV solar in the Amazon region in Brazil. She shows how photovoltaic systems for community water pumping can improve the quality of life for families and particularly for women by giving them more time to engage in activities which do not involve the fetching of water. The project in which the case study is based is considered to have been very successful and innovative, and can be seen as best practice. It emphasises the importance of a participatory process and the involvement of women. The use of PV solar is seen as very appropriate to the Amazon region because of the low operation and maintenance costs which are essential to ensure sustainable family participation in the region. The presentation of this case study at the UNDP workshop on gender and energy during the WSSD served to reinforce the message of the need to integrate gender and energy into sustainable development policies and projects.

In spite of the universality of gender and energy issues in the South, solutions to the energy poverty faced by women and men are only sustainable if they take into account the social, economic, and political contexts of a particular location. This is evident from AFREPREN's contribution to this issue: an article on the energy and poverty situation in Africa. The article provides an insight into improving energy services for the poor in sub-Saharan Africa, and has an emphasis on women since they constitute the majority of the poor. Examples are given of the importance of focusing on gender differences to mitigate poverty, for example, the importance of policy interest and investment in biomass energy the fuel for the majority of poor women in sub-Saharan Africa. The authors consider that small-scale technologies are more effective than large scale and high cost energy projects.



The brochure and materials prepared by ENERGIA for the WSSD proved to be a very useful tool in lobbying for recognition of the importance of gender sensitivity in energy policy discussions at the Summit.

A similar sentiment about the need to contextualise gender and energy issues, as expressed in the AFREPREN article, is found in Rachel Polestico's article on Southeast Asia. Based on her presentation at the WSSD, Polestico analyses the energy situation in Southeast Asia from a gender perspective, and puts forward policy recommendations such as the promotion of access to modern energy for all, with particular attention to women because of their roles in the family, the economy, and the community. She concludes with a call to action to redress and arrest the trends that lead towards energy deprivation, especially among women and the most vulnerable sectors of society.

Building on the successful collaboration at the WSSD, ENERGIA members, Integrated Research for Action and Development (IRADe), and Enda, with support from UNDP, organised a workshop "Engendering the Climate Debate: Vulnerability, Adaptation, Mitigation and Financial Mechanism" at the 8th UN Conference on Climate Change (COP8) held in New Delhi, India, in October 2002. The workshop was an important contribution to COP8 in that it was the only event where gender issues were discussed, despite the fact that poor women are extremely vulnerable to climate change and may bear an unreasonably large share of the burden of adaptation to new weather patterns. There is an urgent need to mainstream gender in the climate change debate and negotiation. A brief report on the workshop is included in this issue. The full report will be posted on the *ENERGIA* web site.

Gotelind Alber from Climate Alliance shares similar concerns about the almost total neglect of gender in the international climate negotiations, particularly in light of the Kyoto convention that may come into effect in 2003. Alber suggests that the greater attention paid to gender in the CSD process has had the effect of women's rights being included in the issues that Climate Justice should address. However, the language is still weak and "women" are simply "added on" rather than mainstreamed. More is needed in terms of increasing knowledge on the gender and climate change linkages, and increasing the skills of women to enable them, and the NGOs they represent, to effectively lobby and advocate for the integration of gender in climate change negotiations.

An overriding theme of this issue is that, despite the weak political commitment to gender and energy in the WSSD Plan of Implementation, recommendations concerning appropriate government policies and project design provided by gender and energy advocates have left no doubt as to the need for gender-sensitivity in energy planning and policy for sustainable development. What is required now is the mobilisation and engagement of a wide range of institutions, including international organisations, donor governments, government agencies, non-governmental organisations, the community, and the private sector, in effective programmes to expand energy access to women as well as men. The integration of gender into the climate change arena is however still in its infancy stage. What is required is advocacy and capability building to facilitate a better understanding of the interrelationships between gender and climate change. ■

Acknowledgement

ENERGIA is grateful to Adélia de Melo Branco and Ulrike Roehr, the Guest Editors for this issue who worked jointly with Joy Clancy of the *ENERGIA* Editorial Board.

- ◆ For more information on the guest editors, please refer to pages 15 and 20.
- ◆ The official web site for the World Summit can be found at www.johannesburgsummit.org



News from the Secretariat

ENERGIA Phase 2: Its Outcomes and the Way Forward

Phase 2 of the *ENERGIA* Network Programme that began in June 1999, with core support from the Dutch and Swedish governments (DGIS and Sida respectively), ended in December 2002. We would like to take this opportunity to briefly highlight: the main outcomes of Phase 2, and the plans for a next phase of *ENERGIA* (Phase 3).

Phase 2 was a follow up to Phase 1 of *ENERGIA* (1996–99) that had raised awareness of gender as a credible factor in sustainable energy development. Building on this increased awareness, Phase 2 began to provide services to the energy sector and the network members, to meet the increasing demands for assistance in integrating gender into energy programmes, policies, and projects. *ENERGIA* is now a widely respected and credible international network – in both the South and the North – with a wide range of committed and capable partners.

ENERGIA Phase 2: Its Outcomes

An external midterm evaluation of *ENERGIA* Phase 2 was carried out on behalf of *ENERGIA*'s main donors, DGIS and Sida, in August 2001 by independent evaluators (a copy of the executive summary of the evaluation report is available on the *ENERGIA* web site). Below we have summarised some of their findings, plus some updated information, on the network's various activities:

1. Formalisation and Regionalisation of the *ENERGIA* Network

ENERGIA Phase 2 has been implemented by the Secretariat with strong inputs from member organisations, especially those in the South. The Secretariat, which is hosted by ETC Foundation in Leusden, the Netherlands, included: a Project Manager, a Coordinator, an Administrative Assistant, and an Information Officer responsible for managing the Resource Centre, (all based at ETC offices in the Netherlands) plus two Directors representing the Technology and Development Group of the University of Twente in the Netherlands (TDG), and the German consultancy company Energy, Environment and Development (EED), who were primarily responsible for the technical support to the programme.

Under Phase 2, the Secretariat strengthened its functioning in both

quantitative and qualitative terms, and made the first steps towards formalisation of the network in a legal sense. From the beginning, one of the aims of *ENERGIA* has been to "southernise" not only the membership but also the influence of Southerners over the Network. At present the majority of the Consultative Group

(30+ members globally active in gender and energy initiatives who support, advise and represent *ENERGIA* in different forums) are from the South. The Secretariat has encouraged 'southernisation' both by undertaking activities in partnership with organisations and by developing networks. All networks determine their own ways of working to suit their countries' environment, identify their particular needs, define their activities, and set their own priorities.

The main emphasis in terms of 'regionalisation' has been on supporting the creation of regional, subregional, and national networks (i.e. member organisations) in the South. This has resulted in the establishment in Africa of a regional focal point based in Kenya, four subregional focal points (South, East, West, and Francophone Africa), and nine national focal points (in South Africa, Swaziland, Lesotho, Zimbabwe, Kenya, Tanzania, Ghana, Nigeria, and Senegal). In Asia, six national focal points have been established (in Nepal, India, Vietnam, Sri Lanka, Thailand, and the Philippines) and there is interest in establishing networks in Oceania and Australia. *ENERGIA* maintains links with other networks in Central America, Europe, USA, and Canada.

Focal points have also developed their own activities. For example, the Senegal gender and energy focal point, Enda Tiers-Monde, has developed a policy paper entitled *Gender: The Missing Link to Energy for Sustainable Development* which was presented at the World Summit on Sustainable Development (WSSD); and the Southern Africa subregional focal point MEPC



One of *ENERGIA*'s priority activities has been to support emerging national and regional networking initiatives. The photo shows the national consultation workshop in Southern India to establish a gender and energy network. (Photo: Courtesy of EPTRI)

(Minerals and Energy Policy Center), with support from UNEP (United National Environmental Programme), conducted a training workshop for women leaders on the uptake of renewable energy technologies in the African context.

2. *ENERGIA* News

The quarterly newsletter, *ENERGIA News*, is *ENERGIA*'s principle vehicle for information exchange. The objective of *ENERGIA News* has been to provide coverage of areas where women's roles are not yet well understood, as well as to disseminate information about good, relevant case studies and examples, and studies of impacts, costs, and benefits, with the purpose of providing models of methodologies and implementations. Thus, in the nineteen issues published to date, *ENERGIA News* has featured gender-related articles and case studies on renewable energy, rural electrification, energy efficiency, household energy, climate change, stove technology, transportation, energy policies, international programmes, networks, projects and markets, training programmes, and advocacy activities. There has also been a special themed issue supported by and focused on a publication by the UNDP - Sustainable Energy Programme, *Generating Opportunities: Case Studies on Energy and Women*; and an issue supported by and based on the outcomes of ASTAE's Energy, Poverty and Gender Initiative (EnPoGen). Eleven guest editors from the South were involved in the preparation of the Newsletter, and the aim to have articles authored or co-authored by Southerners was fulfilled. The number of subscribers has increased from 900 at the end of Phase 1, to approximately 1900

(about a third of whom are men) from 247 countries. Moreover, 60% of the subscribers live in the South.

ENERGIA News is widely appreciated by organisations directly and indirectly engaged in gender and energy, and has provided resource materials for advocacy and research on gender and energy. Additionally, **ENERGIA News** has provided opportunities for issues from the South to be raised in international forums.

3. **ENERGIA Resource Centre**

The **ENERGIA Resource Centre**, focusing on the synthesis and dissemination of knowledge, has contributed to a higher visibility of the **ENERGIA Network** and has been supportive of other **ENERGIA** activities such as advocacy, **ENERGIA News**, and the regional and national networks. Information has mainly been produced in digital form, such as the web site, electronic newsletters, and various databases. An on-line database through which subscribers to **ENERGIA News** can search for the names and contact details of individuals working in, or with an interest in, gender and energy will soon be available on the **ENERGIA** web page. A small library has been established for reference purposes. There is also a photograph library; and annotated bibliographies on gender and energy, including one specifically focused on literature and activities in Africa; methodologies and guidelines specifically related to gender and energy; which contributors can access, either on-line or by mail. Further, eleven working papers on gender and sustainable energy, information on major actors and activities in the gender and energy sector (multilateral programmes of the United Nations and the World Bank, donors, international and regional NGO initiatives and networks), digital links to organisations working on gender and energy issues, and on-line back issues of **ENERGIA News** are all available.

ENERGIANet, which was launched in November 2000, was the first electronic newsletter focussing solely on gender and sustainable energy that disseminated timely and up-to-date information using an email address list. The information disseminated included: forthcoming events, workshops, and conferences; relevant experiences, projects, and approaches; relevant documents, new publications, interesting web sites, and work opportunities etc. in the field. Seven issues have been published to date, as well as special announcements of potential interest to subscribers. During the course of Phase 2, **ENERGIANet** grew in terms of content and membership (currently 160 subscribers). Information has been provided on request to people in the field, and support has been given in the form of inputs to research and presentations.

4. **Advocacy and Advisory Services**

The **ENERGIA Consultative Group** placed a relatively high priority on advocacy and advisory services and intensified such activities in Phase 2. The main thrust of the activities has been a shift towards joint activities with **ENERGIA** partners in the South, and towards supporting the organisation of events by **ENERGIA** members in the regions. Increased emphasis has been placed on contributions to regional and national meetings, by providing resource persons and technical backstopping from both the **ENERGIA** Secretariat and the region. For example, **ENERGIA** Director Elizabeth Cecelski, provided technical backstopping to the Asia Regional Cookstove Program's (ARECOP) *Second Phase Planning Technical Advisory Meeting*, held in March 2002, in Dhulikhel, Nepal. The **ENERGIA** Coordinator, Sheila Oparaocha, and the focal point for the Gender and Energy Network in Zimbabwe, Washington Nyabeze, participated in the *Women in Energy Ministerial Meeting* which was part of the second *Africa US Energy Ministers' Conference* held in Durban, South Africa, in December 2000.

Presentations at key international energy meetings and contributions to expert groups continued with increasing Southern participation. **ENERGIA** organised a forum on gender and sustainable energy as a contribution to the 2001 Solar World Congress. This was the first time such an event had been held as part of the formal Congress proceedings. **ENERGIA** Director, Joy Clancy, participated in the workshop together with other members of the Network: Makereta Sauturaga from the Ministry of Energy in Fiji, and Donella Bryce from APACE, Australia.

The development of partnerships to build support and advance ideas in international agency programmes also progressed. A major focus was the process leading to the Ninth Session of the Commission for Sustainable Development (CSD9) and the World Summit on Sustainable Development (WSSD), this included participation in CSD9 (jointly with Enda) and WSSD preparatory conferences, and the organisation of side events. A number of organisations, such as UNDP/SEED (United Nations Development Programme Sustainable Energy and Environment Division), NREL/US (National Renewable Energy Laboratory), and ESMAP-World Bank (Energy Sector Management Assistance Programme) have started programmes on gender and energy, in which **ENERGIA** has had an inspiring role. Others such as OLADE (Latin American Energy Organisation), ADB (African Development Bank), UNIFEM, RWEDP-FAO (Regional Wood Energy Development Programme), and

Winrock International have sponsored workshops to which **ENERGIA** has provided resources and links to relevant technical expertise and information.

5. **Capacity Building**

Capacity building has been one of **ENERGIA's** core activities. In practice, the activities have concentrated mainly on the development of individuals' and organisations' knowledge and skills to integrate gender and energy concerns into energy policy and programmes. A variety of approaches have been used such as: training courses (in partnership with Winrock International) on gender and energy in which policymakers and finance institution staff from the Department of Rural Electrification in Senegal and the South African Department of Minerals and Energy participated, and co-facilitation of the training workshop focussing on the role of women leaders in the uptake of renewable energy technology (RET). Participants to the workshop included women leaders from governments, NGOs, the private or educational sector, already active in the RET field in Asia, Africa, Oceania region. The workshop was hosted by UNEP and ACRE (Australian Corporative Research Centre for Renewable Energy) and took place in Australia. Other activities have included back stopping the development of gender and energy project proposals by African focal points, the development of gender and energy training tools, joint editorship of **ENERGIA News** and joint writing of articles, inter-network cross-visiting to facilitate the sharing and learning of experiences such as the participation of the focal points from the southern and east Africa gender and energy networks in the national consultation meeting in Nepal.

In Phase 2, the TDG, with support from **ENERGIA**, has begun to revise their Gender and Energy Training Pack, which has been the main training resource of the Network. Network members have also developed their own activities with support from the International Secretariat. For example, the Kenya Gender and Energy Network has developed a proposal for training in gender and energy, and the Swaziland Gender and Energy Network has held a training workshop on renewable energy for women trainee teachers to encourage them to include gender and energy issues in their curricula.

6. **Research and Case Studies**

Research and case studies on gender and energy under Phase 2 supported the other areas of activity mentioned above by providing input for advocacy activities, etc. **ENERGIA News** and the website were important channels for identifying, generating, and disseminating short case studies. The **ENERGIA** Secretariat also

provided support for case studies by other agencies that furthered the development of gender methodologies for energy interventions, such as the case studies on biomass energy conservation in Namibia on behalf the GTZ Program on Biomass Energy Conservation (ProBEC) in Southern Africa, and case studies on the successful rural electrification experience in Tunisia on behalf of ESMAP/World Bank.

Such activities have largely been carried out with finance additional to the core funding, and mainly by catalysing and advising other gender and energy programmes such as those of the UNDP and the World Bank referred to earlier.

The Way Forward: *ENERGIA* Phase 3

Planning for Phase 3

In preparation for the next phase of *ENERGIA*, a planning workshop was held in February 2002 in the Netherlands.

Participants included regional and subregional focal points of the gender and

energy networks in Africa, experts and representatives of organisations involved in gender and energy initiatives, together with *ENERGIA* members from Asia, Latin America and Oceania.

Making use of the outputs of the February planning workshop, the outcomes of the midterm evaluation, and an assessment of *ENERGIA*'s seven years of experience, a four-year proposal for Phase 3 has been prepared, in line with the current needs, with the following aims:

- to expand the institutional set-up of the network so as to meet the increasing demand for *ENERGIA*'s services.
- to raise the skills, knowledge, and concepts of Network members, policymakers, and planners at all levels, on how to integrate gender and energy into sustainable development.
- to provide basic tools and resources to support the capability development outlined above, such as policy and project guidelines, training packages and courses, advocacy packages, bibliographies,

research tools, and gender- and poverty-sensitive methodologies.

- to develop the capacity of members in the South to advise and advocate at high levels so as to ensure that gender is placed on the agenda of international, regional, and national energy debates.
- to carry out thematic synthesis and conceptual development to facilitate a better understanding of the energy, poverty, and gender inter-relationships.
- to prepare case study research of best practices and success stories that can serve as models for project and policy design.

Thus, the overriding emphasis of Phase 3 is the strengthening of Network capacity: the capacity of the Secretariat to provide services and support the network; the capacity of the network in the South to participate actively at the national, regional, and international levels; and the capability of decision-makers, policymakers, planners, implementers, and researchers to integrate gender and energy into sustainable development. ■

Networking Around the World

Report on Gender and Climate Change Event at COP8

Jyoti Parikh and Fatma Denton

Professor Jyoti Parikh, Executive Director of Integrated Research for Action and Development (IRADe), and Fatma Denton of ENDA Senegal, organised an event during COP8 in New Delhi on “Engendering the Climate Debate: Vulnerability, Adaptation, Mitigation and Financial Mechanisms” on 29th October 2002. It was sponsored by UNDP.

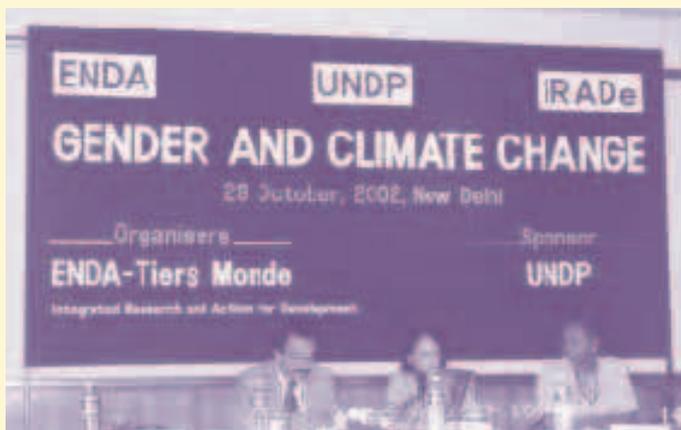
In her opening remarks, Jyoti Parikh pointed out that while the climate debate has been going on for 15 years, gender issues are seldom on the agenda. This was to be the only event at COP8 where gender issues were discussed. She introduced the subject by saying that poor women are extremely vulnerable to climate change, and may bear an unreasonably large share of the adaptation burden. Climate change could mean extra hardship in the farming activities often carried out by women, especially in Africa but also in Asia, where women are involved in paddy cultivation and cash crops such as cotton and tea. Moreover, livelihoods from fishing, in which women are often involved, may also be affected as the sea level rises and saline water intrudes into freshwater, making fishing more difficult. Generally, the tasks of supplying water and fuel for the

family is the responsibility of women, and these will also be affected by climate change, especially the problems associated with water supply.

Any increase in extreme events such as storms, floods, cyclones, even today, places the burden of devastation and destruction on women who have to keep the family together. During a time of catastrophe, the burden of nurturing the family, especially young children, and providing the daily essentials is largely borne by women.

However, women's knowledge and adaptation skills could be used as a resource, and need to be documented. Often, this knowledge may be community-specific. By documenting this, one could connect various communities around the world. Also highlighted was the possible role of women in the Clean Development Mechanism (CDM), since women are engaged in a number of activities such as brick making, charcoal making, and agroprocessing where energy efficiency can lead to CO₂ mitigation. CDM processes through afforestation and carbon sequestration can also involve poor rural women.

Jyoti also stressed that whether a woman wants to use traditional biofuels, petroleum products (which will emit CO₂), or renewable energy sources, the choice should be entirely hers. Further constraints on women should not be imposed in the name of climate change. For example, concerns have been expressed that if women switch to petroleum products, then CO₂ emissions will increase. Poor women are not responsible for excessive GHG emissions, or for foreign exchange imbalances, or for fossil fuel scarcity. These responsibilities lie with those who are rich, and those who are



COP8, New Delhi, November 2002. There is an urgent need to systematically promote women and gender issues in international climate processes such as the Conference of the Parties. (Photo: Courtesy of IGIDR)

profligate consumers of fossil fuels, regardless of wherever they are in the developed or developing countries. A poor rural person in India emits only 50 to 60 kg of carbon, compared to the world average of 1100 kg, with 5000 kg in the USA. Further discussion on this topic can be found in the theme paper by F. Denton and J. Parikh.

Jyoti suggested that gender issues should be mainstreamed in the climate change processes, namely: IPCC (The Intergovernmental Panel on Climate Change), SBSTA (Subsidiary Body for Scientific and Technological Advice), SBI (Subsidiary Body for Implementation), COP (Conference of the Parties) and CDM (Clean Development Mechanism). A fair gender balance is also necessary within these bodies.

Fatma Denton emphasised that gender is absent institutionally in: decision-making, semantics, and financial terms. Climate change will pose challenges to women in terms of land degradation, drought, loss of biodiversity, etc. - and hence vulnerability, adaptation, and mitigation issues are very important.

Arun Kashyap (Climate Change and CDM Adviser, UNDP, New York) put the problem in the context of the millennium development goals for which energy services for women will be needed. Along with huge investments, efforts to reduce climate change and to face the challenges of adaptation and mitigation will be required.

Recommendations:

- It is poor women who are vulnerable and will bear the adaptation burden despite their miniscule contributions to GHG emissions. Funds need to be mobilised for greater research into understanding the complex links between gender and poverty (with regard to climate change), and how to build the adaptive capacity of the poor.
- Mainstream gender into climate change, particularly in relation to adaptation and vulnerability studies.
- Increase the visibility of the potential impacts of climate variability and climate change on vulnerable groups. Ensure that vulnerable groups such as women are not excluded from potential CDM and adaptation projects.
- Promote CDM projects that integrate gender concerns with the sustainable development of forests, the management of biomass resources, and renewable energy.
- Build capacity and resilience to enable women and men to cope with the negative impacts of climate variability and climate change.
- Women should have the right to have the fuel of their choice even if it is based on petroleum products. They should not be denied the fuels of their choice in the name of climate change.
- Mainstream gender in the climate change debate and negotiations
 - Climate change bodies such as IPCC, SBSTA, and especially SBI, should ensure that this issue receives attention. A fair balance of gender participation is also needed. Perhaps the aforementioned climate change bodies could commission a special report, so that more information and analysis is generated.
 - Future COPs should have a side-event specifically focused on gender and climate change issues. In addition, gender and climate change should be included in more formal discussions.
 - UNFCCC should also ensure that gender is a legitimate issue of consideration in CDM projects, technology transfer, capacity building, and other initiatives.
- There is a need for an on-going debate on climate and gender so that it is not reduced to the occasional one-off event. This could be in the form of an electronic discussion – which has proven to be an effective advocacy tool in other sectors. This could be very effective in terms of: maintaining momentum and inviting new ideas, providing a storehouse for current and potential knowledge, and recruiting those genuinely interested in gender and climate change.

The organisers are grateful to UNDP for their financial support. Thanks are especially due to Susan McDade, Team Manager, Sustainable Energy Programme of UNDP, New York for her encouragement for this event. ■



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◆ Professor Jyoti K Parikh is a Senior Professor at the Indira Gandhi Institute of Development Research (IGIDR). She was the National Project Coordinator for the UNDP capacity-building project on the inculcation of environmental economics for sustainable development into the decision-making process. She chairs the environmental economics research committee of the World Bank project on building India's nationwide capacity for environmental management, and she coordinates a large project on rural pollution and health in India. Professor Parikh is a member of the technical advisory group (TAG) for the Energy Trust Funds Programmes (ETFP) of the World Bank which include ESMAP, RPTES, ASTAE and AFREI.

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When reading this article, please bear in mind that the interview with Minister Phumzile Mlambo-Ngcuka was conducted before the World Summit on Sustainable Development took place. This provides an opportunity to compare the aspirations for WSSD with its outputs as reported elsewhere in this issue.

In the ten-year period since the Rio Summit, what have been the major achievements and constraints in the delivery of energy services for sustainable development in developing countries?

One of the main constraints at the UN institutional level has been the failure since the Rio Summit to recognise the importance of energy in sustainable development. As you will recall, energy is not one of the Chapters of Agenda 21 and there has been little effort to promote energy issues in the implementation of Agenda 21. Energy issues have always been treated in the context of climate change and environment.

This situation has meant that resources and means of implementation for energy services have been lacking. There has been a serious lack of finance for energy projects, transfer of technologies, and building capacity in developing countries for energy. This has meant that access to energy services has not received any additional attention from Overseas Development Assistance (ODA) and hence there are still about two billion people worldwide without access to energy. There is a lack of appropriate technologies, and particularly renewable energy technologies, for developing countries. One of the biggest achievements since the Rio Summit has been the growth of the contribution to sustainable development from energy consumption and the energy sector. There is a greater awareness of energy efficiency and its contribution to the economies of nations. The key achievement in the energy sector has been the recognition, through CSD9, of the importance of energy in sustainable development. This has highlighted the central role energy plays in achieving the goals of sustainable development. This will increase international attention and support for energy for sustainable development. There are also discussions on increasing energy-related institutional support from UN Agencies and multilateral funding agencies. Most countries, including South Africa, regard energy as a basic need and service.

As Minister of Energy of the host country, and with energy being a strong contender for a key theme of the WSSD agenda, what has been your role in the planning and preparations for the World Summit on Sustainable Development to be held in Johannesburg, South Africa later this year?

Meeting **ENERGIA** Members



Phumzile Mlambo-Ngcuka

South African Minister of Minerals and Energy

Interview by
Hesphina Rukato

The Ministry of Minerals and Energy has actively participated in national consultative processes in preparation for the Summit. This has involved participation in the drafting of a national position paper for regional, sub-regional, and international preparatory committee meetings for WSSD. In my capacity as the Minister for Minerals and Energy, I will also attend the Ministerial Prep-com meeting which will be held in Jakarta. I have also had informal consultations with a number of African energy ministers on the approach and issues to be discussed during the Summit. In February, DME (the Department of Minerals and Energy) hosted a stakeholder consultation to apprise ministers of the WSSD preparations.

What projects and activities will your ministry be participating in at WSSD?

The Ministry will participate in legacy projects. These are energy best-practice projects that will have long-term impacts on improving the life of the people long after the Summit has ended. An example of these projects is: low smoke/smokeless fuel projects aimed at improving the ambient air quality for the people of Soweto, who still continue to use coal to meet their daily energy needs. This project will also help reduce the health impacts associated with energy use. There will also be a launch of a development fund to clean Soweto and reduce air pollution in this area. Further, the Ministry is involved in several exhibitions.

What are some of the major gaps in energy that should be addressed at the Summit?

Some of the major gaps that might be addressed by the Summit on energy issues are:

- Increasing access to the two billion people worldwide without access to energy services.
- Addressing the means of implementation (finance, technology, capacity building) to achieve universal access to energy.
- Creating a new platform for energy issues within Agenda 21, and address energy issues as a separate chapter for implementation.
- Addressing health, safety, and environmental issues associated with energy use.

How, in your view, will WSSD influence the flow of resources for building, training, technology development and transfer, in order to address the lack of access to energy services to the poor, particularly poor women?

Energy will be addressed as a separate chapter in WSSD, and this will ensure increased attention to, and interest in, energy projects and energy as a whole. This will also attract additional sources of funding for energy projects. There will emerge from the Summit new commitments to achieve the target of increasing the access to energy by over one billion of the world's population who currently do not have adequate access.

What energy-related programmes of actions and initiatives need to emerge from WSSD in order to address the current situation?

There is a need for clear commitments; with programmes and projects with firm targets and time frames aimed at increasing access to energy. The programmes should include renewable energy projects, energy efficiency projects, projects aimed at integrating energy provision with other socio-economic development priorities, and also projects aimed at increasing the use of cleaner energy technologies. These programmes should include and indicate the means of implementation necessary for increasing energy access and indicate clear implementation targets. ■

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Disclaimer

This interview is an English translation of the original German interview, and while the *ENERGIA* Secretariat has done its best to ensure that it is a true reflection, it cannot guarantee that it fully reflects what was originally said or meant. Readers are kindly asked therefore to treat it accordingly.

In the last legislative period, the German Federal Government decided to translate gender mainstreaming into action in all ministries. What does this mean for the work of your Ministry?

For us it means that equality of the sexes is a cross-cutting task in all sectors of development co-operation. Our programmes and projects should be equally useful for women and men, and women and men should also have equal input into shaping the programmes. Primarily, we have taken this approach because we know that if we want to reach the goal of halving the number of absolutely poor people by 2015, it must be done together with women.

You see sustainable energy as a key task of development politics. Do you think that women and men have different contributions to bring to the process?

Women suffer the most if modern and sustainable energy is not available. Millions of women and children have to spend many hours a day collecting wood and dung for fuel. In addition there are the health burdens: every year, two million people, most of them women and children, are dying from respiratory illnesses linked to smoke from the open fires used for cooking. Especially for women, sustainable energy is very important. In other words: a sustainable and clean energy supply is useful for women in particular.

Meeting *ENERGIA* Members



Heidmarie Wieczorek-Zeul

Federal German Minister for Development

Interview by
Ulrike Roehr

In Johannesburg you launched a special programme to support sustainable energy and energy efficiency in developing countries. Could you please outline what the programme will comprise?

The programme "Sustainable Energy for Development" consists of three main elements. Firstly, we will spend one million euros over the next five years in our partner countries, to support renewable energy and energy efficiency initiatives. Secondly, we will build up a partnership with the private sector. Enterprises in the solar and wind energy branches are pursuing interests that widely overlap with ours in development co-operation. Thirdly, we will expand our multilateral co-operation in the energy sector, and we will focus more than we have in the past on the goal of sustainable development.

For example, we will participate in a number of initiatives brought into being in Johannesburg to support sustainable energy in development co-operation. A stronger involvement of the World Bank in sustainable energy is also important. As a governor of the World Bank I will do what I can to see that this happens.

How do you think the outcomes of WSSD will affect women's access to sustainable energy sources in the next decade?

A massive short-term increase in energy consumption in developing countries has been the conclusion of all prognoses. Indeed, this is inevitable in order to fight poverty and enable the economy to grow and generate employment. The World Summit contributed to clarifying the challenges that governments, enterprises, and the energy industry are facing: to create a sustainable energy future, to make access to affordable energy easier, and to 'decarbonise' global energy systems in order to protect the climate. It is not an easy path, and not all people yet really understand the significance. Resolutions must now be followed by action. This will help especially women to overcome poverty.

How are women involved in the programme and how will they gain from it?

The programme can be successful only if the poor are intensively involved. Because women are the main users of household energy, they must be involved equally as partners.

Where are the difficulties in addressing 'gender and energy' in development co-operation in your Ministry, and are there positive examples or best practices among your projects?

There are always initial difficulties when new technologies are introduced – that's a fact of life in Germany, and it is the same in developing countries. For example, it needs a different sort of technical competence to cook with solar cookers than to use a dung-based stove. Because we know this very well, we accompany the introduction of such new technologies with information campaigns to explain simply the operation of the new technology as well as the financial benefits. ■

RESEARCH STUDY

"Towards a gender-aware energy policy: a case study from South Africa and Uganda" is the Masters thesis of Mariëlle H. Feenstra from the University of Twente in the Netherlands. The main objective of the study was to contribute to the formulation of a gender-aware energy policy, that could help to overcome gender-inequalities in national energy policies, by developing and defining the main characteristics of a gender-aware national energy policy and analysing under which conditions such a policy could be realised. The research assesses the experiences in South Africa to genderise energy policy, and the attempts in Uganda to integrate gender into energy policy, as models from which conclusions related to the objectives were drawn.

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International Programmes: Focus on

Global Village Energy Partnership

Dominique Lallement, Judy Siegel, and Katharine Gratwick

On August 31, 2002, at the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, over 150 representatives of consumer groups, non-governmental organisations, governments, multilateral institutions, and companies joined in the launch of the Global Village Energy Partnership (GVEP).

This Partnership aims to connect 400 million people to electricity and cleaner fuels over the next decade – virtually doubling the number of poor villagers who each year gain access to lighting, heating, and

power – and providing 50,000 communities with energy services for schools, hospitals, and clinics.

The Launch

The Partnership launch assembled partners from around the world to pool their resources – technical, human, and financial – towards the common objective of reducing energy poverty. Speakers included Ms P L Mlambo-Ngcuka, South Africa Minister for Energy and Mineral Resources who opened the event and highlighted the critical importance of delivering energy services, particularly in rural areas; Mark Malloch Brown, UNDP administrator, who focused on the links between energy and the Millennium Development Goals; Peter Woicke, Executive Vice-President of the International Finance Corporation and Managing Director of the World Bank, who emphasised the vital role that all the partners bring to this joint effort; and ministers from Germany, Guatemala, the Netherlands, South Africa, and Uganda, who pledged their commitment to the Partnership. Representatives speaking on behalf of the US Agency for International Development (USAID), Shell, BP, Rural Area Power Solution from South Africa (RAPS), Kumasi Institute of Technology and Environment from Ghana (KITE), and the Munasinghe Institute for Development (MIND) also outlined energy-access related projects and pledged their support. The Minister of Environment from Pakistan, along with a host of representatives from NGOs, small and large businesses, multilateral and bilateral lending agencies, the media, and other civil society groups also attended, and many of them participated during the question and answer session.

Following the launch, an Implementation Meeting was held on September 2, 2002 to begin the task of moving forward on delivering energy services and reducing poverty. Over 40 partner organisations attended this meeting and

discussed priority issues for the next year. *ENERGIA* participated in both the Launch and the Implementation Meeting, and has been an integral part of GVEP from its beginning at the Village Power 2000 Conference.

The Partners

At present, the Partnership boasts 80 Partners: from local and central governments of individual countries, financiers, the private sector, NGOs, entrepreneurs and other stakeholders such as research organisations, and the press. Each partner brings to the initiative a unique perspective and the benefits of its own individual efforts and services to improve people's standards of living through energy services. New partners are encouraged and welcomed, and can join by signing onto the *GVEP Statement of Principles* document posted on www.gvep.org. *ENERGIA* was a key player in drafting this document by reinforcing the gender component in energy service delivery.

A number of bilateral donors were instrumental in supporting the development of the Partnership including USAID, Canada, France, Germany, the Netherlands, Norway, Sweden and the United Kingdom, as well as multilateral organisations such as UNDP and the World Bank.

Services

The Partnership focuses on five major service lines which are listed below along with a brief summary of planned activities over the next year:

- **Action Plans:** provide an implementation vehicle for energy-related activities set forth in national and/or local poverty reduction strategies and sustainable development plans. A recent East Africa Energy-Poverty workshop provided the forum for action plan development for Ethiopia, Ghana, Kenya, Tanzania, Uganda, and Zambia. A similar workshop is scheduled for West Africa in January 2003. Further regional workshops are also planned for Latin America/the Caribbean in La Paz, Bolivia (June 18-20, 2003), and for Asia (in September 2003 in conjunction with the Asia Pacific Economic Cooperation (APEC) Business Forum and Village Energy Conference). Between three and five action plans will be drawn up next year and the work started.
- **Capacity Building:** in the next year, a South Asia practitioner workshop is planned as well as training courses, business toolkits, and advisory services for entrepreneurs and consumer organisations.
- **Financing Facilitation:** efforts will focus on making an inventory of existing financing sources, capitalising and launching a seed capital fund, and supporting banker and



microcredit training and train-the-trainer courses.

- *Knowledge Management*: work will continue on cataloguing partner organisations, developing project profiles and best practices guides, launching radio/dissemination campaigns, and producing a monthly newsletter.
- *Monitoring and Evaluation*: will focus on the development of indicators, the collection of baseline data, and the publication of annual results.

Governance

A “light” governance structure is envisaged for the Partnership to include a Technical Secretariat, an Executive Board, and Partner Organisations.

- The Executive Board will oversee and provide strategic guidance to the GVEP Technical Secretariat, with possible responsibilities to include providing vision and leadership, assisting in achieving programme balance, setting GVEP goals, assuring programme integrity, prioritising activities, and providing programme outreach. An interim Consultative Executive Board has been established to select an Executive Board that is expected to be in place by January 2003. *ENERGIA* has been involved in this process and, as of December, one staff member has been nominated from *ENERGIA* to serve on the Executive Board.
- The GVEP Technical Secretariat, housed at the UNDP/World Bank Energy Sector Management Assistance Program, provides day-to-day coordination and support for the Partnership.
- Partner Organisations, which provide both the demand for services and operate as service providers.

Working with Other Type II Partnerships

The **Technical Secretariat** has been consulting with a range of individuals and organisations involved in other Type II Partnerships launched at WSSD to ensure complementarity in the development and implementation of programmes. These include the Global Knowledge Network for Sustainable Development, the EU Energy Initiative for Poverty Eradication and Sustainable Development, the Global Forum on Sustainable Energy, and the UNDP LPG Initiative.

GVEP and Gender

Gender considerations, particularly the role that both women and men play in enhancing modern energy services, have been instrumental in the design and development of the GVEP programme. In particular, GVEP seeks to:

- Promote community-driven and demand-driven approaches that meet gender-based requirements.
- Address the needs for electricity in homes, schools and small industries; but also to promote the use of modern biomass, LPG, and other cleaner fuels for meeting cooking needs – an energy priority for women throughout Africa, Asia, and Latin America.

◆ Dominique Lallement is Manager of the UNDP/World Bank Energy Sector Management Assistance Program, and Coordinator of the GVEP Technical Secretariat. Judy Siegel is one of the GVEP founders and a staff member of the Technical Secretariat. Katharine Gratwick oversees knowledge management activities on behalf of the Technical Secretariat.

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This component of the programme has been included in recognition of the fact that women and children can spend up to one-third of their productive time in the collection and transport of fuelwood for use in traditional cook stoves that pollute homes and risk lives.

- Encourage opportunities for rural women and their families to generate income and improve their quality of life.
- Enhance the technical and business skills of women and support women entrepreneurs.
- Strengthen microcredit institutions and support credit schemes to better reach women in rural areas.

To summarise, **GVEP** seeks to enhance and replicate programmes such as *Renewable Energy Technology (RET) Utilization in Bangladesh*. This programme, operating in Char Montaz - an isolated rural island in southern Bangladesh, is delivering low-cost renewable energy services and changing people's lives. The project has popularised the use of renewable energy, accelerated this isolated community's access to modern lighting, and empowered women. As one of the families said of acquiring their first light bulb under this programme: “for the first time we were able to see the faces of our family members at the dinner table; for the first time we felt safe in our homes.” ■

Saluting Women's Space while Struggling for the Inclusion of Gender in the Summit

May C. N. Sengendo

Our great achievement at the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002 was having the UN recognise “women as a major group”.

No, do not be mistaken. This is exactly what we were demanding at the UN Fourth World Conference on women held in Beijing and at its follow-up Beijing +5. We got it, and I was so glad to see women from different continents occupying seats and being

listened to. However, this was just one step. There were more hurdles in the way as women and men struggled to ensure that gender was included as a priority concern within the WSSD negotiations. The physical space was occupied, but the politics of excluding gender concerns from the main text required more advocacy techniques than just the presence and participation of women and men who had such concerns. This article explains such challenges.

Articulated Advocacy Tools had to be Used

Gender and energy were among the key issues for negotiation. The tools applied in advocating that gender and energy be key priority concerns in the negotiations included the use of *ENERGIA* brochures and gender-related information materials, case studies in the form of regional papers written by *ENERGIA* members

and those by UNDP on sustainable development (*Generating opportunities: case studies on women and energy*), and policy briefs such as those by AFREPEN and ENDA (*Gender: The Missing Link to Energy for Sustainable Development: Rethinking gender dynamics and strategies through sustainable energy services and integrated solutions*).



The ENERGIA Team at Sandton in Johannesburg discussing which gender issues to raise during the WSSD Plenary Energy Debate as representatives of Women as a Major Group. From left to right, Ticho Makabane, Gail Karlsson, Adelia de Melo Branco, Jyoti Parikh, and Sheila Oparaocha. (Photo: Courtesy of Rachel V. Polestico)

One of the methods used to communicate the gender and energy message was through an open plenary discussion that was moderated by a UN representative. This involved asking leading questions and picking one of the representatives of the major groups to answer. The fact that women were recognised as a major group, and included on the panel of discussants, was a benchmark of our achievements. This discussion, a new method in the UN negotiations, was very much appreciated by the Summit participants. Representation on the panel largely depended on the appreciation and recognition of the work done by an organisation. Within this context, *ENERGIA's* efforts in working on gender and energy advocacy in various forums, including those of the UN conferences, were recognised by being selected to represent “women as a major group”. It was clear that our representative had hammered the message home to the policymakers: women’s lack of access to energy is a key concern and there is a need to ensure that women participate in decision-making, especially in terms of planning and using renewable energy sources. Journalists, and the official UN press releases, reported and stimulated women and men to read the final document which was supposed to turn the words into actions by including access and decision-making concerns. However, as the Women’s Environment and Development Organisation observed, the implementation plan ignored the efforts made in the discussions to secure targets for renewable energy sources and simply mentioned an increased sense of urgency without even indicating a time frame for promoting renewable energy sources (WEDO 2002). What then should have been done to sustain the message right up to the writing table, and to ensure that the final documents included gender and energy as was advocated by the “women as a major group” as well as other supporters of these issues? Despite all the advocacy and submission of data and information by *ENERGIA*, AFREPEN, ITDG, ENDA and other organisations, all containing gender and energy components, the end product of this Summit fell short of setting targets for renewable energy. Phasing out energy subsidies was highlighted but efforts to increase the rate of renewable energy use were opposed by major oil companies.

Strategic Alliances had to be Made

The Women’s Caucus made efforts to ensure that the Summit negotiations took into consideration the needs and concerns of disadvantaged people, including women who comprise 70% of the 1.3 billion people who live on less than one dollar a day. Innovative ways were considered to find appropriate language that would be coherent with the commitments made in Beijing and Beijing +5, and address human rights concerns. The strategic alliances made by NGOs and some governments, enabled the inclusion of issues on access to, and decision-making over, resources by women. Despite such efforts, there were differences among women and men, as individuals and as groups, in terms of the way they viewed the process, procedures, and the inclusion of the variety of concerns.

The most memorable moment was during one of the plenary sessions where the “women as a major group” had been given the floor to voice their concerns. Some participants in the lobby were talking to each other... “but who is who among those who are representing us as women?”. When I heard these words, I was inquisitive to find out what was meant. One of the women activists was willing to explain her concern (along with gestures that indicated how confused she was about what was going on). “At this moment it is not an issue of “us” as women, it is an issue of the extent to which “our” different views and voices can be effectively communicated. I wanted to contribute views on what could be said but I did not know when the text was prepared ...who should say what and when?”, the activist explained. In other words, the main concern was no longer one of “how the representatives of women could bring out the critical issues” but one of “how the issues became the priorities to be tabled for discussion”. Prioritising the gender concerns that could be discussed was seen as a challenge since different ideas can be difficult to harmonise into common concerns to be negotiated.

Organising and Networking at National Levels

In order to ensure that advocacy capacity is built among the participants to the Summit, there is a need to be organised at the national, regional and continental levels. In Uganda, some of those NGO representatives who were included in the Government delegation were prepared to advocate for the issues which they had spelt out in four Rio+10 Coalition position papers. The Government recognised NGOs as stakeholders in the negotiations. Twenty representatives of the Uganda NGO Rio + 10 Coalition were included as part of the official national delegation to the Johannesburg Summit. The official delegation was made up of the more than 50 people and was led by the President of Uganda. Prior to Johannesburg, efforts were made by both the NGOs and the Government to organise the women and men who had worked on writing the papers and identifying the advocacy issues, to formulate messages that would convince other members of the delegation to agree with their standpoint on energy issues. Coalition building by NGOs enabled them to lobby more effectively with the Ugandan government before leaving for the WSSD.

There are dynamics within international negotiations about which the advocates of gender-related concerns need to be conversant. The main one is the need for national actions to fill identifiable gaps before the international negotiations get underway. Similarly, energy-related organisations and networks at the international level need to make efforts to consult their members and to find common issues on which to advocate. Such preparations, at national and international levels, could enable participants to engage in negotiations on unresolved and contentious issues while there is still time to make a difference.

Can our Efforts be Evaluated?

We need to evaluate our advocacy efforts. What were the targets? What did we win, what did we lose, and why? Who were our supporters and our opponents, and why were such people or groups for or against us? What can we do to gain supporters to our cause of making gender a priority concern in sustainable development?

These and other questions may still be lingering in the minds of many who went to Johannesburg, and those who supported from their home countries. Although many people have voiced their disappointments with the negotiations on energy at WSSD through the media and articles, not all is lost. Some agreements were reached that can be beneficial to various categories of women and men if implemented. In the energy sector, the Plan of Implementation points to key commitments adopted by governments. These include a commitment to increase access to modern energy services, to increase

energy efficiency, and to increase the use of renewable energy. Such services are needed in rural settings. Partnerships were established, and these have the potential to assist in ensuring that the needs of women and men for energy services are addressed. The Global Village Energy Partnership (GVEP) is one such partnership that was launched at the WSSD in Johannesburg. The GVEP is dedicated to reducing poverty and enhancing sustainable development by increasing access to modern energy services for the unserved and the under-served. The partnership brings together governments from developing and industrialised countries, private firms, multilateral donor organisations, consumer groups, NGOs, research institutions, financial entities, and other stakeholders.

Following Up: A Commitment at National and International Levels

After all this effort, the situation becomes one of following up those issues which were successfully included in the Summit documents. Among the ways of following up, which were discussed at the Summit, is the need to participate in negotiations on the New Partnership for Africa's Development (NEPAD) which includes a range of sectoral issues that are seen as sustainable at regional and local levels. There is a need to strengthen advocacy and implementation strategies by civil society worldwide to enable the articulation of advocacy objectives, the creation of strategic alliances and support for the inclusion of gender in the various sectors' issues, including those of energy.

Let us Move Forward by Growing Stronger in Advocacy

1. Advocacy on Gender and Energy

Although there were opportunities to influence decisions that could help gender and energy become priority concerns, the UN process requires inter-governmental submissions that could best be influenced if efforts were made by NGOs to become part of the process in their own countries. The process in Uganda, of the government working with NGOs at the country level, helped to provide an example of such a development. Gender as a priority concern in energy was outlined within the national level report to the WSSD that had been worked on by both the government and NGOs while still in Uganda.

2. Capacity Building Needs

There is a need to strengthen the advocacy skills of participants to international conferences so that they can successfully influence decisions in negotiations.

The materials to use for advocacy, the language to use, who should say it, and who are we...these were all questions that lingered in the minds of many people whenever they had the opportunity to make submissions to their country delegations or in the plenary sessions. There were opportunities to voice our concerns and to participate, but it was felt that increased capacity-building in advocacy for gender-related concerns in the various sectors could enable contributions to be more effective. A key question when

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dealing with advocacy, and indeed there is a need to reflect and answer it, is were we ready for the "space given to us"? Yes, women and men were able to use the opportunity given, but this needed to be accompanied by appropriate skills in advocacy and information communication. These are key skills that need to be imparted as part of the assistance given by development partners and those who have the skills to train others. Sustainable development can be achieved through a combined effort of building capacity in advocacy, and in the planning and implementation of the commitments made in Johannesburg. ■



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Differences and Similarities: a North-South Comparative Analysis

Ulrike Roehr

At first glance, the energy situation affecting Southern and Northern women seems so very different – women in the South are burdened with trying to find fuel for their household needs, while women in the North apparently face no such problems.

However, when *ENERGIA*, as part of its preparations for the Ninth Commission on Sustainable Development (CSD9), prepared a position paper on gender and energy issues reflecting both South and North perspectives (*ENERGIA*, 2001) we discovered that while there is still much that separates the two (for example, excessive consumption in the North, versus a lack of energy services in the South) there is also a degree of commonality. This article sets out to explore this common ground further.

To attempt an analysis presents us with a challenge. While the issue of “gender and energy” for the South has received a lot of attention in the last few years, a similar process in the North has only recently started (Roehr, 2000; Clancy et al., 2001). The negative impacts of energy supply and use on women’s lives in the South are very apparent and it now seems impossible to ignore them. However, it has taken much research to bring data and information to light, and advocacy at the national and international levels to reach the point where policy-makers are aware of the issues. In the North, it is still hard to spot gender and energy issues, and a more in-depth analysis is needed to make them visible. This article aims to contribute to raising awareness of Northern gender and energy issues.

Similarities at the Structural Level

Women in Energy Production and Planning

Women, both Southern and Northern, are the principal consumers of household energy, the purchasers of stoves and other energy-using appliances, and the selectors of cooking fuels. Despite this, the share of women in decision-making positions in energy production and energy planning in the North seems to be as minute as in the South. This means that women have little opportunity to directly influence the policies of energy utilities. In Germany, for example, the share of female technical staff in the energy industry is around six percent, in decision-making positions four percent, and in senior management less than one percent (Hoppenstedt, 2000). There were expectations in Germany that, after the Chernobyl nuclear disaster, when the discussion started on using more renewable energy sources and a lot of women were involved, that the industry profile would improve. However, although renewables were acknowledged as an important energy source, it appears that the more jobs that were created in the sector, the more women were marginalised. The most important positions were still occupied by men. This caused some women to set up their own all-women windfarming business (Windfang, see *ENERGIA News* 3.1). The latest research on the employment effects of climate change policies and measures (better

insulation of houses, energy saving technologies etc.) shows clearly that most of the new jobs will be created in working areas where women are still underrepresented. Thus, German women, at least in employment terms, do not and will not profit directly from this energy policy.

Proportion of Females in Technological Education Facilities Relevant to the Energy Sector

One of the prerequisites for strengthening the participation of women in decision-making in the energy sector is an increase in their, so far, poor participation in this field of education. Many countries in the South have a much better track record than in the North in encouraging women to follow technical studies. For example, in Germany, only six percent of the students in technical faculties (engineering) are female, although female students make up nearly half of the total student population (BMBF, 2000). This, despite several programmes to encourage women to opt for a technical profession. It is open to debate whether women’s continued non-take up of technical studies is due to a real lack of interest in such issues, or if the system is working against them. It is not only a question of encouraging women into the professions, but also one of keeping them there. Many women find the working conditions incompatible with their childcare responsibilities. Therefore, it is important to work to change attitudes in a number of directions: motivating girls at an early age, changing the existing education structures and orientation that favour men, and changing the culture of work.

The Effect of Property, Money, and Information

Changing energy production in a sustainable way, or putting energy conservation into action, needs information and finances.

Women in the North are financially disadvantaged compared to men. As in the South, women in the North form a greater proportion of

people on low incomes. Women with low incomes are disproportionately found as heads of single parent families and, due to their greater longevity than men, among people of a pensionable age. Northern climates create the need for space heating for significant parts of the year. People on low incomes tend to live in housing with poor insulation and frequently use second-hand equipment with poor energy efficiency. Both factors contribute to



Women working in the energy sector visit a solar research institute in Switzerland (Photo: Courtesy of Gotelind Alber).

the high energy costs of people on low incomes in general, and hence a disproportionate number of women (ENERGIA, 2001).

Similarities on an Individual Level

The Effects of Labour Divisions on Domestic Energy Uses

There is a division of labour in Northern households. In the North, just as in the South, this division of labour leads to gender-differentiated “needs”. Men’s requirements for electrical appliances are mainly in the fields of communications and information technologies (television, CD player, computer) while women’s requirements for appliances are for reproductive work. All decisions regarding energy techniques and energy appliances are the responsibility of men, while women’s responsibility is to utilise them in an environmentally friendly, energy saving, way (Doerr 1991, Weller 1997). In the North, there are also differences in gendered needs in the equipping of single-person households: research in Germany has shown that single male households have more electrical appliances than single female households (Doerr, 1991; Glatzer, 1991). Women more often have washing machines, while men have many more computers, TV sets, and other electronic devices.

Linkage between Energy and Health

Women in the North, as in the South, are far more aware than men of the linkage between energy and health. In the North, Russian women are discussing nuclear energy waste in terms of health, and show clearly how this affects women and children in particular (Kabirova, 2002; Kutepova 2002). In Western Europe, women’s fear of, and their awareness about, the health risks are the main reason for their rejection of nuclear energy (Clancy et al., 2001).

Preferences for Energy Production

There are many similarities in the energy preferences of women in the North and in the South. All over the world, women are at the forefront of fighting against large power plants and supporting small decentralised energy production and supply (Quistorp 1993; Kutepova 2002). Women are seen as more favourable towards energy conservation and renewables than men, and are more opposed to nuclear power (survey data from the USA quoted in Clancy et al., 2001). While 46% of men support the long-term use of nuclear energy, only 16% of women concur (figures from Sweden, see Kaerkaeinen 2001). In Germany, it has been found that there are differences between male and female behaviour in terms of environmental consciousness and behaviour: men mainly restrict their contribution to vocal advocacy while it is women who actively change their behaviour (Preisendoerfer, 1999).

Moving Forward

We certainly need more research into gender and energy issues in both the South and the North. There is no doubt that energy is an important factor in the creation of wealth and economic power; however, sustainable development demands that all citizens should influence the direction of energy supply (What resources do we use? What about energy conservation?) and use (What type of economic development? Who benefits?). Women are excluded from this type of decision-making both at the political level and at the individual level. How can women make their voices heard? I do not believe that the



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support and evaluation of gender mainstreaming in environmental institutions. One of her main concerns is the sensitisation of gender aspects in sustainable energy and climate change issues in developed countries.

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solution is to take part in destructive power structures, nor to take over and profit from unjust instruments, for example by buying shares in the fossil fuel industry as the South African Minister for Energy and Mining recommended in the women's tent in Johannesburg. At a local level, both Southern and Northern, women

can work towards decentralised energy production from renewable sources. At the international level, women should work together to change the structures and instruments, and to develop new ones that are environmentally and climate friendly, and at the same time ensure that these are just, both socially and in terms of gender. ■

Improving Energy Services for the Poor in Africa – A Gender Perspective

Stephen Karekezi, Khamarunga Grace Banda and Waeni Kithyoma

One of the key objectives of the World Summit on Sustainable Development (WSSD) was “improving people’s lives”: a response to the growing level of poverty in many parts of the world, and the widening gap between the rich and the poor. The WEHAB document, which seeks to provide a focus and impetus to action in five thematic areas (Water, Energy, Health, Agriculture, and Biodiversity), was one of the major initiatives at the Summit. The energy chapter of the WEHAB document seeks to show how energy services can be instrumental in reducing poverty – one of the millennium development goals (MDGs).

A lack of energy correlates with many indicators of poverty, such as poor education, inadequate health care, and hardships imposed on women and children. Access to energy has become a clear marker of the differences between the rich and the poor, and between men and women (Annecke, 2002). Although energy (besides from metabolic energy) is not a basic human need, it is critical for the fulfilment of almost all basic needs. Without access to energy services, the poor spend a large proportion of their time and physical energy on basic subsistence activities instead of on income generating and other productive activities which could dramatically reduce poverty.

As the region with the highest level of poverty and facing significant gender equity challenges, which contribute to the prevailing low levels of appropriate energy services, sub-Saharan Africa is the region of focus for this article. Building on some of the recommendations emanating from the WSSD and related side events, this article reviews the gender, energy, and poverty situation in sub-Saharan Africa, with a special emphasis on improving energy services to the poor and in particular to poor women.

Poverty and Energy in Africa – A Brief Review

About 60% of the population in sub-Saharan Africa (SSA) currently lives on less than US\$1/day. The proportion increases to 90% when those living on less than US\$2 a day are considered (World Bank, 2001). Poverty levels are highest in rural areas of the region where over 70% of the population resides. The low incomes that are common in most sub-Saharan African countries lead to very low levels of modern energy consumption. Modern energy use is particularly low in rural areas of the region. This can be clearly seen from the extremely low rural electrification levels in most countries of the region.

Biomass is the primary fuel of the poor, and accounts for up to 95% of total energy supply in some African countries. Biomass, which includes wood, charcoal, agricultural residues, and animal waste, is largely used in its traditional and unprocessed form, with adverse effects on human health and the environment.

Gender-related studies of the poor in Africa demonstrate that poverty impacts on women and men differently, with women often experiencing the most severe levels of deprivation. Available statistics indicate that female-headed households record higher levels of poverty than male-headed households. For example, in Zambia, 72% of female-headed households and 61% of male-headed households live in extreme poverty. Similarly, in Zimbabwe, the prevalence of poverty among female-headed households was estimated at 71%, and 59% among male-headed households (CSO–Zimbabwe, 1998; CSO–Zambia, 1997). Recent studies in the community of Malanangwe in South Africa, revealed a link between poverty, energy, and gender, with female-headed households facing more severe levels of poverty. The study further revealed the heavy

Table 1. Poverty levels in selected African countries

Countries	Year	% of population with incomes of less than PPP* of US\$ 2/day
Botswana	1985-86	61.0
Ethiopia	1981-82	89.0
Kenya	1992	78.1
Rwanda	1983-85	88.7
Senegal	1991-92	79.6
South Africa	1993	50.2
Uganda	1989-90	92.2
Zambia	1993	98.1
Zimbabwe	1990-91	68.2

*PPP – Purchasing Power Parity
Source: World Bank, 2001

workload of fuel collection imposed on women and children (Banda, 2002).

The lower levels of income in female-headed households could be attributed to the fact that these households have a single income source. Further, women often engage in home-based economic activities that are unpaid (Table 2). In such situations, women do not control cash income, which leads to further increases in their poverty level. Another issue that increases the vulnerability of women to poverty is their limited access to ownership and control of assets such as land and livestock, and this limits their ability to access credit.

Table 2. Percentage of unpaid family workers in labour force

Region	Women	Men
Northern Africa	25	7
Southern Africa	22	14
Rest of sub-Saharan Africa	35	18

Source: UN, 2000

Energy use is differentiated by a number of factors, one of which is gender. At the household level, the energy needs of poor men are largely for powering communication and entertainment devices (radio, TV) and lighting. Conversely, women's energy needs are associated with their work: cooking, fetching water, and home-based income generating activities (Annecke, 1999). This calls for the formulation of energy policies and strategies that are cognisant of these gender differences.

Improved energy technologies could reduce the time and drudgery associated with procurement tasks performed by poor rural women such as the collection of fuelwood and water. In addition, improved energy services could be a stimulus to poor women's income-generating activities.

At the household level, women and children are adversely affected by particulate emissions from burning biofuels. A study undertaken in rural Kenya found that women, who do most of the cooking, were exposed to twice as much particulate emission as their male counterparts, and were on average twice as likely to suffer from respiratory infections (Schirnding, 2001). In urban and peri-urban areas, men and women involved in biofuel-intensive small and micro enterprises are exposed to indoor air pollution.

Energy Technology Options - Enhancing Access to Improved Energy Services for the Poor

Biomass still remains the fuel for the majority of poor women. While the ill-effects of inefficient and unprocessed biomass energy use are beginning to be understood at the policy-making level, there has been only limited policy interest and investment in biomass energy. The focus of most energy projects is on advanced high-cost energy technologies, such as conventional electricity sourced from coal, large hydro dams, and centralised capital-intensive oil and gas installations. In many cases, high-cost energy projects such as large hydro-electric dams have not benefited the poor in SSA. Centralised power projects do not deliver direct benefits to poor women whose main requirement is for process heat for which electricity is not the cheapest, or frequently the most appropriate, option. However, it is also true to say that, although this represents the current situation, women (irrespective of income group) may well have a large latent demand for electricity.

There is also growing evidence that, irrespective of the energy source, small-scale energy technologies have a larger impact on

poverty alleviation than large-scale and/or high-cost energy projects (Karekezi, Mapako and Mengistu, 2002). However, available case study data indicate that not all small-scale energy technologies are appropriate in terms of cost for the poor in Africa. There is growing evidence that solar PV, a high-cost energy technology promoted in rural Africa, does not lead to poverty alleviation. Solar PV is an expensive technology, which is beyond the reach of the majority of the population in rural Africa (Table 3). Further, over 60% of the components in solar PV systems are imported. Although solar PV is often promoted as a technology with low maintenance costs, it does not address the issue of inefficient biomass energy use since it cannot be used for cooking. In addition, solar PV cannot meet the process-energy needs of rural small and micro enterprises.

Table 3. GNP per household and cost of 40-50Wp PV system

Country	GNP per capita (1999)	Estimated cost of Solar PV system (40-50Wp) US\$	Estimated cost of Solar PV system as % of GNP per capita
Zambia	330	1200	363
Uganda	310	1037	334
Eritrea	200	600	300
Kenya	350	620	177
Lesotho	570	1000	175
Zimbabwe	610	800	131

Source: Karekezi and Kithyoma, 2002

Given that biomass is the dominant fuel of the poor, improved biomass energy technologies can provide attractive options for meeting their energy needs. Simple, fuel-efficient, improved cookstoves would significantly reduce the amount of fuelwood used, and are likely to also lead to a reduction in the time spent by women collecting wood. In addition, the production and dissemination of improved biomass technologies provides an opportunity for job creation and the creation of micro-enterprises for the poor.

Renewable energy technologies, and other decentralised energy technologies which are modular, low-cost, and locally made provide an attractive option. Compared to existing technologies, these technologies are often cleaner and environmentally sound, and can be scaled up in size when additional investment capital becomes available. Women's low incomes are a barrier to widening access to improved energy services. Decentralised energy technologies with low up-front costs could be accessible to poor women with very limited cash incomes. Attractive energy technology options that could be considered for the poor in the region, include:

- **Low-cost, efficient hand tools, water pumps, and animal-drawn implements** which can increase the agricultural productivity of rural Africa and reduce the drudgery associated with these activities.
- **Low-cost but more efficient biomass-based combustion technologies**, such as improved cookstoves, efficient charcoal kilns, fish smokers, tea dryers, and wood dryers.
- **Solar dryers** which can lead to lower post-harvest losses and enable rural farmers to market their produce when prices are higher.
- **Pico and micro hydro units** providing shaft power that could be used to process agricultural produce, thereby increasing its value, and that could be used for wood processing.
- **Solar water pasteurisers** which can provide clean and potable water and reduce water-borne diseases. This, in turn, translates into increased availability of labour and thus increases agricultural output and income.
- **Ram pumps for irrigation** which can increase agricultural output thus generating additional income for the rural farmer.

Table 4. Relationship between energy technologies and millennium development goals

Energy Technology	Millennium Development Goals				
	Halve poverty	Reduce hunger	Ensure environmental sustainability	Increase gender equality and empowerment	Reduce child mortality
Mechanical water pumps	X	X		X	X
Low-cost, efficient hand tools and animal-drawn implements	X	X		X	X
Solar dryers	X	X		X	X
Improved biomass cookstoves		X	X	X	X
Pico and micro hydro units	X		X	X	X
Solar water pasteurisers				X	X

Policy Considerations – Energy and the Millennium Development Goals

The poverty and energy situation in Africa presents an onerous challenge for policymakers, analysts, and researchers. While there is no prescribed solution that addresses the issues raised, well-crafted policy interventions would ensure that energy contributes to improving the livelihoods of the poor in line with the objectives of the WSSD, and the millennium development goals (MDGs).

As shown in table 4, the energy technologies suggested in this article could contribute to the realisation of the MDGs, and would deliver significant benefits to poor rural women.

A number of partnerships related to energy and poverty were launched during the WSSD. These partnerships provide important opportunities for African governments and institutions to ensure that the follow-up WSSD agenda includes issues that are important for the region. For instance, most countries in the region do not have explicit policies for the development and dissemination of small-scale and low-cost energy technologies. African governments and policymakers could ensure that current and future energy projects and policies include some of the energy technologies proposed in Table 4.

Most African governments face barriers in the implementation of gender-sensitive renewable and decentralised energy options as strategies for poverty reduction. Research has shown that the major problems are institutional barriers to the implementation of sustainable energy programmes and a lack of information on energy technology options that take account of prevailing and context-specific gender issues (Karekezi and Ranja, 1997).

To promote small-scale and low-cost energy technologies, a small levy (of the order of 1%) could be applied to electricity bills. This would be sufficient to establish a viable and sustainable industry for small-scale renewables and low-cost decentralised energy technologies which would deliver significant benefits to women. The financing from the levy would also ensure the establishment of a critical mass for renewable and low-cost energy technologies: i.e. the number of manufacturers and assemblers of these technologies required to initiate a self-sustained dissemination process. A similar levy on petroleum fuels would probably be sufficient to provide modern energy services for institutional use (e.g. in dispensaries and schools) that would directly benefit both women and men, and advance the objectives of the MDGs. Well-targeted programmes financed by the aforementioned levies would ensure that the initiatives borne out of the WSSD lead to the near-term realisation of



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improved energy services for the poor of Africa in general, and African women in particular.

An additional challenge for energy policymakers in the region is to fashion energy policies that take account of the gender-differentiated impact of energy use. A study by an AFREPREN theme group on Renewables and Energy for Rural Development found that only one out of the six governments of the African countries represented in the theme group had explicitly tackled gender issues in their energy policy documents (Banda, 2002; Chandi, 2000; Dithhale, 2001). The introduction of policies that address gender aspects of

energy use would directly support the key MDG: “increasing gender equality and empowerment”, and indirectly contribute to all the other MDGs. ■

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A Case Study in the Brazilian Amazon Region: a Gender Approach to Energy Supply

Adélia de Melo Branco

Access to energy is limited in the poorest regions of Brazil. Most of the population who have limited access to energy are to be found in the less developed regions of the country, i.e. the Northern and the Northeastern regions.

In the rural areas of Northern Brazil, electrification is virtually non-existent. Among the reasons for this are the remote location, the tendency to flooding, and the dense forests. The limited, or lack of, access to energy has hindered the population from benefiting from several Government programmes for the marginalised.

The case study presented here focuses on a poverty alleviation project¹ developed to serve as a model for promoting sustainable development through the use of renewable energy in the Amazon region. Gender differences should be considered in poverty mitigation projects because of the very important role women play in



Map showing location of Mamirauá Sustainable Development Reserve, in Brazilian Amazon.

the household and productive activities in poor households. However, when it came to project implementation, women in the past were invisible and were not considered as important actors. As a consequence, several

poverty alleviation projects in the Amazon region have failed to achieve their goals because they targeted the wrong actors or excluded key players.

The objectives of the case study project, described here, were to increase the use of clean and sustainable energy to power community water pumps in a region of the Amazon. The technology used was PV solar pumps. By providing the community with pumped water, the project helped women to free up time to engage in productive activities, household care, education, and also improved health and sanitation.

PV was chosen over other technologies for various reasons: it matches the power demanded by the pumps, and it does not require

specialised labour to operate it. Additionally, PV powered systems have low operation and maintenance costs, which is essential to guarantee family participation in a sustainable process. Furthermore, PV systems are reliable and long lasting in adverse conditions such as those found in the Amazon region.

A total of five systems were installed. Two of them with submersible pumps placed in the wells, and three of them with surface pumps, all powered by 150 Wp (watt peak) PV panels. The systems pump from three to ten cubic metres a day, depending on site-specific conditions and the type of pump.

The systems were positioned to take local conditions into consideration, especially those in the dry season when collecting water is a heavy burden for women and children. PV systems pump the water to a high reservoir and then it is distributed by gravity to the households. Each house has a tap by the door, and everyone has a period during the day when they can use the water related to the pump's output. The local population manages all operations related to the pump.

The project was implemented in the Mamirauá Sustainable Development Reserve. This area is the largest reserve located in the areas flooded by the Brazilian Amazon (1,124,000 ha.). It is situated in the upper middle Solimões, and includes the Japurá, Solimões, and Auati Paraná white-water rivers. The population involved in the project consists of 6,054 inhabitants occupying an area of 260,000 ha. They are small-scale farmers inhabiting riverside areas that are severely affected by variations in water levels. They cultivate crops for subsistence and for the market. The agricultural work involves both men and women. Although the Amazon region is very rich in terms of natural resources, the local population is economically poor and receives a lot of support from government extension services in the areas of health, environmental education and management, and also for economic production, including fishing and the production of handicrafts. Water is available throughout the year; however, the quantity and quality varies considerably depending on the rivers' water levels. During three months of the year, the so-called dry season, family members, primarily women and children, have to walk for hours to fetch water. Water is normally collected in buckets and transported on people's heads.

The water level varies, on average, by 12 metres between the dry and wet seasons. The river tributaries, where the communities are mostly located, dry out in the dry season, and the people then have to walk to the main river to find water. Also, at this time of the year, the concentrations of crocodile and piranha fish are a lot higher, and so safety is an important factor when collecting water from secondary rivers and lakes. Women have to find a place where they can easily and safely drop their buckets into the river.

Water collection has a strong impact on women's performance of domestic chores and also on the cultivation of crops. During the wet season, which lasts for about three to six months, the land used for agriculture is flooded and crops cannot be grown. The



Photovoltaic panels (150 Wp) used to power water pumps that deliver clean water to communities in the Mamirauá Sustainable Development Reserve (Photo: Courtesy of Adelia de Melo Branco).

water available becomes contaminated with rubbish and sewage waste. This causes family members to become ill, which has a strong impact on women's time as they then have to care for the sick.

At all stages, the PV pump project has used a participatory approach and involved local women and men. By promoting gender equity, the project has actually empowered both the local women and the men. The women, especially, have benefited significantly in terms of empowerment as they have had the opportunity to be involved in activities which were previously open only to men. Despite being poor, the community is well organised with support from local NGOs. The project goals were determined by the local population, and local technicians were trained by a team made up of people from NGO Mamirauá, Winrock International (Winrock has an office in Brazil), and researchers on photovoltaic energy from the University of São Paulo. In addition, the local population was trained to monitor the project once it was implemented. Funding was provided by the Ministry of Science and Technology, the Brazilian Council for Scientific and Technological Development, USAID, Winrock International, and the Mamirauá Institute.

This project was not only innovative with regards to the use of PV solar energy in the Brazilian Amazon region, but also in its participatory approach, with a strong focus on the promotion of gender equity. In addition to involving women in most operational activities, the project also encouraged women to participate in the management and monitoring of the systems. The goal was to have community groups responsible for the management and monitoring process, and that these should be representative of the community, with women forming at least 25% of the membership.

It has already been pointed out that, once access to more efficient and environmentally sustainable energy is provided, women will have more time and opportunities for other activities including income generation. This also improves the general health and living conditions of the local population. By considering specifically the situation of women, the project has helped to promote overall development goals. It can therefore be said that this project can be seen as a model for sustainable development in the Amazon.



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◆ Additional information on the Mamirauá Reserve and Winrock Brazil can be found at **www.mamiraua.org.br** and **www.winrock.org.br** respectively.



- It is useful** to conclude by listing some of the successful results:
- Increased availability of clean water to the population leading to improved health conditions.
 - Better living and working conditions for women: they no longer need to walk long distances to fetch water and are able to engage in productive activities, which lead to their empowerment.
 - Introduction of a gender equity perspective in the context of sustainable energy.

- Implementation of appropriate technology with low maintenance costs.
- Capacity building within the population. ■

I The coordinators of the project on which this case study is based are: Edila Moura, Mamirauá, Institute for Sustainable Development; and Aurélio de Andrade Souza Neto and Cláudio Moisés Ribeiro, both of Winrock International Brazil. I would like to thank them, particularly, Aurélio Souza who assisted greatly in the completion of this paper.

Gender and Energy in Southeast Asia

Rachel V. Polestico

Energy is fundamental to all economic development. However, there are various negative social and environmental impacts connected to all known sources of energy, both with regard to production and use. One has to aim at finding a sustainable balance between the need for protecting the environment and the search for economic development.

Awareness and respect of the physical limitation of energy can inform energy policies and guide energy programmes. Looking at energy from a gender perspective, and drawing lessons from what women around the world and especially from Southeast Asia have done, can shed light on the challenge of sustaining global development.

The Energy Situation in Southeast Asia

In the rural areas, domestic use of energy accounts for 68.1% of total usage. The other major uses are agriculture (18.4%), income-generating and service establishments (9.3%), and transport (4.2%). Women are heavily engaged in the domestic and agricultural activities where most energy comes from non-commercial sources (95.3% and 84%, respectively). The dominant fuel in rural areas is non-commercial biomass and most of the energy supply for the rural poor is secured on the basis of individual or private effort at very low or even zero private cost¹.

The budget allocation and consumption patterns in Southeast Asia reflect the priorities of governments towards industrialisation and supporting the urban populations. Gender and rural/urban differences in energy needs are neglected. Such priorities can lead to unsustainable use of energy and do not address the energy needs of the people, especially women, in the rural areas.

Gender Impact of Energy Policies in Southeast Asia

Energy accounts for about 10% of the total expenditures of a household in the urban areas of countries like Indonesia, the Philippines, and Thailand.² In the rural areas, energy is paid for by rural women's time, with women working longer days (eleven hours on average) than men (eight hours).

Energy scarcity impinges on the provision of other basic needs, such as water, health, and education. The proportion of rural

women affected by water scarcity is estimated to be 32% in Asia, with a median time of about 1.6 hours per day for collecting water in the dry season. In most countries in the region, water-service coverage is significantly better in the urban than the rural areas. This lack of basic services such as water in the rural areas affect women more adversely.³

About 80% of Asian rural households cook daily using wood and crop residues. Women have the highest exposures to indoor air pollution, which is linked to acute infections, chronic lung diseases, low birth weights, lung cancer, and other problems.

Many income-generating activities by women in the informal sector are energy intensive, and the viability of these activities is affected by energy prices and energy availability, and could benefit from labour-saving technologies. However, when energy-saving technologies are introduced, without giving women the capacity to use the technology, this can deprive them of both income and control over the technologies.

In Indonesia, through a governmental initiative, mechanised rice hullers have replaced 90% of hand rice-hulling, with estimates of job losses as high as 1.2 million in Java alone, and 7.7 million in all of Indonesia. Losses in women's earnings arising from the use of mechanised hullers were estimated at US\$50 million annually in Java.⁴

In developing countries, there are few women who have access to the education, financing schemes, and support systems necessary to negotiate careers or enterprises in the energy sector. This hinders the development of energy policies and of technologies better suited to the needs and wishes of women, who are actually the major users of energy. This is confounded by the fact that in the energy-related companies and agencies in industrialised countries that very often dictate energy policies to the developing countries, more than 80% of the employees are men, and women occupy only 5% of the technical positions.

Fortunately, women are effective activists on energy questions involving health, environmental, and children's issues. Women are considered to be more favourable towards energy conservation and renewable energy. The Vietnam Women's Union, for instance, is at the forefront of a revolving credit project to install the first household and community photovoltaic systems in the country.

Policy and Programme Interventions

The disproportionate lack of attention to the energy needs of the rural areas where poverty is at its starkest reduces the chances of achieving the millennium goals. The provision of energy to the rural areas with a focus on the domestic, informal, and agricultural sectors where women contribute the most should be addressed.

Where there is very strong government control over energy policies, megawatt projects from oil, nuclear power, or massive hydro-electric facilities are established with very little civil society consultation. In countries like Thailand and the Philippines, where policies can be influenced by civil society, there is opposition to such projects. Civil society plays a constructive role by redirecting energy policies towards alternative sources of electricity. In the Philippines, for example, the Department of Energy has established the Affiliated Non-Conventional Energy Centers in different parts of the country and has successfully worked with local government to install alternative technologies such as photovoltaics, microhydro, and wind turbines in remote rural areas not connected to the grid.

The 200 Village Survey, by the Asian NGO Coalition (ANGOC), during 1998-2000 in ten Asian countries showed that rural households are already undergoing energy transition from biomass to LPG, kerosene, and oil. However, fuelwood and charcoal are still used for cooking by the majority of the rural households.

There is great concern over the use of firewood by rural women and this issue that has been picked up by the NGOs. Improving cookstoves and the development of alternative fuels such as green charcoal and solar cookers have been mainstream projects for members of the Alliance of Appropriate Technology Practitioners in Asia (APPROTECH-Asia). APPROTECH-Asia, as a network, sponsors training, continuing technology development, and exposure to successful projects using these energy technologies.

Traditional stoves have efficiencies of about 10-15%, while current improved ones achieve over 20%. Some of the improved cookstoves are reported to achieve efficiencies of more than 40% and very low CO/CO₂ ratios. Training programmes, newsletters, and videos are marking the way of the Asian Regional Cookstove Program (ARECOP)⁵.

NGOs have been creative in marketing alternative energy technologies by coupling the technology dissemination not only with training and expert technical advice but also with appropriate financial arrangements for the purchase of the technologies. One such initiative is the Dissemination of Small-Scale Photovoltaic Systems by GTZ in Asia (GTZ, 1992) where stand-alone small home systems for lighting and electrical needs were made available to households through a microfinance mechanism.

There have been some significant successes in environmental management in the region. There are successful mangrove projects in several countries. In upland areas, the recovery of the Gunung Kidul, from its degraded condition in the mid-1960s, is a striking example of what is possible when both government and local initiatives are involved. In Indonesia, the Worldwide Fund for Nature has supported the reduction in the amount of badly degraded land from about 20 million hectares to 13 million hectares, through reforestation and rehabilitation work carried out by the Ministry of Forestry.

There is a growing trend to adopt renewable energy technologies both in rural and urban settings and these initiatives are regarded positively by both men and women. The technology of photovoltaic refrigerators is mature and fully commercialised with more than 5,000 now in use worldwide, the majority of them in African countries. Recently, countries such as Indonesia (400), and Myanmar (200), have started to rely on solar power for vaccine cooling.

Biogas technology is also spreading fast in Southeast Asia. As far back as 1990, there were already 200 family-sized units installed in Indonesia, about 800 in the Philippines, and more than 2000 in Myanmar. The solar energy group of the Renewable Energy Research

Center in Vietnam has designed and installed solar water heaters in Hanoi and Ho Chi Minh City.

A Call for Action

For Southeast Asia, and in synergy with global efforts, energy policies and programmes should satisfy fundamental criteria for sustainable development. Lobbying from Southeast Asia and from other parts of the world during the WSSD reflected the common experiences and issues that demanded the following:

- Recognising that access to energy sources is, in the final analysis, one of our fundamental rights.
- Promoting access to modern energy for all, with particular attention to women because of their roles in the family, the economy, and the community.
- Supporting indigenous capacity-building, especially among women who are already engaged in energy sourcing, production, and utilisation.
- Setting up integrated farming systems that provide food, funds, fertilisers, fodder, and fuel to enhance food and fuel security to small farm holders.
- Systematically introducing a mix of cleaner fossil-fuel technologies, renewable sources, and efficiency improvements to serve the needs of women and men.
- Providing and maintaining financial support for energy development, commercialisation, and the impact evaluation of energy projects.
- Establishing roles for stakeholders (including environmentalists, women's groups, current and potential consumers)
- Supporting networks that provide information about sustainable energy approaches to improve energy policies and programmes.

The WSSD Conference in Johannesburg addressed these issues and recognised the roles of women as primary users and producers of energy. Greater awareness of the crucial role of women in development, access to clean and alternative sources of energy as a prerequisite for poverty alleviation, participation of women in decision-making bodies that prioritise and allocate energy resources, and engendering the different stakeholders and partners in energy ventures to provide the environment for equity in energy allocations - were just some of the imperatives emphasised by both *ENERGIA* and the WSSD discussions. ■

¹ Jay Dunkerley, "Household Energy Use and Supply by Urban and Rural Poor in Developing Countries" (Resources for the Future Inc., Washington, DC) [1997]

² Cecelski, E., 1995: *From Rio to Beijing: Engendering the Energy Debate*. *Energy Policy*, 23 (6), July.

³ Extracted from Source: *The WHO and UNICEF Joint Monitoring Programme 'Global Water Supply and Sanitation Assessment 2000 Report'*.

⁴ UNIFEM (United Nations Development Fund for Women), 1994: *Report of the Expert Group Meeting on Women, Science and Technology: New Visions for the 21st Century*, UNIFEM, New York.

⁵ Aristanti, C., "International Programmes: Focus on ARECOP" . *ENERGIA News* Vol. 5, Issue 2, August 2002



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Climate Justice and Gender: the Need for Capacity Building

Gotelind Alber

In 2003, the Kyoto Protocol to the UN Framework Convention on Climate Change is expected to enter into force. Its ratification is the final point of several years of extremely difficult negotiations. However, the commitments made under the Kyoto Protocol will not solve all the problems of climate change. We can therefore see its ratification as no more than the very first step in a process that will need to enter a new stage.

Unlike in the CSD process, gender issues have been virtually absent in international climate negotiations. This has been stated by Njeri Wamukonya and Margaret Skutsch, among others, in their paper "Is there a gender angle to the climate change negotiations?" They identified several starting points for a gender approach, in particular related to capacity building and participation in the Clean Development Mechanism (CDM) from which they expect positive impulses for clean energy technologies in the South. Based on their tentative findings, we can see that there is an urgent need to raise women and gender issues in the international climate process (maybe this could be a subject for further consideration in a future issue of *ENERGIA News*).

At the most recent Conference of the Parties (COP8) in New Delhi in November 2002, only one of the numerous side events was dedicated to gender aspects (ENDA Tiers Monde / Integrated Research and Action for Development (IRADe): "Is the gender dimension of the climate debate forgotten?"). Although this was a valuable contribution to the discussion on how climate change, and mitigation measures, might affect women, the event did not deal with the ongoing negotiations. That is, the details on how the Kyoto mechanisms are to be implemented have not yet been analysed from a gender perspective, and no demands have been formulated on how to take gender issues into account.

Governments did make a first step towards addressing women's issues during COP7 in Marrakech in autumn 2001, adopting a proposal put forward by the Samoan delegation to improve the participation of women in the representation of Parties in the international climate process. However, the mere participation of women does not necessarily ensure that gender issues are taken into consideration.

This is particularly evident in the NGO scene. Some of the leading NGO negotiators are women who may even be interested in gender issues on an individual level. However, in the heat of the negotiations, they seem to get absorbed by the complex technical issues that arise from the Kyoto mechanisms. These mechanisms have contributed to the climate negotiations degenerating into a playground for economics addicts and number crunchers, leading

away from the genuine core issue of how to actually reduce carbon dioxide emissions.

As for equity and equality, climate negotiations have primarily focussed on the international divide between industrialised producers of greenhouse gases, and those most heavily affected by climate change in the southern hemisphere. Only recently, has the issue of climate justice within nations been put forward with greater intensity by several NGOs. Before the Johannesburg Summit, in terms of the wording and underlying philosophy influenced by the CSD process, the "Bali Principles of Climate Justice" were formulated by NGOs and indigenous groups. However, although women are mentioned among other groups, the language regarding women is extremely weak. Whereas indigenous peoples' demands are put forward in great detail (and I welcome that very much!), the only specific demand on women's issues is "Climate Justice affirms the need for solutions that address women's rights."

This leads me to the conclusion that there is still a lot to do, not only in training women, but also with educating NGOs. Every time a COP is held, local groups strive to get involved, but are often left frustrated by the highly technical insider language that the "professionals" within the NGO scene use. These "professionals" usually do have the best intentions to help others get involved; however, this does not necessarily achieve convincing results.

I would therefore call for even stronger efforts to involve women's organisations and groups. Capacity building will be a major prerequisite, because just getting accredited and attending conferences might not necessarily be an overwhelming success. It will also need thorough preparation, a process of jointly analysing the current status of negotiations and considerations, and learning about the potential options for intervention.

Maybe the indigenous groups can show how to succeed: they had their first large climate forum prior to COP6 in The Hague in 2000, and are already a relevant group within the process. ■



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Next Issue

This issue marks the end of a series of twelve issues (*ENERGIA News* 3.1 – 5.4) produced during the second phase of the *ENERGIA* programme. The next series will begin in the third phase of the *ENERGIA* programme, commencing in the first half of 2003. *ENERGIA* would very much welcome your contributions on gender and energy in sustainable development in the form of articles and/or case studies (1500-2000 words) for future issues of *ENERGIA News*. Please remember to send photographs and/or other illustrations to accompany your features.

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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.

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