GENDER AND SUSTAINABLE ENERGY

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Contents

Gender and Energy in Oceania: A New Concept in a Vast and Challenging Region 1
Editorial

News from the Secretariat 4

Meeting *ENERGIA* Members 6
Soma Dutta

PICs – a Very Different Context 7
Paul Bryce and Chin Ching Soo

Networking Around Oceania 10

Internet Resources 13

Village Power in Solomon Islands 14
Nixon Silas Pio and Joini Tutua

Electricity for Fijian Villages – Evaluation of the Muana Microhydro Project 17
Makereta Sauturaga

Bulelavata Women Speak 19
Donnella Bryce and Chin Ching Soo

Resources: Publications 21

Resources: Pacific Gender and Energy NGOs 22

Bulletin Board 23

Next Issues 24

Women from Manawai village in Solomon Islands made up the majority of the "wiring team" for their microhydro project (Photo: Donnella Bryce)

Gender and Energy in Oceania

A New Concept in a Vast and Challenging Region

In October 2002, the Council of Regional Organisations of the Pacific (CROP) produced a Pacific Islands Energy Policy and Plan (PIEPP) as a guide to energy developments for the small Pacific Island nations within Oceania. Although the PIEPP has a gender component, little has yet begun to materialise although a recent impetus for action has come from the *ENERGIA*-assisted Pacific Regional Workshop on Gender, Energy and Sustainable Development held in Nadi, Fiji, in August 2003. This newsletter, which is a first in the Oceania region, reports on some of the results of that workshop and the prognosis for future gender-energy progress among the small Pacific Island Countries (PICs). Further, it provides focus articles on Oceania to highlight a huge region of the globe (see map) that has long been in need of closer attention.

The region comprises of nations that have a political identity which is often little more than a generation old, and with major problems of aid dependency. Accordingly, an understanding of its special characteristics is critically important: the policies and practices of gender-energy development assistance will need to be appropriate if sustainable development is to be achieved.

While the Oceania region comprises of 24 separate nations, including Australia

and New Zealand, the PICs have long had a sense of regionalism. Writers such as Epeli Hau'ofa have written about the "sea of islands" and the historical trade and cultural links of pre-colonial islanders.[1] The South Pacific Commission, formed in 1947, built on this sense of the Pacific and developed strong regional structures at government level that linked Australia and New Zealand to the PICs. Today, these intergovernmental bodies coordinate through CROP.

The region holds a considerable range of the remaining global stock of environmental and cultural diversity, and at least one of the oldest civilisations on earth. These characteristics are particularly threatened in a changing, globalised world. While the effects of profligate energy use beyond the PICs is physically endangering some nation states through rising sea levels, access to modern energy in the PICs is extraordinarily limited. Indeed, within Oceania, political tensions centre upon energy with Australia remaining one of the top per capita greenhouse emitters in the world, while its smaller neighbours are generally on the bottom rung of energy access and the most vulnerable to climate change.

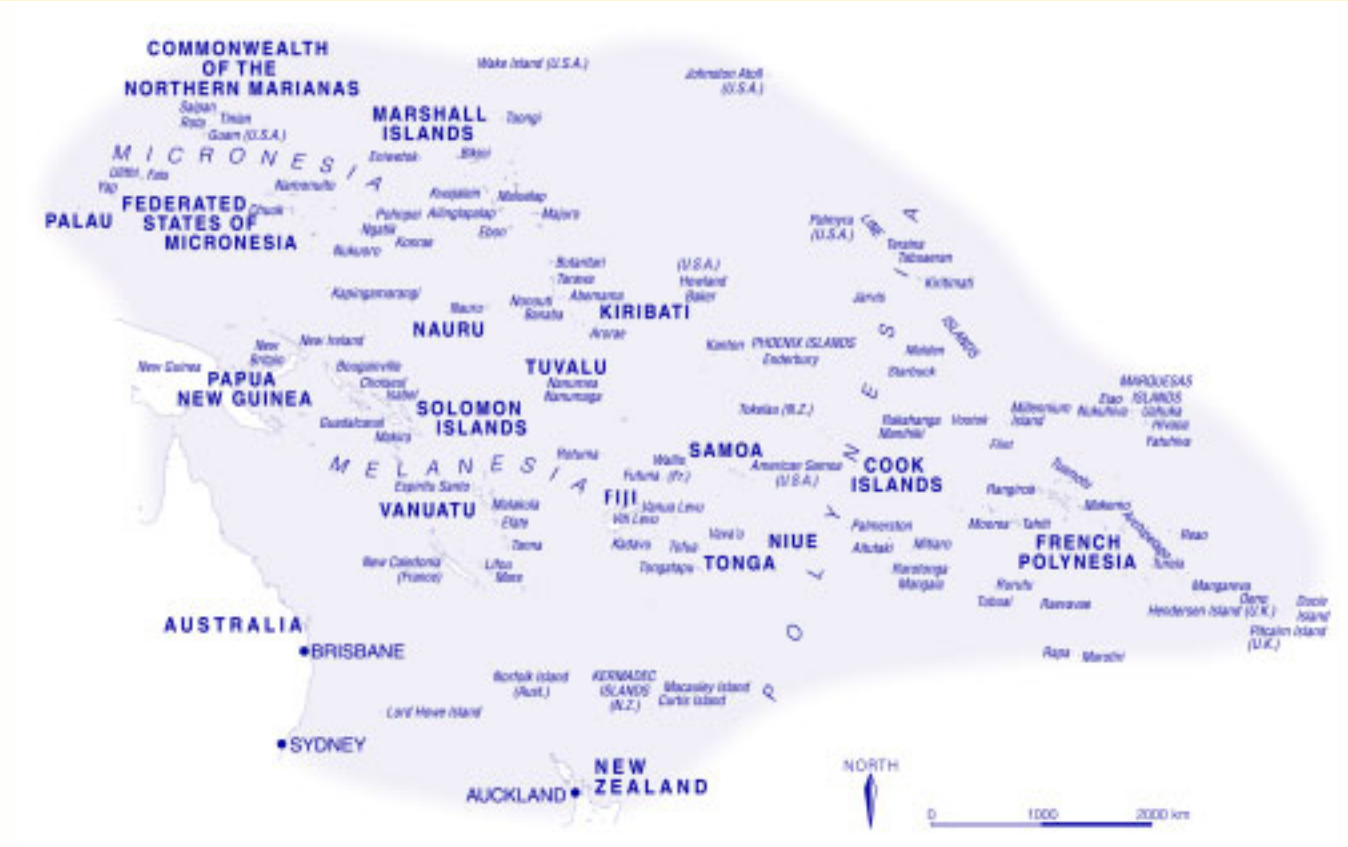
The usual gender inequities that result from resorting to biomass for cooking[2] would likely be found to be at an amplified level within the PICs if it where possible to produce reliable statistics in a region so disadvantaged by weak institutions, stretched resources, and very limited and unreliable communications. Rural women have, in general, no prospect of any other energy supply. In demand-side terms, energy efficiency is, by simple necessity, a strong issue among the PICs since even urban energy supply is often not financially sustainable.

The unusual characteristics of the region have led to different experiences in energy supply models, and the article "PICs: a very different context" (Paul Bryce and Chin Ching Soo) outlines some of the contextual issues as seen through longstanding first-hand experience. A joint report by Yogita Chandra, Jeanette Blainey, V.K. Sastry and Donnella Bryce describes the Regional Workshop, its recommendations, and the follow-up activities envisaged by each participant nation. Whilst the nexus between gender and energy is still a novel issue in much of the region, there is generally no formal or conscious gender-based discrimination in technical areas. The workshop was particularly timely in pointing out the socialisation processes that can implicitly embed gender disadvantage. Among other items, the Workshop resolved to 'genderise' the PIEPP.

Two rural Pacific leaders, Nixon Pio and Joini Tutua, both with many years of experience in energy, development, and gender issues, report on a positive story of energy-for-development in their article 'Village Power in Solomon Islands'. Whilst many energy and gender projects are highlighted at conferences for their successful implementation over months, or perhaps a few years, a programme with so few dollars that has grown and made such persistent progress over 20 years is truly remarkable within the region. There may be lessons here about the need to pay attention to holistic development in an energy programme, and this may only be possible through a greater local ownership in the processes and hence a stronger connection with social and gender contexts.

In the article by Makereta Sauturaga, 'Electricity for Fijian villages', we see why the Fijian energy programme leads government initiatives in many ways in this region. The Fijian Department of Energy shows itself to be a learning institution, with some interesting observations from its gender-disaggregated appraisal results. For example, it is notable that both the Solomon Islands programme (outlined by Pio and Tutua) and that described by Sauturaga have benefited at the local level when women control tariff collection.

Perhaps it is the gender-based socialisation processes that occur in the national settings that provide women with an ability to better manage communal finances and to be trusted so to do. It may be unwise to generalise about local conditions since some well-funded projects in other regions have looked towards expensive technological solutions for tariff collection, such as 'smart cards'.



Should we first put effort into understanding the local social conditions, or should we simply trust in local control, allowing local understanding to provide local solutions?

The women of Bulelavata village, in Western Solomon Islands, collect the communal proceeds from their electricity system. Some of the other experiences of these women that have arisen from their strong involvement in energy development through microhydro are described in their own words in a poignant article 'Bulelavata Women Speak' by Donnella Bryce. Those of us who have grown up with reliable modern energy perhaps need reminding of the transforming mental effects that can result when a technological tool of such pervasive influence is effectively appropriated within an exotic cultural setting. The experience of constructing a complex microhydro electric power system in Bulelavata village, and the flexible developmental tool that was created, provided both a hope for the future, and an organisational capacity to realise that hope. Women and men had acquired a capacity to plan, and a reason to plan.

Thus, this issue provides some encouraging models for a region containing five of the least developed nations of the world: electricity access rates in some areas are as poor as any region in the world, and gender, educational, and health statistics[3] for women can be quite depressing. Some manual-type resources and contacts for the region are included. We look forward to some focussed thought among resource planners about this intriguing, challenging, and important region of the globe, where new ways seem to be needed to fit the specific contextual base. Without appropriate answers, Oceania's cooperative cultures are ill-suited to surviving the competitive trends beyond its borders.

There are no formal gender-energy institutions in the Oceania region, including Australia and New Zealand. *ENERGIA*'s recent interest, manifested in its support for the Regional Workshop, is a heartening step forward. Its leadership may encourage better awareness, understanding, and support for local efforts that work within their own context, as distinct from translations from other regions. ■

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2. *Warwick H and Doig A, 'Smoke-the killer in the kitchen', ITDG Publishing, 2004.*
3. *Naidu, V.: 'The Millenium Development Goals and the South Pacific', Pacific Human Development Report 1999, UNDP.*

Other Readings

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Useful Electronic Resources

- Lechte, R. SET in our ways: **http://awis.org/v_maglechte.html**
- ANU's Research School of Pacific and Asian Studies catalogue of publications at: **http://rspas-bookshop.anu.edu.au**
- Pacific Studies WWW Monitor at: **http://coombs.anu.edu.au/pacific-www-monitor.html**
- Pacific Islands Association of NGOs at: **www.piango.org**
- University of the South Pacific Book Centre at: **http://uspbookcentre.com/store/merchant.mv?Screen=CTGY&Store_Code=UBC&Category_Code=GY**

◆ Donnella Bryce is Programme Manager of APACE - Village First Energy Group, based at the University of Technology Sydney, Australia. She has identified, appraised, designed, managed, monitored, and evaluated village energy systems, energy training, institutional building and strengthening, energy planning, and development projects in the Melanesian countries for 25 years. She has an active record in policy and advocacy for gender and energy issues at government and NGO levels, and has represented Australia at international environment and development forums. She has co-authored many published and presented papers. Her research interests are community self-assessment and appraisal processes; development of an alternative project identification and delivery methodology; issues around the more meaningful involvement of women in energy projects; and reliable and appropriate microhydro generating technology for small, remote village environs. Donnella has raised more than $5m in support of overseas gender and energy development projects.

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◆ Makereta Sautaraga is Acting Director for Energy at the Department of Energy (DOE) and has been involved in a range of energy activities for the last 13 years. She is currently managing a GEF/UNDP-funded project on promoting the sustainability of renewable energy technologies and renewable energy service companies (RESCOs) in Fiji. Prior to assuming this role she managed the Rural Electrification Unit within the DOE, where she was responsible for the control, management, and implementation of Fiji's rural electrification policy and programme. Her responsibilities at the DOE extend to that of Office Manager and the coordination of the Department's energy conservation programme. Makereta has a BSc (1990) from the University of the South Pacific, Suva, Fiji; and in 1998 was awarded a Master of Engineering degree in Energy Planning and Policy by the University of Technology, Sydney, Australia.

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News from the Secretariat

Institutional Development

Regional Network Coordinators
During recent months, the *ENERGIA* Secretariat has been very active in trying to fill the positions of Regional Network Coordinators (the title Regional Desk Officer was changed to Regional Network Coordinator as this better expresses the networking function). Following an extensive selection process, *ENERGIA* is very happy to announce that Soma Dutta has been selected as the Regional Network Coordinator for Asia. Soma is an independent consultant active in the fields of rural and renewable energy and rural development and is affiliated to Winrock International, India. Getting off to a flying start, she co-facilitated the *ENERGIA* Asian Focal Point Meeting in Bangkok in December 2003. *ENERGIA* looks forward to an energetic partnership not only with Soma, but also with Winrock India. Soma Dutta introduces herself to the network members through an interview with **ENERGIA News** on page 6.
ENERGIA continues the search for a Regional Network Coordinator for Africa.

Network building

South and Southeast Asia Focal Point Meeting in Bangkok, Thailand
A very successful first meeting of *ENERGIA*'s South and Southeast Asia Focal Points took place from 1-5 December 2003 under the excellent guidance of the workshop facilitator Christina Aristanti of ARECOP. The meeting was organised in collaboration with the Asian Institute of Technology (AIT) and was attended by 26 representatives of institutions both from within and outside Asia. Of these, nine participated as representatives of established national gender and energy networks from India, Philippines, Nepal, Vietnam, and Sri Lanka. Each national team consisted of the focal point plus an active member of the network. Observers interested in joining *ENERGIA* and establishing national gender and energy networks in their own countries were also present from Cambodia, Burma, Lao PDR, Pakistan, and Indonesia. The meeting also served as a forum for introducing the network to other programmes in the region, i.e. UNIFEM, UNDP, Bangkok SURF, and AIT, and to discuss potential partnerships with them.
As part of *ENERGIA*'s support for the south-south exchange of experiences, Makereta Sauturaga, Acting Director of Fiji's Department of Energy, participated in the meeting as a representative of the recently established Pacific Energy and Gender Network.
An important capacity-building element of the meeting was the exchange of experiences and understandings of networking at the regional and national levels. Technical support for this segment of the meeting was provided by K.V. Ramani who shared his extensive experiences in participating in, and managing, regional energy networks, i.e. APDC and APENPLAN. Christina Aristanti from the ARECOP network also provided inputs on networking.
The main outcomes of the workshop were:
- The identification of regional priorities, agendas, and structures;
- The exchange of experiences and understandings of networking at the regional and national levels, within a capacity-building perspective;
- The identification of potential partnerships with other regional programmes.

The full report of the workshop will be made available on the *ENERGIA* web site by the end of February 2004. For any further information please contact the *ENERGIA* Secretariat or Soma Dutta at: **somadutta@vsnl.com**

Capability Building

Training of Trainers on the Methodology for Participatory Assessment (MPA) on an Improved Cookstoves Programme, 23 February – 2 March 2004
Many of the Improved Cookstove Programmes (ICSPs) that have been carried out in recent decades have not been particularly successful in delivering beneficial and sustainable impacts to users. One of the reasons is the lack of user participation. Giving attention to this issue, ARECOP (Asia Regional Cookstove Programme) is training trainers in the region to use participatory tools and approaches in improved cookstove programmes. In meeting the capacity-building needs of its members in Asia, *ENERGIA* is sponsoring several trainers, proposed by the National Focal Points, to attend the TOT programme on MPA in Chiang Mai, Thailand. The trainees are expected to carry out post-training assignments in their own countries including translating gender components of the MPA manual into their national language and adapting its contents to the country-specific situation, carrying out a pilot project in their country using the MPA methodology (with a duration of at least one year), communicating with the *ENERGIA* Regional Secretariat on the progress of the MPA implementation, and submitting a report on the pilot project on its conclusion.

Renewable Energy in Local, National and Global Context with Socio-economic Perspectives, 25 February – 5 March 2004, New Delhi
IRADe (Integrated Research and Action for Development) will be hosting an international training programme designed to be of particular relevance for developing countries in Asia and Africa. The course is targeted at a wide range of professionals in governmental, non-governmental, and private organisations, and pays particular attention to the participation of women. The programme will consist of lectures and discussion sessions on a range of issues including international energy issues, national energy planning, the need for participative approaches, entrepreneurship, and community-based initiatives and gender. Anoja Wickramasinghe, the Focal Point for the National Gender and Energy Network in Sri Lanka, will be providing the gender inputs at this training workshop.

Regional and International Advocacy

Gender and Climate Change at COP-9, Milan, Italy, 1-12 December 2003
Is gender an issue in climate change and, if so, how should it be approached?
More than 30 people participated at an informal meeting organised by LIFE and *ENERGIA*, on 5 December, with a view of taking stock of the interest of participants at COP-9 in gender as an issue in climate change, and planning how to increase the visibility of gender issues in the climate change debate.
Five main areas of concern were identified:
- Lack of gender specificity in the criteria related to the climate change instruments;
- Lack of gender specificity in relation to the vulnerability/adaptation discourse;
- The need for case studies which illustrate both how climate change itself, and how projects (both mitigation and adaptation), affect men and women differently;
- The underlying gender connections between climate change agreements and other international processes such as the Convention on Biodiversity and health related treaties on pesticides etc.;

• The lack of participation of women in the whole process.

A number of cross-cutting issues were also identified including how to tackle the lack of awareness of these problems at the national and local levels.

It was decided to aim for a one-day event at COP-10 to bring all these issues to the greater climate community. Five subgroups were set up to deal with the five themes outlined. The subgroups will meet during the remaining period of COP-9 in order to plan their inputs to COP-10.

Further to COP-9, a "Gender and Climate Change Network" has been established. Communications within the network are being facilitated via a web site at *www.gencc.interconnection.org* and a listserver, both of which are currently being managed by ETC Foundation. Anyone interested in joining the network is most welcome to send their contact details to **Roselyne van der Heul (r.vanderheul@etcnl.nl) or Leanne Wilson (Leanne@etcuk.org).**

"Promoting Gender Equality, Providing Energy Solutions, Preventing Climate Change"

Another important gender side event at COP-9 was the seminar hosted by the Swedish Ministry for the Environment on 10 December 2003: "Promoting Gender Equality, Providing Energy Solutions, Preventing Climate Change". Inputs on behalf of *ENERGIA* were made by Ms Fatma Denton of ENDA–Tiers Monde, Senegal, who was one of the panellists. More information on the outcomes of the seminar can be obtained from **Johannah Bernstein, Environmental Law and Policy Consulting.**
E-mail: johannahberns24@hotmail.com or Fax: +32(0)2.5375596.

Thematic Background Paper (TBP) for Renewables 2004: "Gender Equity and Renewable Energies"

In preparation for the international conference on renewable energies – Renewables 2004 – in Bonn, Germany, *ENERGIA*, in collaboration with the Technology Development Group of the University of Twente in the Netherlands and LIFE in Germany, is developing a TBP on gender. The main purpose of the paper is to provide input to an "Issue Paper" that will provide the basis for a discussion at the conference and serve as an input in the formulation of the final conference output. The development of this paper is supported by GTZ.

The aim with this paper is to provide a cross-cutting overview of gender aspects and the use of renewable energies. It will highlight the fact that energy issues have to be viewed in a gender-specific way and that they have different effects on the lives of women and men; not only in the developing, but also in industrialised countries. Therefore, it will include a clarifying discussion about the most important aspects of gender equity and energy, with a focus on renewable energies. This paper will, in this way, indicate to decision makers the options for integrating gender aspects into policies and measures. A draft version of the paper is now available and can be requested from the *ENERGIA* Secretariat.

Participants to the ENERGIA Asian and South East Asian Focal Point Meeting in Bangkok, Thailand, in December 2003 (Photo: AIT)

Knowledge Resources

Gender and energy toolkit and resource guide

UNDP and *ENERGIA* are in the process of jointly developing a practitioner's toolkit and resource guide for engendering energy projects and incorporating gender and energy sensitivity into overall development planning. This user-friendly guide is meant to be used in capacity-building activities involving UNDP country office staff, government officials and policymakers, project designers, NGO groups, donor organisations, and others working on sustainable development programmes. It will provide the target audience with relevant information on the cutting edge of current practices on women and energy activities that support poverty reduction and sustainable development so as to guide future activities in this area. The resource guide should be ready by April 2004. ■

NEW ENERGY & POVERTY WEB SITE LAUNCHED – WWW.EASE-WEB.ORG

EASE –Enabling Access to Sustainable Energy- aims at enhancing the access of low-income groups to sustainable energy services in rural Bolivia, Tanzania, and Vietnam. EASE undertakes activities in three areas - research, advocacy, and capacity building – to identify and implement viable energy projects with rural communities in these countries. The major focus of the EASE programme will be at national level, but several activities will also be undertaken at international level.

The recently launched web site of EASE www.ease-web.org gives insight into the programme's aims, activities, and partner organisations. It also provides access to a range of resources, including:

- back issues of the bi-annual international EASE newsletter;
- papers, reports, and publications;
- web links;
- news & events in energy and poverty.

Updates on the EASE activities in each country will be made available on the web site's country pages to be activated soon.

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Meeting *ENERGIA* Members

Soma Dutta

***ENERGIA* Regional Network Coordinator for Asia**

Interview by Chesha Wettasinha

What is your present involvement in the field of gender and energy?
I have been working as an independent consultant for the last seven years in the fields of rural and renewable energy and rural development. Within the energy sector, I have been involved in capacity building and training; project management; monitoring and evaluation of renewable energy technologies and programmes; documentation; and gender issues. In one of my ongoing projects, I have been providing, on behalf of UNDP, inputs on gender mainstreaming to a UNESCAP initiative aimed at strengthening national capacities in integrating energy issues into rural development policies in the Mekong region.

You have been closely associated with Winrock India for some time. What exactly have you been doing?
During the last four years, I have provided consultancy support on specific projects as well as in core areas such as project planning and proposal development. Winrock International India (WII) is an affiliate of Winrock International, a global non-profit organisation, and is registered as a non-governmental organisation in India.Winrock focuses on three principal thematic areas: Natural Resources Management, Energy and Environment, and Agriculture and Enterprise Development. In my role as *ENERGIA* Regional Network Coordinator (RNC) I will be supported by the Energy and Environment Group at WII, which has made a long-term commitment to working on gender and energy.

We know that you have an interest in local governance issues. How do you give this shape?
I am associated with a number of grassroots organisations, assisting them in areas of project planning and proposal development, participatory monitoring and evaluation, and documentation. Recently, I have also been associated with a citizens' group, promoting the active participation of citizens in governance, and ensuring transparency in government functioning.

What kind of work were you involved in before venturing out as a freelance consultant?
Prior to working as a freelance consultant, I worked with TERI (The Energy and Resources Institute), a non-governmental organisation working in energy, environment, and sustainable development. At TERI, I was the area convenor of the Rural Energy Group, coordinating the research activities in the rural energy field, developing an interface with other research areas within TERI and other organisations including NGOs, and conducting research on environmental issues, renewable and rural energy policy, gender issues, and people's participation in sustainable development.

As a member of the ENERGIA Network in Asia, how would you describe the network?
I have been associated with *ENERGIA* for the last few years and am a part of the Planning Group. *ENERGIA* members within the Asia region are a vibrant group of individuals and institutions, and bring to the network an immense wealth of expertise, knowledge, and experience. The variety is reflected not just in terms of the experience that the network members have in dealing with gender issues in a range of themes and sectors such as water, enterprise development, micro-credit, and forestry, but also in the types of organisations: national and regional level networks, academic and research institutions, NGOs. A network of this nature, which pools a vast range of experiences, can perform several important functions including: recording and disseminating experiences, opinions, viewpoints, and perspectives; facilitating the exchange of ideas, experiences and expertise; advocating the needs and concerns of the member institutions to regional, national and international policymakers; and providing a forum for innovation and the development of methodologies.

As Regional Network Coordinator, what role will you play in furthering the ENERGIA Network in Asia?
I view the RNC's position as an opportunity to be proactively involved in the process of institution building. I expect to play a strategic role in defining gender and energy priorities for the region, facilitating the process of needs assessment on the national and regional levels, and translating these needs into concrete network activities. Some of the other priority areas are to build institutional linkages with other institutions and networks; advocacy at international, regional, and national level meetings concerning energy and development activities; as well as network-building activities including putting in place mechanisms for harnessing core competencies within the network and facilitating the sharing of expertise within the network.

What is your long-term vision for the network in Asia?
I hope that, through its varied activities, *ENERGIA* will promote proactive collaboration between professionals and organisations with the aim of positioning gender and energy at the forefront of the agendas of national and local level governments, as well as in international bodies. I would also like to see *ENERGIA* as a network whose activities are relevant, useful, and responsive to members' needs, as well as in line with the gender and energy priorities of the region, and characterised by values of professionalism, quality, and accountability. I would like to see the *ENERGIA*-Asia region serve as a think-tank on gender and energy issues, conducting or coordinating high quality research and analysis, and raising the level (quality and quantity) of the information available on women and energy, so as to include the perspectives, knowledge, and skills of women both at the informal and the professional levels.

You participated at the recent ENERGIA Asian Focal Point meeting in Bangkok. What were your impressions of this event?
The meeting was attended by participants from several countries from South and Southeast Asia. Gender and energy activities in many of these countries are already underway, with national focal points selected to steer the activities in their respective countries. The event was a great success and a useful forum for all of us to meet, interact, and share our views and experiences. Beyond the meeting objectives, it was also a wonderful meeting point for cross-cultural exchanges. I look forward to many more such meetings.

On a more personal note, could you tell us a bit about yourself?
I live in Noida, a suburb of Delhi, with my family and have a five-year old daughter. I hold a Bachelor's degree in Economics and a Postgraduate Diploma in Rural Management from IRMA, India. I love to read, travel, and birdwatch; and I am interested in music, particularly classical. ■

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PICs: a Very Different Context

Paul Bryce
Chin Ching Soo

The Pacific Island Countries (PICs) are physically, culturally, demographically, and economically, profoundly different from other major regions of the world. The majority are economically dependent on aid funding.

Pacific Island women suffer similar burdens of, and responsibilities for, energy provision and use as women in disadvantaged countries worldwide. Regarding energy, the PICs have been largely ignored and often rate no mention in statistical analyses or in development aid strategies. The value and extent of women's work seem often invisible to development planners and government policymakers. The link between energy poverty and rural women's disadvantages also seems little emphasised among major donors to the region.

The Pacific is home to many of the world's least developed nations: energy poverty is nowhere more evident. In Papua New Guinea, the largest of the PICs, 80% of the citizens live their lives without the reality or prospect of modern energy services, affordable or otherwise.

The vast majority of Pacific women subsist using fuelwood for cooking and economically-rationed kerosene for lighting. Domestic disputes, injuries, and household fires often stem from the use of a single kerosene flame. Women's emotional futures are invested in their children who see little prospect of attaining reasonable education or safe health services that would be made possible with an electricity supply.

What is so different about the Pacific Island region, and why has it been largely "off the agenda" in current initiatives addressing energy poverty and the energy-gender nexus? The Pacific Regional Workshop on Gender Energy and Sustainable Development (reported in this issue on page 10) looked at national constraints and needs, but there are also fundamental regional characteristics that affect progress on gender-sensitive energy supply models:

Population is Extremely Dispersed

More than 80% of the citizens of the PICs live in small (often tiny) rural, communal groups sited on customarily owned tribal lands. These communities are spread over thousands of small islands, a handful of larger ones, and across hundreds of thousands of square kilometres of sea.

The accompanying box provides some insights into the extraordinary human resource challenges facing many Pacific nations, where the structures of Government, civil institutions, and services are managed by so few people. Wilbur Heine, for example, is the Marshall Islands *Ministry* of Energy, dividing his time among policy, planning, managing, and field implementation of solar, wind, and diesel energy installations; while also acting as the officer responsible for representing gender issues. Even the relatively large Solomon Islands population is dispersed over 100 significant islands, comprising 28,000 sq km of land spread over an area of 1.3 million sq km of ocean, and serviced by a total of just 13 km of all-weather roads. The narrow human resource base constrains economic development, and the narrow resource base and the geographical isolation of (and within) nations restrict trade and competitive interactions among people, capital, and goods.[1]

Some PIC Populations

Cook Islands	16,500
Fiji	810,000
Kiribati	90,000
Niue	1,600
Marshall Islands	52,000
PNG	4,810,000
Solomon Islands	446,000
Vanuatu	192,000

The Global Village Energy Partnerships (GVEP) programme, for example, provides no explicit place for the Pacific Island States, let alone their particular context of needs. Even Australia, as the most significant regional player and donor, makes no mention of energy within its sectors of developmental assistance towards its Pacific neighbours. Its strong gender policies do not recognise energy poverty as a particular burden carried by women, or indeed as a general need in the region. Even as Australia now focuses massively on Solomon Islands reconstruction, with the EU and other donors generously contributing to a decentralised community development programme within which women are primarily targeted as the peacemakers and peacekeepers, their (and their communities') energy needs and considerable energy burdens are not being addressed. The energy initiatives on the 'drawing board' involve support for a failed urban utility, and (potentially) a token (15 households) 'solar homes' initiative that will do little to assist women's direct energy needs and, as happened in a previous solar home project, may lead to further social unrest.[2]

Cultures are Extremely Diverse

After roughly 50,000 years of ancestry in geographically widely-dispersed communities, Melanesians alone now speak a quarter of the world's languages.

Many Melanesian, Micronesian, and Polynesian societies were "left alone" until relatively recently, and complex traditional customs (notably concerning gender roles, land tenure, kinship obligations, and resource ownerships) differ significantly across the numerous language groupings. Most of the traditional customs are strongly gender-linked, with specific roles and responsibilities for women and men that vary among the different language groups. These cultural ties survive in the hearts, if not always in the minds, of many Islanders as they strive to assimilate the language and values of their powerful neighbours, particularly those of Australia and New Zealand. Pacific women are working to define their rights in the context of Pacific culture and tradition, but pushing the boundaries of what is acceptable in "the Pacific way".

Traditional gender roles arise from the times when male roles were more clearly defined and physically onerous. To an extent, the present emphasis on youth-based developmental assistance is a

belated recognition that the influences of church and state have removed many of a young man's traditional status roles and responsibilities, while increasing women's roles and burdens, with added expectations for their children's futures.

Pacific societies are generally founded on strong family and kinship ties, loosely labelled "wontok" systems. The unifying role of women within these collective frameworks was traditionally respected but the recent, externally imposed, stresses of cash-based, individualistic values weigh heavily on women's perceived role as a 'glue' for communities. This has been clearly seen in their leadership of the peace-and-reconciliation movements in Bougainville, Fiji, New Caledonia, and Solomon Islands, but is continually being challenged by their relative lack of higher education scholarship placements, cementing the dearth of female positions in the 'technical' and managerial spheres of government and private employment. While discrimination appears not to be structural, opportunities for gender equity are limited by an embedded socialisation process, against which the modern church, state, and aid institutions provide few challenging role models.

Moreover, there is little to call on from traditional societal norms to prepare men and women for the 'new' paradigms of cash accumulation, private-sector initiatives, personal ambition, and private resource ownership, or for the adaptation of institutions transplanted by the former colonial powers.

Energy Supply Models do not Transplant

Until recently, energy supply was the prerogative of institutions that remained as legacies of the paternalistic, public-employment models of the 1970s and 1980s, left behind when independence became a reality for most PICs. The government utility model of energy supply predominated, where Ministries oversaw grid extensions fed by diesel-generators with subsidised tariff rates. Government staff, almost entirely men, were trained in technocratic disciplines in first-world tertiary institutions, or at least to syllabuses designed by first-world consultants. Energy supply was a technical matter determined by the textbooks of economics and engineering, with 'statistical' consumers and power station designs transplanted, constructed, and maintained by centralised technical specialists. Within a PIC context, with their small numbers of physically and culturally diverse 'consumers', the lack of social impact assessment or gender-based concerns has left a legacy. The government model leads to persistent recurrent budget burdens, a dominant rural population in energy poverty, and women who continue to become increasingly burdened by a growing list of household management chores.

Government utilities have generally been restructured to form corporate entities separated from policy development. Such changes, while sensible for some reasons, can reinforce the techno-financial culture inherent in the model, and can exacerbate the bleak prognosis for rural areas and rural women. Diesel fuel and maintenance costs are amplified by remoteness, and incomes to fund them are constrained by thin markets. Areas without existing cash-based demands tend not to pass financial modelling 'tests', and the existing energy usages (predominantly by women and generally in the informal economy) are often ignored. There are also protracted costs from social and legal disputes that arise from erecting power stations on alienated[3] land, where a quantitative (dollar) compensation value offered to customary landholders cannot equate to the affective, qualitative measures of value that are based on complex traditions of communal custodianship.

Unless the basic "techno-financial" model is changed, even the newer, decentralised technologies will require human resource capacities, at community, provincial and central levels, that largely do not exist. Unless the role of women in technical training is positively encouraged, the model will continue to lack a balanced, guided approach to policy formulation. As a specific example, energy supply and energy demand assessments, under this model, are seen as separate calculations. Demand is generally based upon standard formulae for a consumer's needs for lighting plus small appliances, plus somewhat arbitrary expansion factors. There is generally little account taken of existing subsistence energy applications, particularly women's usage, nor a concerted effort to facilitate community-based developmental plans that might transform the society's social and economic opportunities. In many cases, where other sources are available, the energy supply assessment is still based upon preconceived technologies, particularly solar-home systems that cannot easily transform the economics of development, and certainly cannot address domestic cooking needs. Meanwhile, the University of the South Pacific's statistics[4] on student participation in high-level technical courses show that these remain overwhelmingly male-oriented, despite the large influence of students from the host country (Fiji), where role models of women in energy technologies do exist.

A private sector model has been adopted within many current multilateral strategies for energy supply. In this model, public funds assist in generating enabling conditions for private investment; see, for example, the GVEP scheme (box).

GVEP (refer www.gvep.org)
Significant GVEP objectives are to:
- Bridge the gaps between investors, entrepreneurs, and energy users in the design, installation, and operation of replicable energy-poverty projects.
- Facilitate policy and market regulatory frameworks to increase the availability of energy services.
- Serve as a marketplace for information and best practices on the effective development and implementation of energy-poverty projects/programmes.

The GVEP's objectives suggest that access to modern energy services by the rural poor in developing countries should be encouraged to be provided by investors and entrepreneurs, with assistance confined to policy and market regulatory frameworks.

Design studies and consultancy reports on 'removing barriers'[5] to private sector investment in energy supply abound in the Pacific, and continue to attract support even though they generally lack gender objectives and women's participation. The preconceptions that surround these studies seem to be informed by other contexts, with larger populations, economic linkages, and cultural traditions of entrepreneurship. The private sectors of the PICs are generally tiny, constrained by both cultural factors and the more measurable physical ones, and are almost exclusively male-oriented. They are debilitated by thin markets that are difficult to serve and without significant economies of scale[6]. They are characterised by remoteness, dispersed populations, lack of fossil fuel resources, irregular shipping transport, limited infrastructure and institutional services, and cultural restrictions on women's participation. For example, it is often unacceptable for women to 'drive' canoe engines, even though canoes can constitute the dominant form of transport, comparable to cars and bicycles in other regions. These conditions make for exports focussed on very limited, low-value commodity options that are vulnerable to fluctuating terms of trade. Imports are constrained by the very high transaction costs of markets that lack physical and knowledge infrastructures. Internal capital accumulation is quite inadequate for a village power supply that would be sufficiently abundant to provide for universal access, including cooking needs. Who will provide external investment for an energy supply for small communal populations without significant cash income, often dispersed by days of difficult travel between sites, often without local experience or training in financial or technical matters, and largely

without economic linkages for exploiting electricity-based small businesses?

In fact it has been stated that nearly all South Pacific rural communities will never have electricity unless project capital costs are heavily subsidised (up to 100% in some cases)[7]. A more achievable rural electrification scheme in South Pacific countries may be one where the capital costs are heavily subsidised, and a user's tariff is set based on the full recovery of the operational, maintenance, and replacement costs of the system.

The uniqueness of the South Pacific region means that more-appropriate solutions for access to modern energy need to be considered by international donors. Criteria that presuppose the economic linkages and opportunities available in culturally and physically different global regions imply that support for energy supply in PICs will be faced by a vicious circle in which affordable energy will be confined to sites where cash-based economic linkages are apparent. In the PICs these will not begin to appear without access to affordable, modern energy supplies[8].

As with the GVEP, the Global Environmental Facility (see box) offers possibilities for alleviating rural energy poverty, although it has similar presumptions. Rather than act alone, an investment in energy supply (or energy efficiency) is supplemented by GEF support to remove barriers to diffusion. High transaction costs, for example, are seen as being addressed by "market development and commercialisation". An indicator of success may well be "an increase in market share" for a particular renewable energy technology; unfortunately, a suitable market is yet to be established in most of the PICs. Such multilateral structures that depend upon governmental focal points may find further unconscious barriers in the specific area of gender access to energy.

One small positive step forward may be to classify the South Pacific as a discrete region with specific attributes and 'Pacific way' criteria that could encourage women's participation.

GEF (refer www.undp.org/gef)
The Global Environmental Facility supports the market development of renewable energy technologies through three operational programmes that address the priorities of the UNFCCC:

- Operational Programme 5: Removal of barriers to energy efficiency and energy conservation.
- Operational Programme 6: Promoting the adoption of renewable energy by removing barriers and reducing implementation costs.
- Operational Programme 7: Reducing the long-term costs of low greenhouse-gas-emitting energy technologies.

A Way Forward?

Two of the cases presented at the Regional Workshop on Gender, Energy and Sustainable Development have worked well in a few PICs. The first, recently implemented with GEF assistance through the Fiji Department of Energy for rural communities, involves renewable energy (solar) companies at the local level, and demonstrates that the multilateral models of assistance can, with good will and understanding, be flexible and relevant.

The second, implemented progressively with NGO assistance over two decades in Solomon Islands and PNG, embodies community ownership (through Village Hydro Management Committees), with gender-based policies and practical objectives. This model sees financial returns through the route of rural enterprise development and, recently, in spare parts support. For more information see 'Village Power in Solomon Islands' on page 14.

Both models offer recognition that investment in rural electrification will have indirect returns through the opportunities afforded to rural citizens to take part meaningfully in their nation's affairs. The longevity of schemes in the Solomons and PNG suggest that this is practicable without the cross-subsidies that often accompany centralised models.

It is worth noting that both these projects, considered as successful models worthy of further expansion, have been led by women (ENERGIA members) who were seen clearly as role models possessing managerial and technical skills. ■

[1] *UNDP, "Pacific Human Development Report", 1994, UNDP*
[2] *See 'National economic recovery, reform and development plan 2003-6, page 78, II, 2, Dept. National Reform and Planning, Honiara, Oct 2003*
[3] *Customary lands, owned through traditional systems that are enshrined in the Solomon Islands constitution, are sometimes 'alienated' by Government regulation, so as to make them available, and effectively owned by the Government, for the purposes of 'national development', such as power stations.*
[4] *refer Serendra Prasad, USP Physics, Fiji*
[5] *World Bank initiatives are currently underway in PNG (developing supply models) and the Pacific region (removing barriers), but follow a plethora of previous donor design studies and "Master Plans".*
[6] *Pg 1, Annex 5, "Pacific Energy Policy" August 2002, by Committee of Regional Organisations of the Pacific*
[7] *"Sustainable Rural Electrification in the Pacific Islands – Mission Impossible?", by Solomone Fifta, refer: SolomoneF@sprep.org.ws*
[8] *Even gender-based objectives within multilateral assistance schemes (e.g. GVEP) presuppose linkages such as microcredit or finance facilities that are not universally available to women, and are often absent at the rural level.*

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Networking Around Oceania

Pacific Regional Workshop on Gender, Energy and Sustainable Development

Compiled by Janette Blainey (workshop facilitator), Yogita Chandra (SOPAC Secretariat, workshop coordinator), Dr VNVK Sastry (ENERGIA representative, South Asia Network), and Donnella Bryce (ENERGIA representative, PEG Working Group).

Overview

The ESCAP Pacific Women's Training Workshop held in Western Australia in early 2001 highlighted the lack of energy services for the majority of citizens in the PICs, together with the almost non-existent awareness of the importance of women's involvement in energy production and distribution. Participants at the training workshop, including men and women from Australia, Fiji, Tonga, Samoa, Vanuatu, and *ENERGIA*, conceived the idea of a regional forum to promote awareness of gender and energy issues. Later that year, at the ISES Conference in South Australia, the idea was further developed to encompass a regional network and from these discussions an initial concept was prepared. In early 2002, Makereta Sautaraga (Department of Energy, Fiji) and Donnella Bryce took the proposal to the *ENERGIA* planning workshop in the Netherlands where *ENERGIA* agreed, in principle, to support the concept. A working group further developed the proposal and submitted it to various organisations for support. The 2002 Regional Energy Meeting in the Cook Islands recommended that the South Pacific Geoscience Commission (SOPAC) coordinate an action plan for women and energy to complement the Pacific Islands Energy Policy and Plan (PIEPP). SOPAC secured funds from the Republic of China, UNDP, *ENERGIA*, and UNESCO, and support from the Pacific Islands Forum Secretariat. The resultant "Pacific Regional Workshop on Gender, Energy and Sustainable Development" held in Nadi, Fiji on 4-8 August 2003 was an important preliminary initiative in gender mainstreaming the energy sector in the Pacific Region.

Forty-eight people representing the Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Republic of the Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, Republic of Vanuatu; regional institutions (UNIFEM, UNICEF, SOPAC); major donors (UNDP, ROC, GEF); several international organisations (Greenpeace, APGEST, APACE VFEG); and indigenous NGOs (ECOWOMAN, PACFAW) attended the workshop.

The topics covered in the five-day workshop included: What is Gender?, Role of Regional Organisations, Gender and Energy Projects in the Region, Community Participation in Projects, Patterns of Energy Use and Household Energy Consumption, Gender, Children and Justice, Gender Policies and Practices in the Pacific, Gender/Energy Networks, Millennium Development Goals, Funding Opportunities, Developing National Action Plans, and Regional Priorities.

***ENERGIA* provided resource** materials and technical assistance as well as support for two people to attend the workshop. Donnella Bryce, a member of the Pacific Energy and Gender (PEG) Working Group, was supported as a resource person having 25 years active experience in gender, energy, policy development, project management, and community participation for villages in Pacific countries; and who, for more than a decade, has been designing and delivering training for women at the village level. Dr.V.N.V.K. Sastry, a social anthropologist who has worked among the gathering and hunting tribal groups of India on environment and livelihood issues for 35 years, was also supported. Presently he is joint director of *ENERGIA*'s South India focal point: the Environment Protection Training and Research Institute at Hyderabad. His task was to introduce and explain the *ENERGIA* Asia network structure, its activities and case studies, and to encourage broad partnership with and within the Oceanic networks. Both representatives made presentations at the workshop and participated in discussion groups and round-table sessions.

The Workshop

Aims

- To develop regional strategies and an overall action plan that will assist in creating awareness and identifying barriers relating to gender issues in the energy sector.
- To help facilitate a consultation process on gender issues and to bring together relevant stakeholders from the energy sector, donors, and partner organisations within the region.
- To support a better understanding of gender issues in the energy sector, leading to the adoption of a fully-integrated gender approach to existing and future energy projects.

Approach

The workshop methodology was generally participatory in nature. There were paper and multimedia presentations followed by questions and comments; group discussions on specific issues followed by group presentations; and round-table discussions on the issues leading to recommendations.

Programme

- Day 1: The focus was on constraints, opportunities, and capacity-building needs in the energy sector, and the role of various agencies. While it was noted that there are some common issues in the region, there are also wide differences among the PICs on gender and energy issues. Gender and energy are not national priorities in all the PICs, and there is an urgent need to sensitise political executives and government officials as well as donor agencies. Energy, Environment, and Education ministries were identified as targets for education and awareness raising.
- Day 2: Participants were provided with opportunities to learn from other countries, international networks, and organisations working within the Region. There is a serious concern, in all PICs, about the depletion of their natural resources. It was noted that the PICs' present energy resources vary from firewood to coconut branches, leaves, and coconut shells.
- Day 3: The workshop explored the benefits of networking in the Gender and Energy Sector as well as funding opportunities at national and regional levels.
- Day 4: Focused discussions on regional interests dominated the day. Decisions on opportunities for partnerships, formalisation of the Pacific Energy Gender Network, and a Plan of Specific Actions

identifying national and regional priorities and a regional framework were discussed.
- Day 5: The participants' recommendations resulting from the five working days, including the establishment of the Oceania regional 'Pacific Energy and Gender Network', were discussed and put to the group for acceptance.

Main Recommendations

The Formalisation of a Pacific Energy and Gender Network (PEG)

- That the region chooses to endorse and establish a regional gender and energy network: the Pacific Energy and Gender Network (PEG).
- That the PEG Network includes and welcomes all countries, and all peoples and their organisations, that have gender and energy interests in the Oceania region.
- That the PEG Network initiates, through this workshop, a strategy and action plan in the PIEPP in order to further gender equity and sustainable energy development in the region.
- That this PEG Network is formally established through a coordinating "hub", initially hosted by SOPAC.
- That the "hub", or Secretariat, for the PEG Network exists as a separate function to the host organisation with the option that the "hub" of the Network rotates throughout the region, hosted by different organisations with the appropriate capacities.
- That the PEG Network would welcome regional, national, and community organisations as members and would provide encouragement and opportunities for community-based representation.
- That a small, representative working group be established, by this workshop, to plan, oversee, and be responsible for the operationalisation of the PEG Network.
- That the PEG Network, through this workshop, chooses to accept the invitation, extended to the Oceania region, to join the broad international gender and energy network known as *ENERGIA*.

Education

- Gender and energy curricula to be included at all education levels.
- Encouragement for female students in technical disciplines.

Training

- Gender awareness training for government energy officers.
- Gender training at community level for older people, men, women, and youth.
- "Train the Trainer" training in gender and energy.

Community Participation

- Sustainable rural electrification critically depends on the active participation of men, women, and youth at the community level.

Policy and Planning

- Mainstreaming gender into national energy policy and planning, including the provision of assistance on the implementation of existing policies through guidelines, direction, and mechanisms that enhance awareness of gender and energy's role at all levels from government to community.

Dissemination of Information

- Need to increase awareness of gender and energy issues throughout the region.

Other recommendations on improving networking at national and regional levels with relevant stakeholders, the provision of technical assistance, improved gender/energy training and capacity building, funding, and reporting on the gender impact of different energy types and technical choices were agreed. Full details of all the workshop recommendations and outcomes can be accessed on the ENERGIA web site at:
http://www.energia.org/resources/papers/0803_pacificwshop.html

Outcomes

The outcomes of the Regional Workshop could be more extensive than those reflected in the recommendations. If followed through with effective networking, regional support, and continued education and learning (as identified in the workshop proceedings), the outcomes have the potential to make a real difference to the way in which gender is included in energy policies and the implementation of energy initiatives and sustainable development in the Pacific Region.

Many countries and organisations in the Oceania region were represented at the Pacific Gender and Energy Workshop in Nadi, Fiji (Photo: SOPAC)

The major outcomes can be identified as:
- Increased awareness and understanding of the knowledge and experience of specialists in gender and energy and in sustainable development.
- Increased awareness of the Pacific Islands Energy Policy and Plan (PIEPP) and how it can be used to support the implementation of appropriate energy technology in the region. The regional priorities identified by the country representatives provide the basis for an action plan on gender sensitivity to be developed under PIEPP.
- Formalisation of a regional gender network.
- Identification of potential "partners" in the process of gender mainstreaming, community education, participation, and in appropriate energy for sustainable development.
- Identification of the barriers, constraints, gaps, and needs in addressing gender at specific levels of the energy sector in individual PICs.
- Identification of capacity development needs to introduce and/or progress gender mainstreaming in the energy sector.
- Identification of issues within communities that may inform appropriate energy and gender planning.
- Identification of national priorities and the development of national strategies to achieve identified goals in energy and gender.

Regional priorities for gender mainstreaming in the energy sector as identified by member country representatives were discussed in specific sessions (these are reflected in the recommendations and in the national strategies). Resource persons assisted in identifying priorities, strategies, and in recording. The results of these sessions were country and region specific.

SOPAC Endorsement
Recommendation 2.2 of SOPAC's Thirty-Second Annual Session, October 2003 "Supports the recommendations from the recent Gender, Energy and Sustainable Development Workshop, in particular that a Pacific Energy and Gender Network (PEG) be established and that the Network initially be hosted at the SOPAC Secretariat."

Recommended Follow-up Activities

Kiribati:
- Conduct gender awareness training and participatory survey methods for energy department staff.
- Conduct community surveys of target groups using participatory methods.

Samoa, Tonga and Tuvalu:
- G&E awareness campaign in primary and secondary schools.
- Use appropriate language to disseminate G&E information.

Niue and Nauru:
To complement the national plans formed at the workshop, the following regional actions are needed:
- SOPAC and others to assist with funding or resources for the G&E education component.
- SOPAC to inform its partners of the stated importance of G&E issues.
- SOPAC and its partners to host a forum to supportively monitor progress on national G&E plans formulated at the workshop, and to assess progress on regional priorities for mainstreaming gender in energy policy and programmes as expressed at the workshop.

Solomon Islands and Vanuatu:
- Review of national energy policy to make it friendly and actionable, using PIEPP as a guideline, and to include gender issues.

Speedo Hetutu, Energy Adviser to the Niue Government, making a presentation at the workshop (Photo: SOPAC)

Fiji:
- Develop an effective mechanism for disseminating energy information to men and women in rural communities.
- Encourage women in operating, managing, and maintaining energy projects.
- Develop Pacific literature on gender and energy.

Cook Islands:
- Training for NGOs on basic energy technology and safety.
- Facilitate the formation of Women's Energy Circles.
- Research on appropriate and available technology choices.

Federated States of Micronesia:
- Review of the education curriculum to incorporate gender, energy, and sustainable development.
- Create awareness of the opportunities in the energy, gender, and sustainable development fields.
- Educate women and men, especially on the outer islands, regarding energy efficiency.
- Networking and communications through internet, workshops, and training.

Observations/Remarks of Participants

Dr Sastry:
- Immediate follow-up is required to encourage the PEG Network to become part of *ENERGIA*. Simultaneously, *ENERGIA* needs to express its desire/willingness to be part of the PEG Network 'working group' by nominating a person/organisation to continuously liaise with the local network.
- Before future advocacy, a short study of the Pacific Island gender and energy requirements is needed to enable *ENERGIA* to prepare a Specific Action Plan from an international perspective.
- There are many ways that *ENERGIA* can support the Oceania Region's 'PEG Network': identifying focal points, organising one-day workshops, taking up of small research projects, encouraging local NGOs and university faculties to publish in the *ENERGIA* Newsletter, supporting advocacy and institutional building.

SOPAC:
- SOPAC looks forward to collaborating with the PEG Network and suggests that a set of working arrangements be developed, the formalisation of the PEG Network linkages with *ENERGIA*, and the implementation of the PEG Network recommendations.

Janette Blainey:

- The outcomes are closely aligned to the objectives of the Workshop. It is a tribute to all who were involved that they were achieved. As the facilitator of the Regional Workshop, it is my view that these outcomes can further the place of gender, energy, and sustainable development in the Pacific. However, I believe this will only happen if the stakeholders (planners, governments, funding bodies, regional and international organisations) work together with the men, women, and youth of the villages and towns of the countries of the Pacific.

Donnella Bryce:

- The Pacific Energy and Gender Network, formalised at this workshop now has a considerable task to operationalise itself, throughout the Oceanic region and at all levels including active community participation, as the recommendations anticipate and strongly encourage.
- As yet, there is no consensus on where the real "home" of the network should finally reside or if that home base should rotate through the region.
- The PEG Working Group needs strengthening and some face-to-face opportunities to meet and define itself.
- The operationalisation of an effective and useful network will be a challenging task for Oceania, but I believe that it can be achieved if the working group representatives, on behalf of the members, focus on gender needs and commonalities, and not regional diversities.

Summary

The Regional Workshop was an extremely busy week with sessions beginning early, days finishing late, and little free time. More was achieved than would normally be expected from such a forum, as can be seen by the range and depth of the recommendations and the workshop outcomes. As with workshops of this nature, the immediate and informal networking was highly valued by the participants; especially by small PIC representatives who normally work alone or with very little support and resources and often feel (and are) isolated from sectoral developments and their peers. Eighty percent of the PIC representatives came to the workshop with no real knowledge of the broad gender and energy issues, and in particular with little understanding of the need for specific policy support in the gender and energy sector. Many did however leave the workshop with the general acceptance that, as a minimum, their national Women's Offices could be more aware, and in some cases connected to their national energy activities. The gender specialist NGO present, ECOWOMAN, resolved to have energy included in its objectives.

The workshop, as with all such forums, generated some lively discussions around the role that direct community representation can play at such a forum – in this case representation was limited to Pacific Island Forum member states through their respective ministries responsible for energy services, plus some donor and international organisations; and resource people. There was also debate regarding the process of the workshop records as the PICs felt that any attempt to summarise the working group sessions using standardised tables would not have the scope to reflect each country's requirements.

The eight recommendations concerning the network have been framed to allow for flexibility, growth, and change depending on needs and regional scope as the network evolves. For example, there is widespread regional tension regarding Australia's, and to a lesser extent New Zealand's, role in the region; their dominance in size, population, wealth, resources, and "muscle" often produces uncomfortable feelings within the much smaller Pacific Island States. To find ways for the PEG Network to become inclusive and so gain from the opportunities presented by the participation of Australia and New Zealand, while at the same time managing the possible constraints of such participation, is a formidable challenge.

The workshop report, including all the session papers, has been incorporated on a CD-ROM which is available from the SOPAC Secretariat at: **Community Lifelines, SOPAC, Private Mail Bag, GPO, Suva, Fiji; Email: yogita@sopac.org, Tel: +679.(0)3381377, Fax: +679.(0)3370040.**

Internet Resources

WWW

ProBEC – Programme for Biomass Energy Conservation in Southern Africa: www.probec.org

ProBEC is a SADC (Southern African Development Community) programme currently active in six countries: Lesotho, Malawi, Mozambique, Namibia, South Africa, and Zimbabwe. The new ProBEC web site www.probec.org presents information about biomass energy conservation activities in each country, and provides training modules and guidelines for planning, implementation, and assessment of biomass energy conservation measures developed by the project (www.probec.org/goto.php/bectools/index.htm). The integration of gender aspects into biomass energy is considered (www.probec.org/goto.php/bectools/th.gender/index.htm).

On-line library of WSSD documents: www.wssd-and-civil-society.org/

The International Institute for Environment and Development (IIED) and the Northern Alliance for Sustainability (ANPED) have been collaborating in developing a web site, "Civil Society and the WSSD", since the end of the World Summit on Sustainable Development (WSSD) in September 2002. This web site presents a broad range of ideas and information developed as a result of the Johannesburg Summit which would otherwise be lost - focussing not just on the inter-governmental process, but also on a range of meetings and initiatives developed in the space created by the official event. The search function allows organisation-wise or content-wise searching of documents.

New web site of HEDON: www.hedon.info

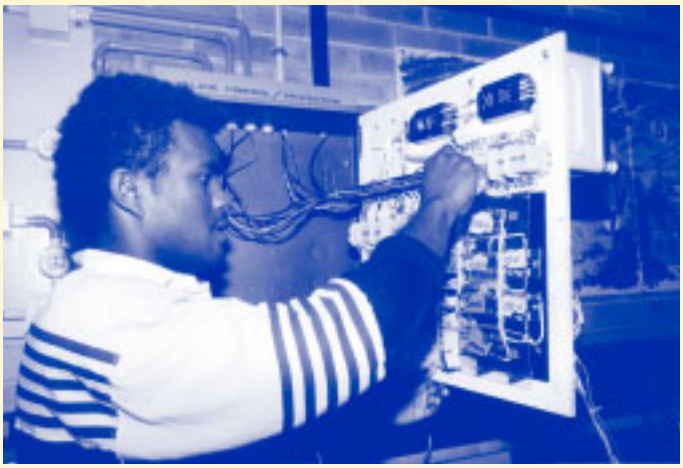
HEDON's new web site is now online: with a new look, new features, and a new web address. The site has been made more functional and accessible. The on-line library is now interactive and users can add documents themselves by signing up to the network. The new forum is a dynamic, interactive, and open 'Knowledge Base' that incorporates user-contributed 'how-to' guides, organisation profiles, personal profiles, and household energy information. Users without web browser access can read the web pages by e-mail through the web-to-mail service. For instructions on how to use this service, send an e-mail to fetch-page@hedon.info with the word "help" in the subject line or body text.

Village Power in Solomon Islands - a Grassroots Development

Nixon Silas Pio
Joini Tutua

In the late 1970s, the lands of the Voko people of the tiny village of Iriri in the Western Solomon Islands were being threatened, against their will, by an international logging company.

The tribe took a united, active stance against the company and started legal action but, ultimately, due to the imminent destruction of their "children's future" (i.e. the forest and the lagoon) they felt reduced to taking physical action. They sat down in the path of the company bulldozers, and the village won its four-year campaign. Concurrently with their battle, the villagers developed a "community development plan" to sustainably harvest their natural resources themselves in order to ensure a sustainable future for their people. The cornerstone of this development plan was an electricity supply from their water source. By 1983, the first village-based microhydro electric system to be built by Solomon Islands' village communities was completed in Iriri Village in the Western Province. This village-based microhydro scheme was funded by UNIDO as a pilot project to test the viability of small hydro systems as stand alone, community based, energy supplies[1]. The Iriri project (designed and implemented by an APACE team of four men and one woman) did not have a policy commitment to women's participation; it did, however, include a consultative process to identify and address the particular concerns of the village women[2]. For twenty years now, the Iriri project has operated without outside financial assistance. The Iriri project was perceived locally as being successful, and led to similar projects in the neighbouring villages of Vavanga and Ghatere, which replicated the Iriri model but with a more explicit identification of gender needs and women's participation. Similar projects in other provinces continue to be implemented under what has become the Village First Electrification Programme - Solomon Islands (VFEP-SI), the only active energy programme in the region with a stated gender policy commitment.



Nixon Silas Pio testing a microhydro distribution box in the APACE/UTS Renewable Energy Laboratory (Photo: Donnella Bryce)

The Success Story Spread among the Villages

The "success" of the early projects, as seen by Solomon Island people, was first measured by the cheap, universal access to modern, affordable electricity; then followed factors such as the new income-generating opportunities (small village businesses such as ice-making, carpentry, and bread baking) that sprung up in these villages, better quality houses[3], and street lights in the electrified villages. Enhanced community participation and pride became a conspicuous characteristic as the residents frequently spoke of their modern villages and the changes that had come about. Communities did not enunciate women's participation as a "success" factor, but they did identify the extent of women's participation as a strength of the electrified villages. Despite non-existent telecommunications and scant national media services, the success stories of these early projects spread rapidly throughout the country (through tribal and marriage connections, word-of-mouth, and an increasing number of local and eco- visitors) leading to hundreds of villages requesting similar energy-based development projects. Interestingly, all the applications for new projects came through village men.

Recognition of Women's Participation

In 1993, the Western Provincial Assembly signed a Memorandum of Understanding with APACE to plan and design a provincial village electrification programme based on the community development model first trailed in Iriri. The MoU contained a unique section (for such an agreement at that time): it acknowledged the central role women hold in village life, and the protection of the land and natural environment. It attempted to ensure that all project stakeholders took into account the energy needs and aspirations of women, and that adequate provision would be made in all project stages and at all levels to actively involve women.

A field office was opened in Gizo, the main town in the Western Province, to begin social, economic, and environmental assessments and technical surveys of all the villages in the Western Province that had requested, in writing, to participate in the programme. A team of young men and women were recruited from the original three villages that had built and managed their own microhydro development projects. A set of guidelines and appraisal criteria for community participation in the programme was developed[4]. The guidelines advised villages of the programme's commitment to women as primary energy providers and users, and one of the nine criteria stipulated basic levels of women's participation that a village must meet in order to become eligible to become a priority village for financial assistance within the programme.

Role Modelling and Mentoring for Women and Men

APACE, based at the University of Technology Sydney, had responsibility for the programme. This was managed by a woman, and coordinated by a team of women and men; further, a Women's Officer was appointed to plan for, and monitor, women's participation at all levels of the programme. The local staff team of four men and six women were mentored by the Sydney-based management team.

Box 1: Women in Development Policy

The policy is formulated to provide incentives and opportunities for women to be constructively involved in the development process.
The policy aims to achieve:
- Women being involved as decision-makers
- Women's needs as primary energy users being addressed at the village level
- Equitable distribution of benefits to women, men, and youth

The policy and accompanying manual adopts an equal opportunity (and sometimes affirmative action) methodology for village assessment; pre-feasibility studies; project design, implementation, monitoring, and evaluation; electricity use; training; and role modelling.

Box 2: Zuke Women's Energy Awareness Workshops

The workshops aim to empower women through awareness, understanding, and exploration of the implications of modern energy technology at the village level.
The workshops are divided into five sections:
- Energy and technology
- Women as project participants
- Working as a unified community
- Decision-making and planning
- Why women want and why women need village electricity

Technical management of the programme was eventually devolved to Nixon Silas, and coordination to Claudine Lilo, two of the young people originally recruited to the programme. A Women In Development (WID) Policy and Manual (box 1), and "Zuke" ("I see the light") Women's Energy Awareness Workshops (box 2) were developed. Women from throughout the province, and the rest of the nation, attended these workshops.

National Acceptance for the Policy and Programme

By 1995, the success of the projects in the Western Province had gained significant national attention leading to the Prime Minister approaching APACE to sign a Memorandum of Understanding with the Solomon Islands' Government under which the two organisations, with the cooperation of the Western Province, would design and implement a national village electrification programme based on the model pioneered in the Western Province. To coordinate this national endeavour, Claudine Lilo moved to the national capital, Honiara, to establish the Village First Electrification Programme - SI office, which also acted as the Secretariat for the national coordinating body and became SIVEC, the Solomon Islands Village Electrification Council, formed with community, NGO, and Government representation. Although designated places on the Council for three women were constitutionally ratified, the process of their appointment has never been clearly delineated. However, the gender balance has been met - but more by chance than procedure. Constitutional amendments proposed for the forthcoming AGM, to be held in February 2004, include significant additions to strengthen the recognition and position of women at all levels of the programme. The amendments further propose to institutionalise a gender policy and programme based again on the Western Province model.

SIVEC has, through the VFEP, adopted guidelines and criteria for community participation, and advised the government on an appropriate village electrification policy which includes gender and energy issues. The SIVEC guidelines and criteria have been built upon the experience of the Western Province programme and contain similar gender priorities. Again the national programme has taken a similar approach to role modelling and mentoring as used in the Western Province. The framework of the plan is for all the village electricity projects to be wholly owned and operated at the community level.

The VFEP-SI is designed as a rural village *developmental* programme[5], not as an energy programme. Therefore, the inclusion of gender issues and their integration into the programme has a natural and central role. The first five fundamental tenets of the VFEP-SI are:

Training is the Key

Human capacity and institutional strength are seen, by all stakeholders, as the two over-arching barriers to delivering energy projects in Solomon Islands[6]. The basic methodology used for technology transfer, within the VFEP-SI, is training and education at all levels. Each village project is designed as an on-the-job training activity covering planning, design, construction, technology, organisation, monitoring, and management. Various local groups (SIVEC, SIEA[7], provincial coordinators, the VFEP-SI Technical Team, village technicians, the village management committee, and the local hydro committees) are involved in activities at their appropriate level. Short training courses, seminars, workshops (including segregated, women-specific workshops), work experience, and periodic formal courses are organised as well as sponsorship for international training opportunities and seminars to increase high-level capacity.

Claudine Lilo, SI Programme Coordinator, discussing with Alen Tele, the SI Rural Training Centre Association's General Secretary, about village surveying and mapping techniques (Photo: Donnella Bryce)

Women have at least an equal opportunity to participate in all training and employment opportunities throughout the programme. However, despite specific encouragement, women have not taken up the opportunities for training *beyond village level activities* (with the exception of Claudine and two of the original young women recruited to the programme[8]). This pattern may change given that some village women are now becoming more involved at the national coordinating level[9].

Regional Interest in Replication

In the same way as the perceived success of the VFEP-SI, in delivering social and economic development opportunities directly at the village level, spread to the provincial and national levels, it is now expanding into neighbouring countries. The Papua New Guinea Village Electrification Council is a registered indigenous NGO; and in Vanuatu and Bougainville, Village Electrification Working Groups have been set up. Each of these groups, which cooperate under a fledgling cross-border network - the Melanesian Village Electrification Group, has endorsed the Village First model, including its strong gender-biased approach.

Encouragement but no Dollars

The VFEP-SI has been nominated for several international awards, won three national Australia awards, and has been reviewed by the Australian Government's development assistance agency many times, on each occasion receiving high praise. In Solomon Islands, commendations and encouragement for the programme have come from government members, non-government organisations, and rural communities across the country. There was a recent unanimous vote of the all-male parliament calling for the adoption of a national village electrification programme using this Village First model. The traditionally conservative SIEA (again an all-male institution except for some women clerical staff) has given their informal support. However, although the programme exists under a national government agreement and support is conspicuously widespread, the national ministerial bureaucracy has consistently ignored its existence[10]. The programme has never received any official budgetary support or aid funds (beyond limited NGO opportunities) and has been ignored by three ministerial programme identification and planning missions (1985, 1996, 2000), each of which failed to consult with any community women involved in the programme.

Neither SIVEC nor the VFEP-SI have any core funds: both struggle daily to remain in operation despite being well structured, accountable entities with substantial political, community, and grassroots support. For those of us who have been a part of this bottom-up programme for a long time, it seems that it is excluded from mainstream energy sector recognition, and therefore broad funding assistance, because:

- it has set its own indicators (including gender acceptance) and does not rely on the traditional energy indicators of western supply-and-demand models;
- it does not provide a private sector investment focus for the energy supply, or rely on a credit model to bring in users;
- it is perceived as a development activity by the energy people, and an energy activity by the development people; and
- it is largely gender-driven and therefore not seen as real technology by the technology people. ■

[1] *ref "Replanting the BANANA TREE – A Study in Ecologically Sustainable Development" by Robert Waddell. APACE 1993*

[2] *For example, Iriri women decided to go against the project designer and NOT have lights installed in their kitchens as they felt that they would then be expected to cook in the evening and early morning hours.*

[3] *The VFEG was unique in putting electrical circuits into well maintained village leaf houses. APACE developed an extremely high standard, triple-insulated, wiring procedure designed to allow safe circuitry for all village people, the majority of whom still live in houses constructed from local bush materials.*

[4] *The guidelines and criteria cover resource ownership, community development, community contribution, community ownership, appropriate technology, youth, community tariff structures, training, monitoring, environmental conservation, village technicians, commitment to SIVEC, and gender.*

[5] *A developmental programme has broad social, economic, environmental, gender, and sustainability objectives.*

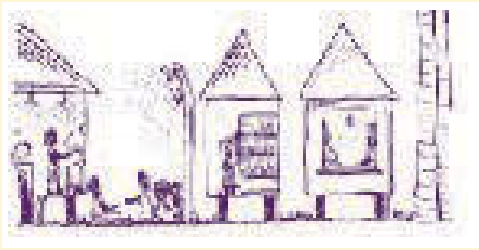
[6] *Local capacity and local institutional strength were the two highest priority needs identified by all PIC representatives at the Pacific Regional Workshop on Gender, Energy and Sustainable Development in Fiji, August 2003*

[7] *Solomon Islands Electricity Authority*

[8] *Claudine Watoto (nee Lilo) has gone on to be employed by the Australian Government; the other women found it too difficult to remain village-based women and maintain an outside occupation.*

[9] *Refer to article in this edition "Bulelevata women speak"*

[10] *The Solomon Islands Ministry of Energy is atypical of the region; in Vanuatu the ministry works closely with the NGO stakeholders, and the DOE in Fiji clearly has a priority to work with communities.*



◆ Nixon Silas Pio is the Solomon Islands Technical Manager for the APACE Village First Electrification Group. He has worked on or designed all the microhydro village projects in Solomon Islands. Silas has also assessed village microhydro potential and has conducted training in Bougainville, PNG, and Vanuatu. Despite his lack of academic qualifications, he is respected as one of the region's most experienced microhydro engineers. Mr Silas Pio lives in the remote village of Vavanga.

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◆ Joini Tutua studied in Papua New Guinea and at Cambridge College, UK. He is a former school principal, Solomon Island Government Minister, Chairperson of the Committee into Corruption, member of the Constitutional Reform Committee, and is committed to rural, decentralised development as the path to recovery for his troubled country. Joini Tutua has pioneered appropriate education, sustainable agriculture, and community-based renewable energy programmes in his country. He is a nationally-respected cultural leader, has written widely, and been invited to speak in many countries. Mr. Tutua is an advocate for womens' rights in his country.

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Electricity for Fijian Villages –
Evaluation of the Muana Microhydro Project

Makereta Sauturaga

Many rural communities in Fiji have been involved with the Government's Rural Electrification Programme (REP) of which a key element is community participation and ownership. Rural communities, assisted through the REP, become owners of the project three years after commissioning. The on-going management, repair, and maintenance of the project then become the responsibility of the community.

In Fiji there are five community microhydro projects operating under the REP. These projects range from 3 kW to 100 kW and were constructed through assistance in the form of soft loans and grants from overseas agencies. The projects provide electricity to villages and schools in remote rural locations. The Muana microhydro project is one of the five.

Through assistance from the Korean Government, the Muana microhydro project was constructed and commissioned in 1999. It has an installed capacity of 30 kW and provides electricity to three neighbouring villages, a primary school, and a medical centre. A representative committee (Project Management Committee) from the three villages runs the project. The villages select the members of the committee and they decide on the composition of the committee and how they run their project. A monthly fee of F$5 (US$ 2.85) is levied on each household. Prior to handing the project over to the community, the Department of Energy (DOE) realised that a thorough evaluation was needed to enhance the project's future sustainability. To this end, the DOE chose to trial a "Participatory Rural Appraisal" (PRA) approach with a multidisciplinary gender-balanced DOE team of eight people.

Participatory Appraisal Methodology

The three villages were included in the PRA, which commenced with a general discussion with all village members. This was an open discussion in which the villagers provided their views on the technical, management, communication, and social issues affected by the project. The villagers were then divided into six groups, namely: senior men, married men, local women from the village, women married into the village, male youth, and female youth. Each group was asked to discuss a number of issues relating to the project. In traditional Fijian villages it is difficult to get the views of women and youth during general discussion sessions, and the use of small group discussions allowed the views of all village members to be heard and noted.

The concluding session was a presentation on the findings of each group. During the PRA, interviews were also held with the village chief, leaders of village organisations and women's groups, and church leaders.

Group Discussion

The main approaches and areas covered in the facilitated group discussions were:

• ***Resource and Social Map***
The groups were asked to draw two village maps: one of the current village and the other of the village ten years ago to provide an indication of how the village has developed.

• ***Venn Diagram***
Venn diagramming was used to determine the villagers' perceptions of key institutions and organisations, the importance of these organisations to the village, and their relationship to the project.

• ***Matrix***
The groups were then asked to rank their preferences on items such as resources, expenses, sources of lighting, and household commodities.

The DOE team approaching Muana Village in a small fibreglass boat. The remoteness and isolation of Pacific villages is a great barrier to development opportunities (Photo: DOE, Fiji)

• *Time Line*
The groups constructed historic time lines to identify the changes that have affected their communities, e.g. migration, population growth, education, disasters, and developments.

Highlights of the Evaluation

• *Community Participation*
Community participation is a must in the planning and implementation of any project. For the three villages, electricity now plays an important role in their lives. The community runs the project, and various members of the community are involved in different aspects of the project's operation. Women collect the monthly fees, youth are engaged in planting root crops as a means of compensating the system operators, and men and village elders take the leading project roles through the executive committee. Community participation has encouraged teamwork amongst the three villages.

• *Women's Involvement*
Each village has a women's group, which is tasked with ensuring the timely payment of the monthly household fees. A penalty is imposed for households that default on payment. The collection of monthly fees used to be carried out by men, but because they failed to collect on a timely basis it was felt that women would do a better job - and they did.

• *Skills Training*
Capacity building was an important aspect of the project. Training of village operators and project management personnel was conducted in order to enable the villagers to operate, maintain, and manage their project.

• *Project Benefits*
Electricity has improved the standard of living in the three villages.

School children have an improved ability to study and work during evening hours, and they have access to televised educational programmes. It was noted that in one village there was a marked improvement in student's exam results.

Women have developed small businesses such as a cold storage facility for selling seafood and other foodstuffs. The comfort that bright lights provide to rural households is something that is always recalled – rural households no longer have to purchase benzene and kerosene for lanterns.

• *Problems*
Four areas - technical, management, communication, and social - were identified as problematic by the evaluation and needing attention. Technical problems due to wear and tear were encountered and concerns were raised over the time taken to repair such problems. Due to the isolation of the microhydro site, any maintenance and repair work carried out by the Public Works Department takes quite a time. Management problems identified included the irregularity of the meetings of the project management committee, and the limited capability of operators and the management committee to manage such a project. There is a lack of regular contact and information sharing amongst the major project stakeholders, these being the DOE, the village project committee, and the villagers themselves. The appraisal also found that traditional ties, land, and wealth issues contribute to the problems faced by the project.

Multidisciplinary Appraisal Approach

This was the first time that the DOE staff had carried out a participatory appraisal approach on one of its rural electrification projects, and the results were encouraging as it provided the in-depth views of the village people on the microhydro project. The use of women and youth groups was of interest as the members felt that with such an approach they were able to voice their concerns and this enabled them to realise that they play an important role in the project and the community as a whole. An elderly woman was very happy with the appraisal approach and said "this is the first time I am able to discuss in detail my thoughts, concerns, and how I view this project. I feel a sense of relief after discussing this with you." Further, a youth asked for confidentiality about the information that he was providing. These are indications of the dominance of culture and socially-imposed roles, and the need for a strong consultative approach that involves all the community members. The appraisal enabled all the villagers, in particular the women and youth who often do not speak out during communal discussions, to freely express their views. All the villagers, including the men, were satisfied with this approach.

Lessons Learnt

Women know their own area well, and the depth and validity of that knowledge has not been accorded its just due. When the project began, there were no special efforts made to involve women in the running of the project because the project committee members were all men sharing the perception that women should not do men's work. However women's involvement in fee collection has changed that perception and has contributed to the smooth running of the project.

The use of a multidisciplinary PRA, where men, women, and youth are all involved, is an effective tool for evaluating a rural electrification project. However, it would be much more effective if such an appraisal was carried out in the planning, monitoring, and evaluation stages - and not as a one-off appraisal towards the end of the project cycle.

Technical, management, communication, and social problems need to be carefully considered, and a plan of action developed to overcome these problems and ensure the sustainability of the project.

Future Plan

In response to this evaluation, the DOE is developing a plan of action to ensure a more holistic project approach that will address the problem areas. Additionally, the DOE has adopted the PRA approach and will use it in the planning and assessment of all projects. ■

◆ Makereta Sauturaga's contact details are on page 3.

Correction

The *ENERGIA* editorial team wishes to make a clarification to the photo caption on the cover page of issue 6.1, "Women, Gender, and Energy in South Africa". In the photo, Noluthando Poswa is seen receiving a Certificate of Achievement as first runner up. The winner of the Women in Energy Awards 2002 was Marlett Wentzel, who contributed the article on page 17 of the issue.

Bulelavata Women Speak

Donnella Bryce
Chin Ching Soo

The women in Bulelavata, a small, remote village in the Western Solomons accessible only by sea, used to live a subsistence lifestyle typical of women in tens of thousands of other PIC villages.

Then, in 1998, the community chose to begin the process of establishing an energy-for-development project. In 2001, the community-owned microhydro system funded by the Australian International Greenhouse Partnerships, Caritas, and the Provincial Government, was officially opened by the Provincial Premier. The system produces 24 kW and has 1.5 km of high voltage transmission line enabling the community to sell power to the Provincial Secondary School.

For the women of Bulelavata the energy project has had some significant and profound impacts ranging from the practical, quantifiable advantages of lighting and community income to qualitative outcomes such as solidarity and empowerment. The project design of the Bulelavata community microhydro scheme used a women's participatory action agenda, exploiting "action learning", or learning-by-doing. They had the decided advantage of a context in which a relevant project was happening in their lives, in which workshops could be grounded. The facets encompassed project policy support, female project management, female role modelling at varying levels, specific women's awareness and training workshops (although community ones were also held in which women also participated), visits by women to other villages, management committee positions for women, a new village institution for women, technical team leadership by women, and logistical project support teams being given equal status to technical project teams. This affirmative agenda was designed to encourage and facilitate active and meaningful opportunities for participation by the village women, and operated within existing Melanesian cultural and village religious mores while at the same time challenging the boundaries of perceived gender roles through the medium of the new technology. The Bulelavata village men say that the electricity project has changed their women; that they are now more confident and outspoken and participate more in community development activities. The men think this is a good outcome in terms of the whole project, and rate it second only (by consensus) to the community's understanding of "planning for tomorrow".

The project agreement, negotiated between the community and APACE (the project designer and implementer - described briefly elsewhere in this issue) prior to the commencement of the project, stipulated the involvement of women in the management committee, on technical construction teams, in training opportunities, and in distributing the resultant electricity to meet women's aspirations both in and outside the home. The agreement also made provision for long term, participatory monitoring and evaluation of the project. This aspect was seen by the Bulelavata Community as a way in which they could assist other communities to participate in similar projects. APACE is conducting a long-term study of the impacts of this project on the community and the surrounding district, with a particular emphasis on the impacts and outcomes of the project and the energy supply for the village women. From its long experience in the sector and region, APACE has found that results are more reliable and usable if the gender evaluative work is conducted in a whole-of-project context, albeit with gender disaggregated data and specific women's approaches employed. With a new technology that will transform lives, prior perceptions of roles will alter, and supportive women-only environments are sometimes essential to gain confidence in the process. APACE, in consultation with the community, and in collaboration with engineering staff and students from the University of Technology Sydney and the project donors, developed indicators and guidelines for this evaluative study. To date there has been no specific financial support for the fieldwork, so much of the study has been conducted through personal visits and community reporting. In a series of formal and informal activities, involving Janette Blainey, Paul Bryce, Chin Ching Soo, and Donnella Bryce, the women from Bulelavata have shared their reactions, observations, and understandings. The following quotes exemplify the changes they perceive as having come into their lives.

Electric Lights

"The hydro system has saved us women money; the electricity is cheaper than kerosene and batteries .Now we are doing much more sewing and weaving and we can do it together at night time when we are free from home duties. Before the hydro, a family only had one or two small kerosene lamps and the first priority went to men's work and second to children for studying."

"The new street lights are good; now we can freely walk about in the night time without gossip happening. The electric lights have made it easier and safer when we come back from night fishing. Young girls are more free to walk about the village at night time too".

"We really like to read things but we usually, except at church times, never had an opportunity to read because in the daytime we are too busy with gardening and housework. Now we can read at night time and soon we hope that we will have some books."

"With house lights, our children can do homework and the school principal says Bulelavata children already have better marks at school. Our children can get up and find their clothes and get ready for school, we don't argue with them as much as before. We really believe electricity will provide a much better future for our pikininis (children)."

Electric Power

"Some people in our village now have electric kettles, radios, videos, electric drills, circular saws, and there are two freezers

Bulelavata women in front of the microhydro weir celebrating the success of their project (Photo: Donnella Bryce)

for selling fish and ice; but we don't like the loud music the youth play. The thing we like most about now having a radio all the time is that we can hear the news and stories about other places in the world and voices from other countries. And we can listen at any time we like and even choose what to listen to for ourselves."

"It is a big thing for us to be able to easily and quickly warm water using an electric kettle and it saves a lot of firewood. We need warm water to bath our babies, for healthy drinks and food, and for the elderly and the sick. The ollos (elderly people) *can easily go to the toilet during the night. Now we are much more interested in our houses, we like to keep them clean and make them pretty and we don't like rats in our house now we can see them. Electricity is helping us with better hygiene."*

"When we visited our sisters in Manawai (a village with a micro-hydro electricity system) *we thought this must be just like heaven is; and our sisters told us that they did not have as many pikininis now that the electric lights are in their houses. So we really wanted to have electricity too."*

"With the women's training workshops we learnt all about the hydro technology and we are very proud to be women who know about how electricity is generated and distributed. When visitors come we feel proud to tell them about technical things like how the dam was built and the penstock was installed."

"We were concerned about the rise of the salt water that we could see on our beach (a rise in sea levels) *but now we understand about the world environment and how we are little bit helping by using renewable energy. We are able to tell all our neighbours about world greenhouse problems and how renewable energy can help uime* (everyone)*."*

"Everybody thinks Bulelavata it is a modern place to live, just as good as town and now many of the young people, and some families and educated people too, have returned to home and are building new, permanent houses here."

"We have learnt about tink tink disteam nau long future (planning)*."*

Women's Solidarity

Women in the village have gained experience and confidence from observing and participating in the establishment and operation of the community's Village Hydro Management Committee (VHMC). The women have now formalised their own 'Bulelavata Women's Committee' (BWC) in which the women work together to support other village women in times of crisis, organise income-generating and community welfare projects (the first being the establishment of a small kindergarten), help each other with transport for marketing and stocking stalls at the markets. The women own and manage their committee money. The BWC's work is carried out with an acknowledgment of the women's roles in their own families and in their community, and with the respect and encouragement of the village men. The income generated from BWC projects belongs to all the women although some may be given to an individual woman if a need arises. The BWC, at the community's request, has taken over the responsibility, from the VHMC, for collecting and banking the monthly electricity tariff charges from all the village households. The community's decision was based upon their belief that the women's group would be more transparent, reliable, and honest in handling the community money; the BWC sees this decision as a positive one in terms of community recognition and status.

The second major project for the BWC is to build a village Women's Centre. The Women's Centre (with an electricity connection for lighting and a 240 volt power supply) will be used as a meeting place for women to work and socialise together; to run demonstrations and training in health, hygiene, nutrition, and sustainable agriculture; and will house a small village library. The BWC has bought some local building materials for the centre using the funds they have raised. They have also written a request to the VHMC for assistance in building their centre. The VHMC has agreed to the request, and the Women's Centre is now a priority on the community planning agenda.

Women participated on an equal basis with men in construction teams. Here they are constructing a bridge to carry the penstock over a small river (Photo: Donnella Bryce)

Women's Empowerment

The BWC has been instrumental in conceiving, developing, and promoting Bulelavata as a conference and seminar venue for NGOs, government departments, and training institutions seeking a safe and inspiring location with modern facilities, powered by the electricity. The design for the brochure promoting the Bulelavata Conference Centre has paid careful attention to the visual presentation of men and women fulfilling complimentary but equal roles. It is anticipated that approximately half of the income generated from the Conference Centre project will go directly to individual women for the many small support services they wish to provide.

Two members of the BWC have been chosen to become members of the APACE VFEG Team that is facilitating a Village Women's Energy Workshop in another province.

The BWC has selected women to attend the Solomon Islands' Village Electrification Council 2004 AGM and the National Planning Seminar. It has also participated in the general community appointment of two other village representatives. Women have previously attended these seminars, but this is the first time that women have been appointed to represent their village.

The confidence and competence that Bulelavata women have gained through their participation in the community energy-for-development project has empowered them to take a greater role within their community, to develop their own support structures within their community, and to see their village in a more national and global context. It would appear that Bulelavata women are moving through a process of change, from traditional cultural subservience to a higher level of community decision-making responsibility. Both the village men and women see this change as coinciding with the beginning of their community energy project.

The growth in personal and group strength, for the women of Bulelavata, has taken place over a period of six years and with each step being initiated by the women themselves. This leads us to believe, from our observations, knowledge, and relationships with these women, that the changes in their daily lifestyle, and in the broader perspective of quality of life, will be sustained and that there are indications of a further strengthening of the women's individual and collective aspirations and roles. ■

◆ Donnella Bryce's contact details are on page 3.
◆ Chin Ching Soo's contact details are on page 9.

Resources

Technical Training in Renewable Energy: Anywhere, Anytime

The Brisbane Renewable Energy Centre and ACRE have produced training materials in six renewable energy (RE) technologies: photovoltaics and standalone systems, wind, energy efficient building design, solar water heating, microhydro, and hybrid systems.

These materials were produced by a mixed gender team that paid attention to gender-inclusive language and analogies in explaining the technology and design processes. For example, when explaining heat transfer, a cooking experience is used rather than a car; and when explaining why and how thermal mass works in a building the learning guide relates it to the experience that plastic in a dishwasher or on a dish-drainer never dries as well as ceramic pots due to how they hold the heat within the materials differently. These training materials attempt to avoid using the typical engineering analogies that only seem to help a student if they live life as a "boy's boy" – using soccer, cars, and guns to explain the principles of science.

Since the materials are for practical learning they approach the technical information in a down to earth, non-academic way; however, they are engineering topics and require a basic understanding of mathematics. The materials can be studied alone and used for self-paced learning.

The materials are in the form of a textbook and learning guides, which include a CD-ROM with photo sets, software, and other resources. When run in a college, each RE course topic is typically delivered over 18 weeks.

The first topic is an "Introduction to Renewable Energy Technologies" which covers the basics of each of the RE technologies, and includes energy auditing, instructions for working out the position of the sun (solar geometry) and its energy potential at your location, as well as details of biomass technologies. The student gains an overview of the types of RE technology and acquires the basic skills to assess a site and size a system. Many people only study this topic, which in itself is sufficient to become literate in each of the technologies.

As a set of resources these materials are unique - they are designed to empower and build up the knowledge of the reader in a logical learning sequence.

Resource Books are priced between AUD$60 - $90 and Learning Guides AUD$30 - $50.

◆ For further information about the courses and books see the web site: **www.bnp.tafe.net/ren_energy/products.asp**

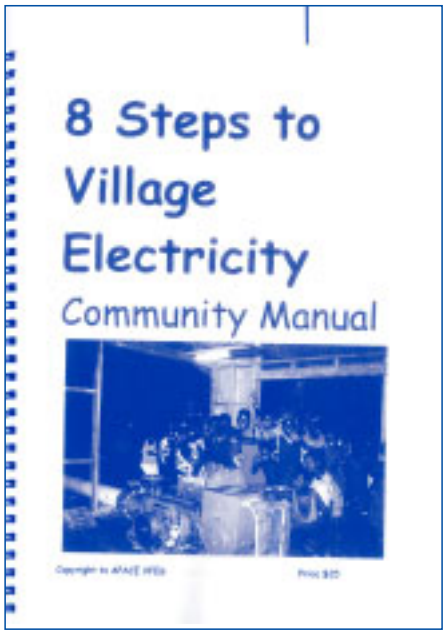
◆ For further information about training and/or licences contact: Sasha Giffard, Ecco$_2$sol - Educating for Sustainability **www.esded.com.au or sasha@esded.com.au**

"8 Steps to Village Electricity - Community Manual"

Creating community and government awareness of energy and gender issues was cited by all participants at the Pacific Workshop on Gender, Energy and Sustainable Development (page 10) as a regional need with a high priority. This manual, as a proven approach to community understanding and empowerment through informed decision-making, can help in this.

It is a clear, informative but "friendly", manual for communities wishing to develop their own energy sources by participating in a Village First Electrification Program (VFEP) developed by APACE-VFEG. The manual is a step-by-step approach, including a comprehensive progress checklist that can guide a community through the assessment of needs, development and project planning, construction, and sustainable energy management. The manual is a new approach that empowers a community to become both the decision-maker and the project driver.

The 8 Steps Community Manual uses an affirmative action approach to the inclusion of women in the project cycle. The fifth criterion for the programme requires participating communities to encourage the active involvement of women in all stages of their project, in ongoing electricity management, and in the resultant economic and social benefits. Photographs accompanying the text were chosen to reinforce a female role-modelling approach.



The manual presents a realistic picture of the opportunities and challenges confronting a community wanting to become its own energy generator.

The VFEP has won several awards, the latest of which was for Best Practice Policy, both for the Programme and separately for the Capacity Building elements, from the Asia Pacific Forum for Environment and Development. The VFEP model is considered by the managers as transferable to other regions, and this manual would provide a guide for both programme designers and interested communities. Although the original manual was developed through a specific Melanesian energy programme, it is a generic document and could be reproduced for different regional locations through the insertion of an appropriate local facilitator. ■

◆ Information may be obtained from Rae Gill at: **apace@uts.edu.au**

Resources

Pacific Gender and Energy NGOs

Within the Pacific region there are many women's organisations working on a spectrum of development issues ranging from economic rights, income generation, reproductive health, environment, literacy, and women's participation in governance, to violence against women, peace, and civil society building. However, the region has very few local non-government entities with energy as an objective of the organisation; the majority of those that do are from Australia or New Zealand. Even fewer have policies that explicitly recognise the energy-gender linkage.

The following summaries describe the non-governmental organisations represented at the Gender, Energy and Sustainable Development Workshop in Nadi (see pages 10-13); readers are invited to contact the NGOs directly for further details and clarifications.

PACFAW

Pacific Foundation for the Advancement of Women is a new regional focal point for national women's organisations. The initiative grew out of the YWCA (Young Women's Christian Association) Pacific review that recognised the need for gender advocacy, with a strong focus on institutional capacity at national and regional levels. PACFAW became the resulting regional secretariat structure, with programmes aiming to:

- strengthen national institutions for gender advocacy, and build national women's NGO focal points in order to become more effective in gender and policy advocacy, and
- build solidarity and provide strategic leadership on gender advocacy at the regional level, to further strengthen national focal points and to coordinate and consolidate regional NGO positions at regional and global negotiations.

Activities: Cook Islands, Kiribati, Papua New Guinea, Solomon Islands, Tonga, and Tuvalu - plans include political empowerment of women, micro-enterprise development, and gender-sensitive digital technology diffusion.
Current partners include: CEDAW, BPA, and the Pacific Power Association.
PACFAW publishes the "Gender Advocacy Resource Manual" with financial assistance from Bread for the World.

◆ **Mereseini Seniloli, P.O. Box 3940, Samabula, Suva, Fiji.**
E-mail: mseniloli@pacfaw.org.fj

ECOWOMAN

Ecowoman, established in 1995, is a collective of Pacific women that aims to strengthen linkages between professionals in science and technology, and their urban and rural counterparts in communities, with a vision of enhancing women's involvement in rural resource management, and for a better daily life for rural women. It operates by networking, information dissemination, awareness training, advocacy, and the development of models. For example, its activities have included participatory rural appraisals in Fiji, Samoa, Kiribati, Cook Islands, Tonga, and Solomon Islands; it has also piloted smokeless stoves and fuelwood projects for Fijian women.
Current partners include network women in WWF, UNDP, Fiji Govt. Departments, and the University of the South Pacific.
Ecowoman publishes a set of practical manuals appropriate for field workers in the region such as the "Community Environment Workshop Handbook for Women" (developed with financial assistance from AusAID) to assist woman in facilitating workshops on community environmental issues; "Participatory Learning and Action – A Trainer's guide for the South Pacific"; and "Vatulele" a training video on participatory techniques (developed with financial support from CIDA and the Pacific People's Partnership).

◆ Contact details same as for PACFAW.

APACE VFEG

APACE Village First Electrification Group (APACE VFEG) is an Australian-based development organisation, established in 1976. It assists communities in the Asia/Pacific region to implement low-impact, environmentally-responsible energy-for-development projects. APACE VFEG projects are supported by research, development, and field study.
APACE VFEG is not a donor organisation: it offers services in the energy, gender, community development, and village enterprise sectors; and provides technical assistance with project identification, design, and management (using participatory techniques). It also has experience in policy development, national planning, institutional strengthening, advocacy, lobbying, and civil society strengthening.
APACE VFEG has specialised in a methodology based on training and experiential learning within tangible community-driven goals. It provides formal and informal opportunities for women and men.
Current partners: Earth Trust, University of Technology Sydney, Solomon Islands Village Electrification Council, PNG Village Electrification Council, Solomon Islands Government (MOU), and the Government of the Republic of Vanuatu.
Current activities: Melanesian Village First Electrification Programme; human and institutional capacity development for rural energy supply and sustainable management; policy development and role modelling for women's technological and managerial development.
Funding sources (minimal): donations, project contracts with community partners.

◆ **Donnella Bryce, P.O. Box 123, Broadway 2007, Sydney, Australia.**
E-mail: apace@uts.edu.au

SIVEC

Solomon Islands Village Electrification Council was established in 1996 to promote, encourage, and support rural communities in establishing integrated sustainable development initiatives through the implementation of community-owned renewable energy systems. SIVEC's functions are to lobby for appropriate energy policies nationally and regionally, to seek funding or financial ventures to support rural community energy projects, to coordinate village energy projects within a national framework, to assist village communities with productive economic uses (sustainable livelihoods) of the available electricity, and to advocate for village-based electrification and related policy issues. SIVEC seeks to be an inclusive organisation with membership from civil society, government, and the private sector; including rural communities, relevant government ministries, the National Council of Women, the Climate Change Office, individuals, and organisations. SIVEC has an affirmative action policy and programme commitment to women's participation in energy projects for which it conducts gender and energy awareness and training.
Value-added: Providing a supportive pathway to affordable energy for rural communities, including gender-based policies for social sustainability.
Funding sources: AusAID, Republic of China, Solomon Islands Government.
Current Partners: Rural Solomon Island communities, Solomon Islands Government, Solomon Islands Energy Authority (SIEA), Provincial governments, MIVEG.

◆ **Joini Tutua, Chairperson, P.O. Box 867, Honiara, Solomon Islands.**
E-mail: Tutua_s@usp.ac.fj;
or Cherry Tanito, Coordinator,
E-mail: negogaga@hotmail.com

The Bulletin Board

PUBLICATIONS

Smoke – the Killer in the Kitchen
Smoke in the home from cooking on wood, dung, and crop wastes kills nearly one million children a year. In its report, "Smoke: the Killer in the Kitchen", ITDG is calling for global action to save the lives of 1.6 million men, women, and children lost each year to lethal levels of household smoke.
◆ The report can be read on-line at: **http://www.itdg.org/index.html?html/smoke/smoke_index.htm~mainFrame**
◆ Files in pdf format can also be downloaded from this web page. Orders for printed copies can be placed at **www.developmentbookshop.com** or by e-mail at: **orders@itpubs.org.uk**

Energy for Rural Livelihoods – a Framework for Sustainable Decision-making
Alison Doig, Simon Dunnett, Smail Khennas and Tim Jackson
Published in September 2003 by ITDG Publishers, this book presents a range of analytical techniques to assist in evaluating and comparing energy technology options. It takes into account the challenges of integrating social priorities, environmental issues, financial constraints, gender differences, demographic characteristics, technical considerations, and institutional frameworks into a coherent decision-making framework. The analytical techniques are elaborated through case studies from various parts of the developing world.
◆ The book is priced at £12.95 and can be ordered at: **http://www.developmentbookshop.com/book.phtml?isbn=1853394874.**

Boiling Point Number 49, 2003
"Forests, Fuel and Food" is the theme of the most recent issue of Boiling Point which focuses primarily on options for household energy and their impacts on forest resources. Among the articles are:
- Gender dimensions in household energy *by Ishara Mahat*
- Toll on human resources due to lack of energy, water, sanitation and their health impacts in Rural North India *by Jyoti Parikh, Vijay Laxmi, Shyam Karmakar and Pramod Dabrase*
- Livelihoods in the urban biomass sector - realities and threats *by Hannah Isaac*

◆ More information can be obtained from: **The Editor, Boiling Point, ITDG, Schumacher Centre for Technology and Development, Bourton on Dunsmore, Rugby CV23 9QZ, UK.**
E-mail: Boiling.Point@itdg.org.uk.

PROGRAMMES

HEDON Associate Programme for Young Professionals
In order to build the capacity of young professionals to develop effective and sustainable household energy projects, and to increase regional participation in the network, the HEDON household energy network is launching the HEDON Associate Programme. The programme aims to provide young professionals with the substantive knowledge, communication skills, resources, and practical experience necessary to develop sustainable household energy projects and to become effective agents of change.
◆ The full announcement can be downloaded from: **www.hedon.info/docs/HEDONAssociateProgramme.pdf.** It can also be read on-line at: **www.hedon.info/goto.php/HEDONAssociateProgramme**, or obtained from Grant Ballard-Tremeer: **grant@ecoharmony.com**

DONORS

Global Fund for Women
The Global Fund for Women is a grant-making foundation supporting women's human rights organisations around the world that works to address critical issues such as gaining economic independence, increasing girls' access to education, and stopping violence against women. Proposals for grants are considered from organisations which are led by women, consist of women working together, and have a strong commitment to women's equality reflected in their activities.
◆ Grant application procedures and other news can be found on: **http://www.globalfundforwomen.org/.**

COOPENER Programme
The COOPENER Programme is part of the European Commission's Intelligent Energy Europe strategy, and relates to Energy in Developing Countries. COOPENER has a budget of Euro 6 million available for the first call, which will focus on energy projects in sub-Saharan Africa (later there will be further calls for other regions). The COOPENER budget is intended to meet up to 50% of project costs, which must have the support of partners from two European countries and involve partners in recipient developing countries.
COOPENER was launched in Brussels on 28th November 2003 with a call for proposals. The deadline for submitting completed proposals is 31st March 2004.
◆ More information can be obtained at the following websites: **www.europa.eu.int/comm/energy/intelligent/index_en.html**, and **www.managenergy.net/.**
◆ Enquiries can be sent to **TREN-Intelligentenergy@cec.eu.int**, or direct to **William Gillet at William.gillet@cec.eu.int**

Internet Resources

WWW

Country Reports on Household Energy Situations: www.sparknet.info
New on the SPARKNET site, these on-line country reports enable comparisons to be made between seven eastern and southern African countries on factors related to energy supply and demand. Go to www.sparknet.info and click on "Country Reports" on the left menu. The "Report Builder" incorporated in the site allows users to put together their own reports with the factors and countries that interest them most, and in the format they prefer (tables, graphs). Users are encouraged to send in their comments, concerns, and suggestions on the reports through the feedback forms in each section.

Sun for Life: www.sunforlife.com
Sun for Life (SFL), based in Switzerland, works to empower women and fight deforestation and desertification. It works in partnership with non-governmental organisations in countries in the South. The SFL solar cooker is specially designed to use material freely available anywhere in the world. SFL trains local women in the construction and use of solar cookers, enabling them to eventually become trainers. A step-by-step guide to construction is available on the web site www.sunforlife.com. SFL welcomes contact details of women who are interested in becoming trainers.

Next Issues

This issue of **ENERGIA News** focuses on Gender and Energy in Oceania – a remote region to many of us, but a very challenging one as seen from the articles. Due to serious difficulties encountered in communicating with authors and resource persons in the region, this issue has been delayed to January 2004. We apologise for this to our readers.

The following issues of **ENERGIA News** are planned for 2004:
Issue 7.1 – Gender and Rural Electrification, April 2004
Issue 7.2 – Gender and Energy in the water sector, August 2004

ENERGIA would very much welcome your contributions on gender and sustainable energy for future issues of **ENERGIA News**. The length of articles or case studies should be around 850 words for a one-page article or 1500 words for a two-page contribution including a photograph. Please remember to send photographs and/or other illustrations to accompany your feature together with captions and credits. Guidelines for writing articles can be obtained from the *ENERGIA* Secretariat.

ENERGIA reserves the right to select those articles that are appropriate for publication in **ENERGIA News**. If an article is worthy of publication but not suitable for a particular themed issue it can be published on the *ENERGIA* web site. *ENERGIA* also reserves the right to edit, shorten, and rewrite articles. In principle, providing the publishing deadline allows it, approval will be sought from the authors for any substantial revisions made to an original article prior to publication.

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

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

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

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