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# ENERGIA

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**THEME**  
**GENDER, BIOFUELS**  
**AND ENERGY**

Can the production and use of biofuels help women in developing countries save time and labour, and also create and expand income producing activities? **JOY CLANCY and GAIL KARLSSON**

# Gender, Biofuels and Energy

ENERGIA members have been exploring this question over recent years, spurred on in part by participation in the 2006-2007 sessions of the UN Commission on Sustainable Development (CSD), at which many governments highlighted the potential of biofuels for rural development, diversification of fuel supplies and reduction of greenhouse gas emissions.<sup>1</sup>

Much attention has been drawn to the negative consequences of large-scale operations that primarily produce biofuels for export and transportation uses. Biofuels production has been linked to food shortages and increased poverty, as well as to deforestation and the displacement of small farmers and indigenous people from their lands. It may also increase greenhouse gas emissions due to land clearing, loss of trees and the use of fossil fuels in agri-business production methods. While we do not want to detract from these very real concerns, it is worth pointing out that these issues are not specific to biofuels but reflect the general way in which large-scale crop and forestry operations tend to be practiced.

In comparison, the locally managed production of biofuels does seem to offer a possible way of expanding access to energy in rural areas, particularly in places where people are already engaged in small-scale agriculture.

## **Biofuels and rural development**

Studies by the United Nations show that available energy systems fail to meet the needs of poor communities, with 2.4 billion people relying on traditional biomass (wood, charcoal, dung and agricultural residues) and 1.6 billion without access to electricity.<sup>2</sup> With prices for fossil fuels remaining high, and energy infrastructure investments in poor countries primarily focussing on urban and industrial development, many people in rural areas are being left without good-quality basic energy services.

Women are the main producers of food crops in many developing coun-

*Woman taking care of the jatropha seedlings in the nursery at Malibiocarburant in Koulikoro, Mali.*



tries. They are also the ones primarily responsible for collecting and managing traditional biomass fuels, as well as making journeys to buy kerosene and batteries. Rural women's long hours and distances travelled gathering wood or other fuel, carrying water, growing crops, processing food and caring for their families - all without electricity, motorised equipment or modern fuels - prevent them from being able to rest between their daily chores, or pursuing education, training and income generating activities that could help lift them, their families and their communities out of poverty.

If people in rural areas could grow oil-producing crops, sell them to generate income, and also use the oil for motorised power, electricity generation, household activities and profitable enterprises, this could open up exciting new opportunities for local economic and social development.

At the 2007 CSD meeting, a number of governments announced that they were launching or expanding biofuels programmes. In response, women's representatives recommended that 'governments... should explore investments in local production of biofuels for use in meeting the energy needs of the poor in an environmentally friendly way'.<sup>3</sup> The women's group also urged governments to document best practices in biofuels production, to provide guidance on adopting gender mainstreaming approaches and to place greater emphasis on small-scale agriculture and informal income generating activities in which women predominate.

### **Biofuels for empowering women?**

This issue of ENERGI A News focuses on work relating to the role of biofuels in rural development and the empowerment of women, and provides examples and analyses of biofuels projects. There is information about recent biofuels activities by ENERGI A and by network members and partners, including new case studies, advocacy initiatives, policy advice to governments and relevant tools for gender mainstreaming.

Early concerns about gender and biofuels were raised by an FAO report that warned of the potential environmental and socioeconomic risks associated with large-scale production of liquid



*Jatropha seeds, used as feedstock for biofuels.*

biofuels in developing countries - including the exacerbation of inequalities between men and women, particularly due to gender differences in access to and control over land and productive assets.<sup>4</sup> However, there is little empirical evidence available concerning women's and men's experiences with biofuels. Many of the concerns raised are based on general experiences with agri-business, particularly with growing sugarcane which has a history linked to slavery and exploitation. It is important for ENERGI A to ask whether biofuels production has to be like this.

Several ENERGI A members have participated in processes that have discussed standards and criteria for sustainability in relation to biofuels, particularly the multi-stakeholder process organised by the Roundtable for Sustainable Biofuels. This process has produced draft criteria that emphasise protecting land rights, water rights, human rights and labour rights, as well as having transparent, consultative and participatory processes when planning biofuels projects. The draft principle on rural and social development states that 'biofuel production shall contribute to the social and economic development of local, rural and indigenous peoples and communities'.<sup>5</sup>

Nevertheless, even when the social impacts of biofuels programmes are considered, women's particular concerns are rarely emphasised. In order to address this gap, ENERGI A has recommended that environmental and social impact assessments of proposed biofu-

els projects and programmes should include an evaluation of gender-differentiated impacts - through consultative processes designed to ensure substantial participation by women - and that gender equity should be one of the principles considered in such assessments.

### **Publication of case studies on biofuels**

ENERGI A collaborated with the International Union for the Conservation of Nature (IUCN) and the South Africa National Energy Research Institute (SANERI) in looking for examples of biofuels projects and programmes and then supporting their analysis in terms of gender-related issues. The resulting case studies were compiled in a publication, *Biofuels for Rural Development and Empowerment of Women*, which was edited by Gail Karlsson and Khamarunga Banda, and presented at the May 2009 session of the CSD.

Abridged versions of two of the case studies are presented in this issue of ENERGI A News. These and other case studies, from Cambodia, Ghana, Nepal, Sri Lanka, Uganda and Zimbabwe can be viewed in full on the ENERGI A website. The case study from India shows community groups in isolated villages collecting seeds from the nearby forest and using oil from the seeds to make biodiesel in a small pedal-powered processor. The biodiesel is used to run water pumps, an electricity generator and a tiller. Women have participated in the seed collection and the planning



and development of the micro-energy systems, but additional efforts are needed to strengthen women's involvement in decision-making regarding the management of the systems and in the development of new enterprises using the energy that is now available.

The second case study presented here is from South Africa, and describes a large-scale initiative that involves soliciting and training farmers to grow feedstock - in this case sunflower seeds and soya beans - for a biodiesel plant. This has been organised as a collaborative engagement of the government, the private sector and research institutions. Both men and women farmers are engaged as out-growers in an 'incubation' system that provides them with extension services, fertiliser, pesticides and access to tillage equipment. The project was aiming for equal participation of men and women, but only 30% of the participants in the pilot phase are women, due in part to factors such as poor access to information, limits on women's land ownership and water rights, and institutional gender discrimination.

Sadly Khamarunga Banda, who contributed the South Africa case study and co-edited the book of case studies, passed away unexpectedly in December 2009. Besides being a dear friend, she was a moving force in ENERGIA's work on biofuels, for example in the Roundtable process referred to above, with a passion for women's equality. She will be greatly missed.

In examining biofuels projects, we found some that specifically targeted women, but most did not have a gender focus. It is our view that if biofuels projects are going to promote the empowerment of women, women need to be involved in planning and managerial decisions, to have shares as co-owners or investors in biofuel production companies and processing operations (rather than simply providing labour as growers of biofuel feedstocks) and also to be included in all the available training programmes and extension services.

It is important for men to understand and support the need for women to have equitable access, participation and benefits. Governments, managers and investors in biofuels projects

should incorporate gender equity as a key element when assessing potential benefits and impacts, and make an effort to capture gender-specific information as one of the factors that determine the sustainability of biofuels projects.

#### Additional research and analysis

In our 'Meeting Friends of ENERGIA' section, we profile Faith Odongo, Assistant Director of Renewable Energy in Kenya's Ministry of Energy. In June 2009, the Ministry prepared a bioethanol strategy, with input on gender aspects from ENERGIA. A broader biofuels policy is expected soon, as well as pilot projects with special measures to ensure gender equity in participation and access to benefits.

The significant role of governments in developing a framework for gender equity is also highlighted in an article about the Hassan district of India where farmers are engaged in biodiesel production. There, the benefits accruing to women can in part be attributed to the Indian Government's specific policy that ensures women are integrated into biofuel programmes on an equitable basis with men, and that their participation extends to governance structures.

IUCN has produced a useful overview of methodologies for evaluating biofuels production in the publication *Implementing Sustainable Biofuel Production: A Compilation of Tools and Approaches*. To ensure sustainability, economic as well as social and environmental concerns need to be addressed. From an economic perspective, a cost-benefit analysis of the use of jatropha oil for the Multifunctional Platform Programme in Mali, by UNDP and Columbia University, showed that jatropha oil production by village committees was consistently cheaper than purchasing diesel, although further monitoring, and evaluation of gender issues, is needed.

As noted in the 'News from the Secretariat' section, ENERGIA has recently been working to actively mainstream gender approaches in energy projects. We hope that there will soon be new opportunities to move forward with our gender and biofuels work by providing guidance and recommendations for de-

signers and managers of biofuels projects and programmes on ways to increase their gender sensitivity and the benefits accruing to women.

#### NOTES

- 1 Chairman's Report, UN Commission on Sustainable Development, 2008. <http://daccessdds.un.org/doc/UNDOC/GEN/N07/363/23/PDF/N0736323.pdf?OpenElement>
- 2 UNEnergy, 2007. Sustainable Bioenergy: A Framework for Decision Makers.
- 3 Priorities for Action for Women as A Major Group at CSD 15, UN Document E/CN.17/2007 [www.un.org/esa/sustdev/csd/csd15/documents/csd15mgpfa.pdf](http://www.un.org/esa/sustdev/csd/csd15/documents/csd15mgpfa.pdf)
- 4 FAO, 2008. Gender and Equity Issues in Liquid Biofuels Production
- 5 Roundtable for Sustainable Biofuels, <http://cgse.epfl.ch/page79931.html>



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including *Biofuels for Rural Development and Empowerment of Women* (ENERGIA, IUCN & SANERI, 2009); *Where Energy is Women's Business: National and Regional Reports from Africa, Asia, Latin America and the Pacific* (ENERGIA, 2007); *Gender & Energy for Sustainable Development: A Toolkit and Resource Guide* (UNDP & ENERGIA, 2004) and *Generating Opportunities: Case Studies on Energy and Women* (UNDP, 2001). For more information:

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