

International Symposium

Rethinking Biomass Energy in Sub-Sahara Africa

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Summary of Presentations and Discussions

By Ewah Eleri (International Centre for Energy, Environment and Development, ICEED)

The debate over bioenergy is often narrowed down to biofuels. However, biofuels represent just one possible use of biomass for energy purposes. Ten percent of global energy consumption is covered by traditional, non-commercially-used biomass – first and foremost firewood and dung from livestock. In Sub-Sahara Africa, this share is even up to 90 percent in some countries. Usually, this is not sustainable: More wood is taken than can re-grow. And burning dung means losing important nutrients. The consequences are soil degradation and desertification.

The Symposium focuses on modern, renewable energy options for Sub-Sahara Africa. How can – chiefly rural – regions in Africa gain access to modern energy services? What is the energy demand like? What role does bioenergy play in this context, and what is the role of replacing imported crude oil with biofuels? How should export-oriented biofuel programmes run by a number of African governments be assessed?

VENRO, the Association of German Development NGOs in collaboration with the German NGO Forum on Environment & Development organized the international symposium: Rethinking Biomass Energy Strategy in Sub-Sahara Africa with invited panelists from Germany, Mali, Nigeria, South Africa and the United Kingdom. The following is a summary of the proceedings.

Africa's Energy Needs – the Status Quo, Importance, Opportunities and Constraints

Amanda Luxande, Renewable Energy and Energy Efficiency Partnership (REEEP), South Africa

Renewable energy (RE) and energy efficiency could potentially account for 80 percent of emission reductions. However, evidence of investments in this sector is hardly at a level that demonstrates seriousness in tackling emission reductions through these opportunities.

There are a number of reasons to support renewable energy, and these include: a) they enhance security of supplies; b) they are important in increasing access to energy services for the poor; c) they help create jobs and improve technical expertise; d) they deliver local, regional and global environmental benefits and e) help achieve the MDGs.

Despite these advantages, RE struggle to compete with more established energy sources. An important reason is the lack of level playing field in fiscal policies. There are also significant financial risks and the fact that several RE sources are by nature intermittent. More barriers include poor quality of long-term energy planning; poor infrastructure and skills and inadequate regional cooperation.

In Southern Africa, these barriers are compounded by poor understanding of RE feedback mechanisms; patchy and uneven development across the region; low levels of access to modern energy services; heavy reliance on coal; and the dominance of South Africa's coal powered electricity grid in regional power trade. Tariffs for conventional energy are often too low to permit entry for most RE sources.

Certain trends provide opportunities for growth in the RE sector. These include a) the anticipation of economic growth and expected higher demand for power; b) climate change is increasingly driving renewed interest in RE; c) current load shedding by utilities is creating opportunities to re-evaluate RE prospects; and d) new international partnerships are creating additional impetus.

A number of options exist for Southern African countries to expand RE investments. These include: a) legislating RE mechanisms, including feed-in tariffs; b) providing a stable investment climate; c) increased funding of RE research and development d) scaling up promotional activities. Best practices in the region include the development of Power Purchase Agreements, simplification of licensing procedures for green power, setting explicit targets, subsidies and private sector participation.

International best practices provides a good choice of policy instruments – feed-in tariffs, quotas, tender schemes, voluntary mechanism or hybrids. Individual countries will choose according to their national circumstances. More public awareness on the various policy choices are important in developing sound policies to drive the RE market in Southern Africa.

Rethinking Biomass Energy in Sub-Sahara Africa

Ewah Eleri, International Centre for Energy, Environment & Development (ICEED), Nigeria

There is a growing interest on biomass energy in Africa, for the following reasons a) the link between biomass energy and poverty is strong; b) it is a flexible energy form used in gas, liquid and solid forms; c) it meets energy needs without costly technologies; d) it is locally-driven and therefore enhances energy security; e) it is essential in reducing emissions of greenhouse gases; f) half a million Sub-Sahara Africa (SSA) people die annually as a result of indoor air pollution from firewood use; g) access to modern energy services such as electricity is declining in most parts of the region; and h) if this trend continues, in 2030 one billion Africans will be dependent on firewood use.

The increasing dependence on firewood is a result of the rising level of poverty in Africa. The number of poor people is increasing in the region, despite the fact that Africa is rich in energy resources. Biomass energy still account for a large share of total energy use, especially in form of traditional inefficient use of firewood. Today, forest cover is in decline, some towns and villages are experiencing wood shortages and rising cost of both wood and charcoal.

Traditional biomass energy use is predominantly based on open fire methods. It has high energy loss, high costs and imposes very high health costs, with total number of deaths only less than malaria and HIV/Aids in the region.

Improved firewood technologies can be manufactured locally, has no patent impediments and requires only basic training. Kenya has disseminated about 2 million stoves while Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) has facilitated the distribution of 1.5 million improved woodstoves. These are tiny drop in a market of about a half billion people. The reason is that stove programmes are small scaled, donor dependent and project-based. The private sector has been slow in providing stoves, and most governments have no implementable policies to improve the market conditions. In all, there is policy failure, poor stove quality, no promotional support, financing remains an obstacle and there are no strong global partnerships to deliver stoves in a big scale.

Modern biomass energy technologies like biogas production have not made any significant impact in the African energy landscape. Several factors including consistent access to feedstock, skills, finance and policies are responsible for the lack of interest in biogas technologies.

High oil prices have sustained a growing interest in biofuels in Africa. However, few countries have policy frameworks to support this sector. It is marked by poor regulation and promotion. There are only few large scale investments in biofuels in Africa, compared to other regions. Several key issues should be addressed including: the food and fuel conflict, environmental issues, land rights, policy and financial issues as well as the debate over small size vs. large size biofuels investments.

Biomass cogeneration provides an opportunity for quick-wins in delivering electricity. Good examples exist in Mauritius and Kenya. De-industrialisation in many countries has reduced the scope of cogeneration investments. Some countries, including South Africa and Kenya are introducing feed-tariffs to facilitate more cogeneration projects.

Domestic reforms are needed to increase access to efficient biomass energy service in Africa. These reforms include: a) devolution of energy institutions; b) increased participation in decision-making, especially for women; c) making energy access a right; d) budget tracking for energy services for the poor; e) building domestic coalitions to support reforms; f) fight against corruption; g) Thinking big – small-scaled project alone will not reach the poor within a reasonable time frame, h) engage the political process – energy access is a political issue; i) deepen the domestic financial markets; j) support stronger regulations for biofuels; and k) invest in market transformation for improved firewood stoves.

The international community can support these reforms by a) setting a global target on energy access – along other Millennium Development Goals (MDGs); b) scaling up areas of quick gains, especially improved woodstoves and cogeneration technologies; c) build a global partnership for improved woodstoves d) strengthen the link between energy access and the technology transfer debate within the United Nations Framework Convention on Climate Change; e) make the carbon market serve the poor; f) scrutinise the role of multilateral financial institutions.

Large scale biofuels programmes in Africa – who benefits?

Andrew Scott, Practical Action, United Kingdom

Though energy consumption in Africa needs to grow from a human development perspective, current levels of energy consumption are low and based largely on biomass. Consequently, per capita greenhouse gas emissions are low in Africa, and the continent does not need to achieve mitigation through renewable energy and biofuels. As far as greenhouse gas emissions are concerned, biofuels production in Africa is not to reduce Africa's emissions but rather to contribute to emission reduction by industrialised countries.

Indeed, biofuels production is as much if not more about energy supply and consumption in industrialised countries as it is about energy for Africans. This is driven by policy changes and financial incentives introduced, by the USA and EU particularly, to promote the production and use of biofuels. In contrast, policies for biofuels are absent in most African countries.

South Africa has a draft strategy, which focuses on a mandate for biofuel consumption (4.5 percent of liquid road transport fuels (petrol and diesel) by 2013). And the biofuels industry will continue to receive a percentage Fuel Levy reduction for all liquid biofuels that comply to agreed specifications. In Tanzania a Biofuels Task Force was established in April 2006 to promote development of the sector and develop legislation to stimulate use of biofuels, but there is no policy or legislation in place.

There is a need therefore in most African countries for national policies for biofuel production and use. In the face of the threat of land acquisition by foreign investors and the inevitable increase in oil prices, policies for biofuels will need to address both consumption and production, at the same time taking account of wider development objectives, including equity and sustainability.

Sustainability criteria or standards will be necessary and will need to be agreed internationally. Such criteria can be used to regulate the international trade in biofuels and to ensure that public finance support for biofuels (including ODA) is used only in support of sustainable development and does not negatively affect food security and people living in poverty.

More research and investment is required to develop the potential of small-scale biofuel production aimed at meeting the energy needs of people living in Africa. Access to modern energy services being a prerequisite for poverty reduction and achievement of the MDGs, the potential contribution of biofuels as a renewable and viable local level energy source should be a development co-operation research priority.

In the absence of specific biofuels policies, there are indications that action by farmers groups and civil society can help prevent the worst excesses of unregulated expansion. In Swaziland, for example, production ceased when the absence of an environment impact assessment became known. In Tanzania one company withdrew when its activities received publicity, and in Zambia there is an instance of the Government declining to allocate land in because of the likelihood of environmental degradation and the displacement of people. There is thus a role for NGOs and community based organisations to inform those who may be affected by plans for biofuels production and to lobby national and local governments to ensure that biofuels do contribute to sustainable development.

Summary of Discussions

Panel Discussion: Bioenergy in development cooperation – Criteria

Panelists: Harry Hoffmann, Leibniz-Zentrum für Agrarlandforschung (ZALF) e.V., Jürgen Maier, German NGO Forum Environment and Development, Ousmane Ouattara, Mali Folkecenter, Barbara Richard, Federal Ministry for Economic Cooperation and Development (BMZ)

Facilitator: Monika Hoegen, Freelance Journalist

Biomass Projects:

Ousmane Ouattara presented a project on Jatropha with small-scale farmers in Mali. Farmers grow both food and Jatropha and this fuel crop has exists in Mali for a very long time. There is no evidence that it affects the quality of the food produced. There is a policy framework in place and a National Agency for Biofuel Production. Malifolkecenter supported the government in developing criteria for sustainable biofuel production.

Harry Hoffmann presented a project implemented by ZALF in Tanzania. He emphasised the benign impacts of small-scale-bioenergy projects on the environment. The project has so far been running for four months.

Discussion on Criteria for success:

Barbara Richard listed the criteria used by BMZ for assessing the sustainability of biofuels projects. This depends on the region, scale, etc. Key among the criteria is the centrality of food security and participation of the local community. It is also important that projects are aligned with known best practices. There are already international standards (for example working conditions).

Jürgen Maier focused on the sustainability of large scale projects. In his view, it should be possible to establish criteria for large-scale projects especially since they have serious consequences and are the focus of global discussions. There are and will always be large scale projects. The challenge is to develop laws and other regulatory instruments to ensure that they are sustainable.

Question: How can governments be made accountable in their implementation of the criteria?

Answer: Countries have to prove the criteria are met. There is also need for an independent certification. Some forms of closer engagement with the affected countries are needed; Europe should not develop a unilateral strategy. Further, there are already watch-dogs in existence, like FSE that currently reviews how the regulations are applied.

When standards are set, it is also important to ensure compliance. This will be particularly difficult for small-scale farmers, especially in meeting certification costs. However it is important that standards become national policy, and that Government ensure that standards are met.

It is also important to hold companies accountable - ensuring that they pay the full costs of their projects, rather than passing the cost to tax payers. We also have to build in good incentives that make sustainability attractive to investing companies.

Discussion on Strategic Plans:

Jürgen Maier argued that the biomass action plan in Germany is not very concrete. The “wait and see” position is not acceptable. There are several good and bad examples for bioenergy projects. We need to share lessons on the good projects and use them as templates. For example the EU has a strategy on sustainability that seems to make sense. There are a number of international initiatives that promote sustainability. The strengthening of the regulatory framework needs to go beyond biofuels to encompass the entire agricultural sector.

In her response, Barbara Richard makes clear that the BMZ does not “wait and see” but actively supports pilot projects on bioenergy. However, not much experience has been generated so far. The ministry develops standards and evaluation systems. BMZ seeks to

integrate biomass issues in international strategies, especially regarding the environment and potential land grabbing problems. Setting stringent standards should be part of the national energy policy. However, it is important to make clear that international standards should be set by an international forum (at the moment there are several different fora). There is a growing pressure to set up these standards.

Success factors according to Barbara Richard include the existence of strong governmental structures, support and participation of the local population and the role of the private sector.

Ousmane Ouattara maintains that mainstreaming the needs of the local population is central to success. Projects must ensure an active local participation. The acceptance of large-scale projects in villages depends on the level of local participation and benefits to the local community. It is uncertain how much a certification scheme promotes the interests of the local population. When not properly implemented, it might work to the disadvantage of small-scale farmers. For now, international standards are still not possible at the local level.

Monika Hoegen suggests certification of products in the international markets and local agreements for small-scale farmers, shielding farmers from international markets.

Barbara Richard calls for the same criteria for everyone (if there are standards to protect people they should be for everyone). This should apply to all companies alike. Because it is not important where the investing company comes from, the impacts are the same. It is important to focus more on agreed frameworks.

Jürgen Maier suggests that there is a risk to only focus on biofuels while entire populations are dependent on firewood for their basic energy needs. Firewood energy needs to attract more policy attention.

Conclusions by Richard Brand, Church Development Service, eed

Biomass is important for development in Africa. Improving energy access and poverty eradication are strongly linked. Though firewood is central to the poor in Africa, it is often not given priority.

There is no clear consensus on the advantages or disadvantages of large or small scale biofuel projects. This depends on the design and ability to meet the needs of the local community. A number of issues arise:

1. What should be the strategy in Sub-Saharan Africa?

A biomass energy strategy is lacking, despite the fact that it dominates energy supply in Africa. It is essential that a biomass energy strategy should be linked to the development strategy of a country. A broader framework of reforms is needed.

2. What should be the role of CSO?

Access to energy services is important in addressing poverty. Civil society groups must engage actively in the policy dialogue and participate in the implementation of pilot projects. There is need for a broad partnership on providing energy services for the poor.

3. What should be the role of Development Cooperation?

Development cooperation must strengthen national strategies in Sub-Saharan Africa. It should support pilot projects, replicate good examples, encourage exchange, etc. A comprehensive biomass strategy should be developed in cooperation with civil society.

Projects must be evaluated on case by case basis. There might be different strategies for different energy forms, or specific locations. Both small and large scale projects should be judged by their ability to meet people's needs.

VENRO is the umbrella organisation of development non-governmental organisations (NGOs) in Germany. The organisation was founded in 1995 and consists of around 120 organisations. Their backgrounds lie in independent and church-related development co-operation, humanitarian aid as well as development education, public relations and advocacy. 16 one-world networks are part of VENRO. These represent about 2000 local development initiatives and NGOs. VENRO's central goal is to construct a just globalisation, with a special emphasis on eradicating global poverty. The organisation is committed to implementing human rights and conserving natural resources.

VENRO

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- strengthens the role of NGOs and civil society in development co-operation
- engages in advocacy for the interests of developing countries and the poorer segments of society
- sharpens public awareness of development co-operation issues

Website: www.venro.org



The German NGO Forum on Environment and Development The German NGO Forum on Environment and Development was founded in 1992 after the UN Conference on Environment and Development. It coordinates activities of German NGOs in international political processes concerning sustainable development. Our main aim is the implementation of sustainable development. Issue-based Working Groups develop common positions as well as public relations and lobbying strategies. Once a year the Forum meets in plenary. Coordination and information within and outwards are managed by the secretariat. It is a kind of 'marketplace' for positions discussed by NGOs within the Forum.

The Forum's political leadership is a Steering Committee consisting of representatives from environment as well as development organisations.

Website: www.forumue.de



International Centre for Energy, Environment & Development works to address poverty, access to energy and climate security. The centre is committed to a change agenda supported by high quality research and advocacy. It seeks to reform public policies and build partnership with the private sector and civil society in confronting poverty through enhanced access to sustainable energy services for the poor.

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With the project “Prospects for Africa – Europe’s Policies” VENRO seeks an active civil society contribution to the implementation of the Africa-EU Strategic Partnership. The project builds on cooperation with African partners that began during VENRO’s successful EU Presidency Project in 2007. VENRO member organizations then worked together with their African partners to develop statements for policy makers, the media and interested public on the main topics of the project: energy and climate policies; regional integration and trade; and gender.

Website: www.prospects-for-africa.de