

PABO Report

Powering Africa: The Biofuels Options

An Executive Dialogue



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Introduction

PABO was an executive dialogue, hosted by the Ministry of Energy in Mozambique, focusing on unlocking Africa's biofuel potential.

Government, industry, financiers and development agencies were invited to discuss the challenges that are preventing the development of Africa's biofuels industry. By promoting an open dialogue between government and the private sector, PABO hopes to overcome their joint concerns and further the responsible development of Africa's biofuels industry.

The debate on the sustainability of biofuels - the rising food prices, deforestation, displacing existing arable land and doubts over climate change benefits - is well documented. The aim of PABO was not to reiterate these issues but to discuss policies that ensured that the biofuels industry in Africa moves forward in a sustainable and responsible manner.

The below executive summary provides an overview of the main topics discussed during the conference, followed by synthesis and general conclusions.

Policy Dialogue

Africa holds the potential to host bioenergy developments, but governments must be fully aware of the existing global standards when pursuing their strategies. Harmonization of policy by bridging the different requirements set at global, regional, national and local level is a priority, but both governments and private investors should take the necessary precautions, which takes time. Especially large-scale biofuels investments, which affect large social systems, and bring challenges such as allocation of land, avoiding conflict with communities and food shortage. Private investors expressed the need for 'success stories'; i.e. biofuels projects that show that food and fuel production can co-exist, and that biofuels investments can positively contribute to rural development.

At the time of writing (March 2009) the Mozambican

government is working on a National Biofuels Policy that is focused on supporting sustainable biofuels investments. The government decided to embark upon the promotion of biofuels production and end-use, with the aim of responding to the National Poverty Alleviation Agenda and the high and unpredictable oil prices on the world markets. Through the National Biofuels Policy, the Mozambican government is seeking to facilitate and bring together the different interests from the parties involved, being aware of the challenges that large-scale biofuels initiatives entail. Currently a zoning exercise is being carried out to define the appropriate use of different types of land. This exercise should contribute to ensuring the correct allocation of land for biofuels production and that a balance is made between biofuels production and food production. A comprehensive study was also undertaken to look into the social and environmental impacts and market opportunities for biofuels production in Mozambique.

With regard to the National Biofuels Policy several conference participants contributed that there is a need for diversified policy strategies. The diversified character of biofuels projects (taking into account scale, crops, working with or without outgrowers) needs different policies, regulations and frameworks. There was discussion among the participants about how the zoning could potentially benefit or harm biofuels investments in Mozambique. Some claimed that from an environmental point of view it would make sense to concentrate biofuels production on less-productive soils, whereas others warned that within any cropping system there exists a relation between soil-fertility, resource-availability (such as water) and yield. Subsequently, from an investment point of view, it does not make sense to focus on less-productive soils when more fertile soils are available. Moreover governments were advised to incorporate strategies to prevent illegal blending, side-selling when working with outgrowers, and promote incentive payments for *Jatropha*-outgrowers. In order to turn the first biofuels projects into the required 'success stories', soft financing and government support will be very important to reduce the financial risks. This is especially important given the lack of infrastructure and competitiveness

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in many sub-Saharan African countries compared with other biofuels producing countries. These first projects should also be used as 'learning entities' to operationalize and specify National Biofuels Policies, identify knowledge gaps and to create strategies for dealing with undesired side-effects. Implementing this requires a constructive, transparent and pro-active dialogue between the multiple stakeholders involved.

Investment & Infrastructure Dialogue

Commercial bank representatives described the agricultural business as a high-risk business. There is huge uncertainty in the biofuels sector due to climate change, land-use issues and the long-term character of the projects. Commercial banks prefer to finance the processing side rather than the production side of projects. As long as the two are interrelated, private investors will experience difficulties with having access to funds for biofuels projects. Commercial banks advised to separate production from processing and to divide the risk. "Biofuels is not an industry in which banks want to take the full risk".

Subsequently improved information and services for biofuels investors was suggested. According to bank representatives there is a lack of knowledge among investors on which institutions provide which services.

Development banks are normally guided by the country's national strategy paper. Moreover they evaluate biofuels investment requests on the following factors: profit maximization and environmental and social impact; land acquisition process; displacement of people involved; strategic investments; companies who know the business (experience with sugar production or palm oil); equity; off-take markets and arrangement; and legislation and policies (for example on blending). Investment banks explained they are looking for innovation projects designs which focus the co-existence of biofuels and food security, combined with rural development initiatives such as infrastructure and electrification activities, (farmer) capacity building, gender and HIV/AIDS. Environmental and Social Impact Studies were also mentioned during the dialogue and should no longer

be seen as additional costs, but as an integral part of the whole investment. It is unfortunate that some still interpret it as a 'must do'.

Private investors responded by saying that the banks' requirements are reconcilable and fit within the framework of sustainable biofuels production. By focusing on the long-term and integrating biofuels projects with food security and infrastructure projects the private sector could contribute substantially to rural development in Africa. By doing so the current lack of infrastructure (labor, water, roads, pipelines, communication and information) could be transformed into an opportunity for rural development, creating win-win situations: "Go for areas with good infrastructure or bring it to rural Mozambique!?" Both the World Bank and the Mozambican government assured that these types of investment proposals will be supported. Micro-financing opportunities were also mentioned and should also be explored when working with outgrowers.

National & International Market Dialogue

Various participants expressed their concerns about the competitiveness of the African biofuels sector compared to other biofuels producing countries such as Brazil. These concerns were related both to the physical scale and production costs. What is considered large scale in Africa is bottom-end in Brazil, where subsequently enormous efforts are undertaken to maximize production in relation to herbicides, weeding, etc. A tangible alternative to overcome this problem could be intensive collaboration with other Southern African Development Countries. Currently the focus is on producing for the EU-markets, but Southern Africa could create its own market. In order to compete with Brazil, Southern African countries have to behave and act like one country and create a strong regional market.

Although there might be competition with Brazil, valuable lessons can be learned from the Brazilian context. The Brazilian government has years of experience and works closely together with the private sector. For the Brazilian domestic market the first step

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was to create the basic conditions and policy for blending (Brazil started off with 2% of blending biofuels). During the first biofuels auction the Brazilian government paid huge prices for the fuel, but this created promotion and trust, funds and policies that stimulated local production. Blending is now 3% and will go up to 5%.

Several participants emphasized their preference to produce biofuels for domestic and regional markets rather than exporting to the EU for the same price. The increasing transportation costs related to shipping products to other continents could possibly strengthen this focus in the longer term. Moreover side-products of for example Jatropha could potentially become as important as biofuels itself. Jatropha seed-cake can be transformed into electricity, or be used as organic fertilizer. But also other forces influence whether African biofuels will be used for domestic or international markets. The EU's ambitious sustainability criteria and mandatory 10% blending target for the Transport sector by 2020 is creating a premium market for sustainable biofuels. If investment banks require stable off-take and arrangements, this could make producing for the international market favorable over producing for domestic and regional markets.

Finally it was stated that African politicians should raise the market development issue with their EU colleagues. There is a lot of focus on the EU-market, but other market opportunities in Africa (SADC), China and India should also be explored.

Conclusions: the way forward

During the PABO meeting the main discussion topics related to developing a sustainable biofuels sector in Africa. Key conditions for sustainable development were identified as promoting transparency, participation, accountability and monitoring towards a healthy relationship between the involved multi-scale public and private stakeholders. A framework for operationalizing and achieving this objective could be the establishment of an innovative Public Private Partnership (PPP) attached to financing mechanisms.

Such a PPP should take the whole value chain into account, making sure that everybody - from local producers and outgrowers to consumers - benefits from Africa's biofuels potential.

Nevertheless the biofuels sector is surrounded by high uncertainty and risks. During the PABO several discussions about bio-physical, socio-political and economical issues indicated the need for further research and development. The scientific community should play an important role in this. Science could inform and facilitate discussions towards sound decision-making by looking at long-term scenarios, learning from existing experiences with biofuels and other commodities, describe the environmental, socio-cultural and economic impact, explore improved Plant Production Systems, and design innovative business and management models for the biofuel sector. Both the private investors as well as the universities are open to these kinds of partnerships.

Biofuels provide opportunities for Africa. The challenges are there, but ready to be dealt with. On the 24th March the Mozambican government approved their National Biofuels Policy and Strategy, which is the most important instrument for launching wide-scale biofuels production in the country. The strategy approved in a Council of Ministers meeting: "Establishes a regulatory framework for production of biofuels by the public and private sectors, based on principles of transparency, social and environmental protection." Innovative, multi-scale PPPs which operate on the basis of transparent learning and adaptation could form the starting-point for overcoming challenges towards developing a sustainable biofuel sector in Africa.



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PABO Participants

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Below is a list of organisations that attended the PABO Meeting, Maputo, 4 - 6 March 2009

Angola • BIOCOM - Companhia de Bioenergia de Angola • **Belgium** • De Smet Engineers & Contractors • PANGEA-Partners for Euro-African Green Energy • **Botswana** • Department of Energy • **Canada** • MagIndustries • **Germany** • GTZ • **Kenya** • Kenya Sugar Board • Ministry of Agriculture • Norfund • Promotion of Private Sector Development in Agriculture • **Madagascar** • GTZ • **Malawi** • Bio Energy Resources Ltd (BERL) • **Mauritius** • Board of Investment • **Mozambique** • African Development Bank • Austral-COWI • Bioenergy Africa • British High Commission • Cahora Bassa Hydroelectric Dam (HCB) • CENELEC • CEPAGRI • Consultec- Consultores Associados, Lda • Department for International Development • Deuman • DNA Sugar • Eco Energia • Eduardo Mondlane University • Electricidade de Moçambique E.P. • Embassy of Brasil • Embassy of Italy • Embassy of Sweden • European Commission • FEMA • Global Bioenergy Partnership (GBEP) • Green Resources Mozambique SA • GTZ • IFC • Ingerop Mozambique • Investment Promotion Centre • Mauritius High Commission • Ministry of Energy • Ministry of Planning and Development • Ministry of Public Works and Housing • National Fund for Energy (FUNAE) • Petromoc • Pimenta, Dionísio & Associates • Portuguese Embassy • ProCana • Resource Energy • SDV AMI Moçambique (SARL) • SNV Beira • Tongaat-Hulett Acurareira de Xinavane • Transportes Tembe • World Bank • WWF • **Namibia** • Electricity Control Board • **Netherlands** • Wageningen University & Research Centre • **Portugal** • Galp Energia • **South Africa** • Agri-IQ (PTY) Ltd • Bauche Energy Africa • Bosch Projects • Colors Fruits Holdings (PTY) Ltd • Development Bank of Southern Africa (DBSA) • European Investment Bank • Fortis Bank • Ingerop Africa • Intertek Caleb Brett • MAN Ferrostaal Southern Africa (PTY) Ltd • Standard Bank- Investment Banking Africa • Tongaat-Hulett Sugar Limited • **Sweden** • Gröna Bilister • Orgut Consulting • SEKAB • **Switzerland** • Addax Bioenergy • Jatropha Sustainable Biofuels Alliance • **Tanzania** • Africa Biofuel and Emission Reduction • Ministry of Energy & Minerals • SEKAB • Tanzania Investment Centre • World Bank • **Tunisia** • African Development Bank (OPSM) • **United Kingdom** • Euroventures / Infraco • Fieldstone Private Capital Group Ltd • SEKAB • Sun Biofuels • **United States of America** • Nexant • United Nations Foundation • **Zambia** • Energy Regulation Board (ERB)