

BIOENERGY SCHEMES – WITHERTO IN AFRICA? THE ZAMBIAN CASE

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**BIOENERGY SUSTAINABILITY SCHEMES – AN AFRICAN
PERSPECTIVE CONFERENCE,
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BIOENERGY IN AFRICA – THE ISSUES

- Bioenergy contributes a larger share of the energy basket in most African countries
 - In the form of woodfuel, more than 70% of total primary energy in some Southern African Countries
- Bioenergy – currently exploited in its traditional form, with implications:
 - Environmental Issues
 - Can a hungry person eat the environment? A normal human reaction....!
 - Governance difficulties
 - Sub-sector under auto pilot!
 - Govts not able to handle the multi-sectoral aspect of bioenergy
 - Policy definition complexities
 - Whose mandate is it? Energy, Environment, Lands, Agriculture.....?
 - Accountability difficulties
 - Socio-economic benefits - difficulty to quantify
 - Self denial: the poor are being unreasonable!



TRADITIONAL BIOENERGY IN AFRICA – THE DRIVERS (IN ZAMBIA)

- Unavailability of modern energy
 - Modern energy unavailable to both the urban poor and rural areas
 - traditional bioenergy – the only option
 - In Zambia for example, national access to electricity has risen from 17% in 1996 to 20.4% in 2006
 - From 45% in 1996 to 51% in 2006 in urban areas
 - From 2% in 1996 to 4% in rural areas
 - The transition is too slow
 - Goal: reduce dependence on woodfuel from current 70% to 40% by 2030
- Limited income generation schemes for the poor
 - In Zambia a majority of the urban poor and rural dwellers depend on charcoal as an income generator
 - In rural Zambia, charcoal acts as a buffer against the underperforming agricultural sector
 - Droughts
 - Too much rainfall



BIOENERGY IN AFRICA – WHERE DO WE TAKE THE DEBATE?

- Critical Issues
 - Let us have a common platform!
 - Govts and their people should speak the same language!
 - Energy security for all
 - » National level
 - » Household level
 - Environment
 - » Balance environmental issues with sustainability of livelihoods
 - Let us Africanise transition to modern energy services
 - African energy solutions should take cognizance of current capabilities and needs
 - Can African economies sustain the solutions proposed for the energy sector?
 - Are the energy solutions borne in Africa or externally generated?
 - Bioenergy solutions to include:
 - Need for energy to contribute to poverty reduction
 - Provide energy security to African Countries



OPPORTUNITIES IN THE BIOENERGY SUB-SECTOR – THE CASE FOR BIOFUELS

- a) **Energy Security** – oil supply affected by political/social instability
- b) **Rising prices of oil** are burdening world economies
- c) **Poverty reduction in developing countries-**
 - create Job opportunities for the rural poor
 - Provide new markets for rural produced agricultural products
- d) **Biofuels can contribute to poor people's increased access to modern energy services**, e.g. electricity
- d) **Environmental concerns.** Biofuels can:
 - replace carbon rich fuels that emit Green House Gases (GHG)
 - enable many poor countries produce more cleaner fuels
 - Biofuels can assist some countries halt deforestation
- e) **Opportunities for product diversification**, e.g. in the sugar industry. This increases project viability and benefits
 - create Job opportunities for the rural poor
 - Provide new markets for rural produced agricultural products



ISSUES IN THE AFRICAN BIOFUEL SUB-SECTOR

- **IN SUPPORT OF:**

- 1. Unprecedented political and social support**

- a) African countries are setting ambitious production targets
- b) Support both at country and regional levels, e.g.
 - i. Southern African Development Community, SADC
 - ii. Association for African non-oil producing countries
 - iii. Forum for Energy Ministers of Africa, FEMA
 - iv. Common Market for Eastern & Southern Africa, COMESA
 - v. African Union – African Energy Commission

- 2. Excellent conditions for producing biofuels**

- a) Good climate
- b) Good soils
- c) Abundant land, e.g. only 14% of arable land in Zambia is under cultivation



ISSUES IN THE AFRICAN BIOFUEL SUB-SECTOR

3. Enormous potential markets exist

- a) Local/village level – for farm activities
- b) National level – transport fuels, electrification, other uses
- c) International level – to meet high renewable targets for developed countries



ISSUES IN THE AFRICAN BIOFUEL SUB-SECTOR

- NOT IN SUPPORT OF:
- Food versus Fuel
 - A genuine concern, but we can have solutions....
 - Can we focus on non food feedstocks until the food question can be resolved?
 - Is it a question of biofuels taking food crops or under productivity of our agricultural systems?
 - Where is Africa is this a problem? If the problem is inadequate food aid, does Africa see food aid as a long term solution to its food problems?
 - Isn't rising energy costs also a function of rising food costs?



POLICY ISSUES FOR THE AFRICAN BIOFUEL SUB-SECTOR

- Production Capacity
 - Can Africa satisfy its biofuel requirements?
 - Balancing many competing needs
 - E.g. Land, water, environment
 - For Zambia
 - 5% of diesel from biodiesel by 2015
 - 10% of petrol from bioethanol by 2015
 - Supply the external market?
- Business models
 - What business models with support a sustainable biofuel sector in Africa?



POLICY ISSUES FOR THE AFRICAN BIOFUEL SUB-SECTOR

- Market development
 - Accessibility
 - State of infrastructure
 - Standards/specifications
 - Fair Trade
 - Ecological labelling?
- Socio-economic Issues
 - Food security
 - Sharing of benefits
 - Gender inequality

