Trade and development implications of developments in commodity markets

by

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"The views expressed are those of the author and do not necessarily reflect the views of UNCTAD"
PART 1

SITUATION IN AFRICA
I. Quick facts

Africa’s share of world exports follows trends in commodity prices

Africa remains a commodity exporter ... its comparative advantage is in natural resources, including oil which is intensive in foreign capital and agriculture which is intensive in labour.
I. Quick facts

Importance of boosting trade and agriculture

- Sub-Saharan Africa’s share of world trade was 3.1% in 2008... down from 6.0% in 1980.
- 1% of world trade was worth $161 billion in 2008, more than five times the development assistance sub-Saharan Africa received from G8 countries that same year.
- Farmers in developed countries received $258 billion worth of subsidies in 2007.
- 963 million people are hungry around the world today, an increase of 40 million people since 2007.
- Growth in agriculture is twice as effective at reducing poverty compared to growth in other sectors.
- 2/3 of people in sub-Saharan Africa are employed in agriculture;
II. The promise of Agriculture

Africa has vast tracts of unused land.
II. The promise of Agriculture

Agricultural incomes

- Africa has vast tracts of unused land.
- Increases in GDP originating in the agriculture sector benefit the poor more than proportionately.
- 75% of poor live in the rural areas of developing countries, but ...
  - Only 4% of aid is directed to agriculture, and
  - In Africa, only 4% of fiscal spending is on agriculture.
- The 2008 World Development Report (World Bank) urges more investment in agriculture for developing countries ... as a necessary input to the attainment of the Millennium Development Goal of reducing poverty by 2015.
III. Emerging Energy Model

Current model
- Reliance on one source (petroleum)
- Dependence on one region (Middle East)
- Large scale production facilities (International Oil Companies)
- Negative environmental impact (emissions)

Emerging model:
- Many sources (solar, wave, wind, biofuels)
- Regional production
- Smaller scale production facilities
- Carbon neutral … or at least, reduced life-cycle emissions

Conclusion:
- Portfolio of renewable energy solutions
- Region-specific combinations
III. Emerging Energy Model

Outlook: 2030

BP Magazine, Issue 3, 2007:

- “At the moment, about two thirds of the earth’s crude oil is used in transport fuels and over 95% of transport fuels currently come from crude oil;

- “These fuels account for around a fifth of man-made CO2 emissions”;

- “By 2030, biofuels could provide 30% of the world’s road transport fuel, and cut as much as 80% of greenhouse gas per litre (compared with a litre of petrol).”
Demand for diesel fuel is expected to surge over the next decade:

- Global demand for diesel-powered light-vehicles is projected to increase from 16 million in 2007 to 29 million by 2017... raising its market share from 23.6% in 2007 to 31.5% by 2017
- Asia’s largest light-vehicle markets, China and Japan, have very low current levels of diesel vehicle sales
- By 2017, North America and Asia combined will account for 45 percent of global annual demand for diesel light vehicles, compared with just 25 percent in 2007

In terms of absolute demand, Europe will remain the most dominant region throughout the next decade

Biodiesel can be used by diesel-powered vehicles without any modification

Source: J.D. Power and Associates 2008 report
PART 2

BIOFUELS: OPPORTUNITY OF SUSTAINABLE ECONOMIC GROWTH
Biofuels are at the intersection of three key global challenges:

- Energy security
- Climate change
- Poverty reduction

For Africa, biofuels present an opportunity to reduce poverty by

- Stimulating rural development
- Enhancing access to energy
- Focus should be on non-food source of biofuels ... such as Jatropha

Consistent with Africa’s comparative advantage

- Excellent agroclimatic conditions
- Environmentally sustainable
- Labour-intensive
III. The Promise of Biofuels

Africa is a potential biofuel superpower

- Evaluated potential for sustainable production of biofuels and bioenergy
- Of all the regions studied, sub-Saharan Africa has the largest potential

Based only on the framework of CDM-approved methodologies, the World Bank estimates the potential for thousands of low carbon energy projects ... with an estimated potential to provide more than 170 GW of additional power-generation capacity, more than twice the region’s current installed capacity

The additional energy provided, both electrical and thermal, would equal roughly four times the region’s current modern-energy production... for a continent where only 6% of rural population currently have access to electricity


Studies from International Energy Agency confirm Africa’s potential
III. The Promise of Biofuels

**Biofuels: viable**

- Commercially viable alternative
  - Available now
  - Existing infrastructure
  - Fuel today’s cars … at little or no additional cost

- Forecasts
  - **US government agencies** … “biofuels could displace 25-50% of US petroleum fuels by 2030”
  - **Daimler** – “biodiesel could represent 10% of European diesel market by 2015”
  - **Boeing** – currently testing bio-jet fuels
  - **Goldman Sachs** – some feedstocks have economic breakeven points as low as $43 per barrel of oil… **Jatropha Curcas**

- Currently: biofuels provide only 1% of world’s liquid transportation fuels
III. The Promise of Biofuels

**Sources and uses**

- **OECD countries:**
  - Do not have sufficient agricultural land to comply with government mandates and meet expected biofuel demand
  - To meet its mandated targets, EU has begun to import feedstock and biofuels

- **Africa:**
  - Low energy consumption, and available land and favourable climate to produce energy crops
Biofuels create large numbers of rural jobs, including in the:

- agro-industrial sector (crops, distillation, processing of by-products)
- commercialization of new market commodities (oil, biodiesel, glycerin)
- new products (energy, fertilizers, animal feed, etc.) with guaranteed market absorption.

In 2004, Brazilian sugarcane sector: 700,000 direct jobs and 3.5 million indirect jobs, corresponding to the production of 350 million tones of cane.

The current ratio of jobs created per unit of energy produced is much higher than for other energy sources:

- Taking the oil industry as the baseline (oil = 1) ...
- hydroelectric power creates 3, coal creates 4 ...
- and ethanol creates 152 jobs

Also, job generation in most other industries requires higher capital investments.
To date ... Clean energy and CDM projects have largely by-passed Africa
PART 3

GHANA AND NIGERIA
I. Ghana

**Biodiesel production from Jatropha**

**Objectives of the Project**

- For the country to be self reliant in liquid fuel production.
- To increase the value of Ghanaian exports.
- Lower Ghana’s reliance on imported goods.
- Create massive employment for the teaming unemployed youths, reduce poverty and rural urban drift.
I. Ghana

Biodiesel production from Jatropha

Description of the project

- Planting Jatropha to cover about 1 million hectares of idle lands in Ghana will:
  - Prevent desertification in plantation areas.
  - Improve Climate change positively in these areas.
  - Reduce the spread of bush fires in these areas.
  - Control erosions and loss of topsoil's and reduce silting of water bodies.
  - Lead to the reclamation of degraded lands due to mining activities.
  - Reduce rural poverty and rural-urban drift.
  - Translate into massive job creation (mainly in harvest periods on farms).

- 600 000 tones of full capacity production after 5 years
I. Ghana

*Biodiesel production from Jatropha*

*Economic and financial impacts of project*

- To create jobs for both skilled and unskilled unemployed youths roaming the streets of major cities and towns in Ghana.

- The project will also help increase the contribution of the agro-industrial sector to Gross Domestic Products (GDP), added value and technology transfer. Macro economic gains shall be obtained by the import substitutions and the resulting improvement in the balance of payment of the country.

- The biodiesel produced will also be used to run electricity-generating plants to generate electricity, to save the country from importing electricity or using imported light crude oil or gas in running these plants, and thus stabilize electricity generation and supply in the country and export the excess.

- The transformation of marginal and idle lands into productive areas, putting more money into the hands of farmers and thus making farming more attractive and profitable.
The objective of the programme is to firmly establish a thriving fuel ethanol industry utilizing agricultural products as a means of improving the quality of automotive fossil-based fuels in Nigeria. The Policy shall link the agricultural and the energy sector, with the underlying aim of stimulating development in the agricultural sector.
II. Nigeria

**Ethanol production from Sugar Sorghum**

*Description of the project*

- Sweet sorghum is one of the most promising sources of biofuel feedstock for the Nigerian.
- First, it is hardy and thrives in arid conditions such as that in the Sahel Savanna of the Northern and Southern Sudan areas of West Africa where precipitation is low and access to irrigation water is limited.
- At the same time, it is able to withstand storms and flooding and thus reduces the risk of crop failure.
- This is especially important considering that lately, Nigeria has been experiencing extreme weather disturbances such as desertification, extended dry seasons in some areas and increasingly strong rainfall and flooding in others.
- The site selected as the pilot for the biofuel ethanol project in Nigeria meets all the agro-climatic conditions for the sustainable cultivation of Sweet Sorghum, Safflower and Soybean in Nigeria (3000 ha to 10 000 ha from 2009 to 2010).
II. Nigeria

**Economic and financial impacts of project**

- Developing, manufacturing, building, installing, and maintaining renewable energy technologies, as is the case with fuel ethanol, has the potential to create new Nigeria-led jobs and powerful modern industries and reduce Nigeria’s adverse foreign trade balance.

- This will not only serve to empower entrepreneurs and companies to help build a vibrant and diverse economy, it is also a wise economic choice for the long term.

- Biofuels provides jobs and economic development in rural areas.

- It reduces a country’s dependence on fossil petroleum and will give Nigeria the opportunity to qualify for carbon credits under the Clean Development Mechanism (CDM).

- Employment opportunity for growing population

- Ability to access Agricultural Development funding from International Finance Institutions and Agencies

- Rural Integration and Development for operating communities

- Encourage and permit the active participation of both private and public sectors in sustainable development
PART 4

WHAT FINANCIAL SOLUTION: AFRICAN BIOFUEL AND RENEWABLE ENERGY FUND (ABREF)
I. Objectives of the Fund

The Fund will:

- Contribute to the development of the biofuels and renewable energy industry in the African regions, with a particular focus on West African countries.

- Provide investors with superior returns through investments in biofuels and renewable energy projects which generate Certified Emission Reductions (CERs).
II. Structure of the Fund

- **Equity Investment**
- **CERs Purchase**

- **Feasibility studies**
- **Energy audit for potential energy efficiency projects**
- **Project Design Documentation & Validation**
- **Projects preparation costs**
- **Capacity building**

- **Project identification**
- **Support for Management of the TAF**
- **Liaison & Coordination**
- **Support to the Fund Manager**

- **Review & carry out due diligence on projects & recommendation to the Board of Trustees**
- **Monitor the project post funding & report back to the Board of Trustees**
- **Prepare an annual budget for its activities**
Contact

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