

The first High-Level Biofuels Seminar in Africa

Draft Action Plan for Biofuels Development in Africa

1 Preamble

Bio-fuels have grown in importance in the recent past due to their potential to provide a reliable and sustainable source of energy in most parts of the world. Between 2000 and 2005, the global levels of ethanol and biodiesel production rose from 18 to 33 and 0.9 to 3.9 billion litres respectively¹. In Africa, although records of the exact land being developed for biofuels are not readily available, efforts are underway to initiate or expand biofuels production and use in a number of countries².

Bio-fuels can reduce dependence on imported fossil fuels and increase energy security. There is a growing realization in the Africa that high dependency on imported fossil fuels is having a negative impact on the continent's economic development. Out of 47 of the world's poorest countries, 38 are net oil importers - majority of them are from Africa (ICTSD, 2006). A total of 42 countries in Africa are net oil importers vulnerable to the adverse macro-economic (particularly balance of payments) of high oil prices. This is particularly true as economies of countries in Sub-Saharan Africa are oil intensive and estimates show that recent changes in the price of oil caused, in some cases, losses as high as 3% of GDP³.

Biofuels can play a key role in reducing the rate of global climate change by replacing fossil fuels, which in turn, will increase Africa's access to climate-related concessional finance. Other key benefits of bio-fuels includes the potential to provide communities in Africa with energy services for essential uses like lighting, income generating activities, pumping water, transportation, and for educational activities (UNDESA, 2007). Energy crops for bio-fuels production potentially constitute an important source of job opportunities for rural communities in Africa due to the labour-intensive character of biofuel crops which, in turn, could strengthen the region's agricultural sector and the non-food markets. Compared to other energy sectors, the biofuels sector, in particular the production of ethanol from sugarcane, can create 10times more jobs than conventional energy sectors⁴.

Although Africa has vast land resources, huge biomass feedstock and conducive climates, there is growing concern that the development of biofuels to meet the ever increasing energy needs in Africa and supply international markets, especially liquid biofuels, poses a number of risks. Large-scale, export oriented production of biofuels requires vast monocultures that are usually associated with a number of environmental problems. Other risks include the expansion of agricultural frontiers, deforestation, water pollution, the spread of genetically modified organisms, food security problems and poor labor conditions. In addition, without the right policy

¹ Renewable Energy Policy Network, 2006, Renewables Global Status Report, 2006 Update, Page 6, Renewable Energy Policy Network for the 21st century, available on <http://www.ren21.net>

² WorldWatch Institute, 2006, Biofuels for Transportation: Global Potential and Implications for Sustainable Agriculture and Energy in the 21st Century, available at <http://www.worldwatch.org/node/4081>.

³ International Energy Agency, May 2004, *Analysis of the Impact of High Oil Prices on the Global Economy*, Available on <http://www.iea.org>

⁴ Goldemberg, J., 2003. The Case for Energy Renewables, Thematic Background Paper for the Renewable 2004 Conference, Available on <http://www.renewables2004.de>

and institutional safeguards, small-scale farmers could be squeezed out of their land and the biofuels sector by powerful large companies. Although useful long-term scenarios of potential conflict between food and biomass energy plantations have been undertaken, available data is still not fully conclusive.

The exact benefits and costs of biofuels vary widely, according to the type of feedstock, cultivation method, conversion technology and geographical area⁵. In addition, energy crops differ in terms of their energy conversion efficiency, impacts on GHG emissions and other environmental effects. So, the decision to develop biofuels should be based on thorough analysis of both opportunities and trade-offs on a case-by-case basis. Additional research is required to provide a more nuanced and disaggregated understanding of the challenge.

As global demand for oil continues to increase on the back of rapid growth in China and India, there is no evidence to support the possibility of low and stable oil prices in the near future. In addition, major oil producing regions such as the Middle East have continued to be politically unstable thereby increasing the risk premium in oil supply chain. Against this background, it is important that countries in Africa develop biofuels with a sense of urgency to minimise the possible risks of even higher oil prices that would require unprecedented response measures.

2 Priority Options

Five key bio-fuels: bio-ethanol, bio-diesel, biogas, biomass gasification and biomass cogeneration have demonstrated some level of embryonic signs of success at the pilot stage – with some options recording encouraging scale-up performances. The most developed options are bio-ethanol, biogas and biomass cogeneration. Biodiesel is attracting growing interest with a rapidly growing portfolio of investments in various bio-diesel projects in Africa many of which are using *Jatropha* as the primary feedstock. Gasification has been piloted in selected African countries. Lessons emerging from countries such as India and Brazil provide important reference points for Africa.

This document defines an action plan for the development of biofuels in Africa, which will span a period of 10 years, and is divided in two phases of five years each, namely: Short/Near Term and Medium/Long Term.

The priority options for the short and medium/long term options take account of two broadly defined ecological clusters: Drylands and Wetlands. The rationale is that different biofuel feedstocks are best adapted for different ecological regions. For example, in the Sahelian regions of West Africa, biodiesel feedstock such as *Jatropha* is suitable for these regions and would be suitable near term options. However, with irrigation, other feedstock such as sugarcane can be grown in drylands indicating that bioethanol and cogeneration options could also be possible candidate short-term options.

In wetlands areas of Africa, rain-fed feedstocks such as sugarcane are more common. Consequently, bioethanol and cogeneration are attractive near-term options. Biogas and biomass gasification are medium/long term options, as these are not fully developed in the region and there are, to date, few successful large scale efforts that can provide persuasive demonstrations to decision makers. There are however, successful examples in other developing parts of the world such as India and Nepal.

The proposed priority options in the short and medium/long term are summarized below:

⁵ Annie Dufey, 2006, *Biofuels production, trade and sustainable development: emerging issues*, International Institute for Environment and Development, London.

- Drylands (Arid and Semi Arid areas)
 - Short Term Options
 - Biodiesel
 - Bioethanol
 - Cogeneration
 - Medium to Long Term options
 - Biogas
 - Biomass Gasification

- Wetlands (Moist and rainland areas)
 - Short Term Options
 - Bioethanol
 - Cogeneration
 - Medium to Long Term options
 - Biodiesel
 - Biogas
 - Biomass Gasification

3 Key Programmes

The key programmes for the action plan will address six broad challenges to development of biofuels in Africa:

- Policy and Institutional Challenges
- Financing Challenges
- Resource availability and sustainability
- Technical Challenges
- Networking/Knowledge & Implementation Platform

3.1 Enabling policy and institutional framework

Conducive policies are central to the development and sustaining of biofuels production and markets. Policies for bio-fuels development in Africa are largely under developed, although a number of countries have formulated strategy documents. At local level, Africa needs supportive policies instruments such as blending targets, tax benefits, smart subsidies and loan guarantees to stimulate biofuels production and use while at global level, there is need to relax existing international trade barriers. In addition, there is need for win-win beneficiation structures so that the benefits of biofuels are equally shared along the value chain.

In countries where biofuels policies and strategies have been developed, they have largely remained non-operational. Some of the available laws governing energy development and distribution cut across sectoral laws governing forestry, agriculture, environment, water, industry, electricity and petroleum and hence require institutional coordination, a complex challenge that is not easily overcome (ADB FINESSE, 2006; ESDA, 2003). Biofuel programs should be systematically integrated into policy planning processes for concerned sectors such as agriculture, energy, industry and international trade. There are also inadequate channels for sharing and disseminating lessons and experiences between countries and among regions in the developing as well as with industrialized countries.

Ideally, the development of biofuels policies can begin at national level with coordination at sub-regional levels like SADC or EAC or ECOWAS within the framework of continent-wide and global initiatives that can be anchored in institutions such as the African Union (AU) and UNIDO, respectively. . The sub-regional approach has clear advantages as countries within a given geographical contiguity will have similar climates and face similar biofuels challenges. A sub-regional approach will also set the basis for regional biofuels markets that could stimulate and sustain biofuels markets.

The main activity will be to develop detailed country specific as well as regional policies and strategies to guide the development of biofuels in the respective sub-region. This will involve streamlining of policies on biofuels, and enhancing coordination of institutions involved in the development of biofuels as well as clearly definition of the roles of various institutions and stakeholders. The policies and strategies will provide the basis for country specific targets for biofuels contribution to the energy sector. In addition, exchange of experiences (South-South and South-North) on biofuels policy and institutional development will be undertaken. A continuous Research and Development programme will also be initiated.

All stakeholders relevant to the growing, processing, distribution and use of biofuels should be actively engaged providing inputs to policy making processes aimed at promoting biofuels.

Outputs and activities: *The main outputs expected are technical studies on policies and institutional structures as well as, policy guidelines/templates. A number of policy events will be organized, to debate policy options and review policy documents, as well as promote dialogue on policies and evaluate implementation of policy measures and strategies. These policy events will be useful in forging consensus over targets for biofuels contribution to the energy sector. Other outputs include training workshops and study tours.*

Key indicators of progress and success will include the number of countries that establish supportive policy measures/strategies such as pre-defined prices (\$/liter and/or \$/kWh) and national targets for biofuels (millions of litres and/or MW installed capacity).

3.2 Financing mechanisms

Production of bio-fuels is often a high up-front cost venture, and many programmes require government support in the initial start-up phases. Access to finance or availability of affordable finance is a major constraint. Traditional banks are unwilling to provide finance due to market uncertainties and perceived high risks⁶ . There is limited data and information on the biofuels industry to guide investors and financiers in making sound judgments and decisions in biofuels projects development.

Biofuels require a ready market, locally or internationally, in order to ensure economic viability of the initiatives. Reliable and competitive markets for biofuels are not yet fully developed in Africa. In addition, Africa has limited access to international biofuels markets. There are limited standards and guaranteed prices for biofuels across the continent. Biofuel proponents in Africa need to work more closely with conventional financial services providers from Banks, Insurance, Venture Capital, national and regional development Banks to increase their capacity to assess and implement biofuels projects.

⁶ The economics of ethanol production is dependent on too many variables and this results in market uncertainties. Thus ethanol prices can fluctuate with varying world market prices of sugar, oil, molasses as well as other site specific factors.

Activities in this work programme will be aimed at expanding local market for biofuels as well as enabling access to international markets. Streamlining pricing of biofuels will be undertaken, in tandem with development of enabling policies and institutional structures. In addition, incentive mechanisms for biofuels development as well as associated investments and joint ventures will be promoted.

Financial analysis of biofuels projects will also be undertaken to steer project developers to the most attractive investment opportunities. A parallel effort will be directed towards mobilizing financing for biofuels assessments and project implementation.

Key Outputs and activities include:

- (i) Technical studies on pricing and incentives for biofuels;*
- (ii) Pre-feasibility and Feasibility assessments on viability of bio-fuels projects*
- (iii) Training workshops and study tours on financial assessments and pricing may be organized based on the requirements of specific countries*
- (iv) Additional investment funds successfully mobilized for biofuel investments*
- (v) Number and capacity of Greenfield biofuel investments (joint ventures, public-private partnerships or other options) that are successfully initiated*

3.3 Resource assessment - feedstock availability and sustainability

Availability and sustainable supply of feedstock is crucial to the success of the biofuel industry. Current commercial technology limits feedstock to agricultural crops and any major expansion is likely to require additional land area, increase in yields or diversification of feedstock.

The growing of the biomass energy resource can also presents several challenges. Firstly, inappropriate high-input mono cropping can result in the loss of biodiversity, soil fertility and land degradation, and can be accompanied by the use of fertilizers and pesticides, which could lead to pollution of underground and surface water sources. Secondly, it could lead to competition for land between food production and biomass resources (Masera et al, 2000).

There is an urgent need for biofuels sustainability guidelines at AU level and/or sub-regional level. Respective countries could then further develop their own specific indicators that better reflect their specific and unique characteristics. Adherence to widely accepted sustainability standards is important if Africa is to actively participate in international trade in biofuels and minimise potentially adverse social-economic and environmental risks of biofuels. UNIDO, ECA, UNEP, AfDB could assist in developing these indicators.

Use of Existing Agricultural Wastes: Activities should be firstly geared towards the efficient exploitation of existing agricultural wastes, which presents significant potential for developing biofuels without unduly disrupting existing agricultural practices and food production or requiring new land to come into production. Unlike many other agricultural sector, biofuel-related waste products are generated during agro-processing and are rarely returned to the field. Consequently, use of such agricultural wastes for energy generation is unlikely to have a detrimental impact on soil management and food production and could potentially constitute an important additional source of revenue for the poor.

Expansion of biofuels feedstocks: Although useful long-term scenarios of potential conflict between food and biomass energy plantations have been undertaken⁷ - available data is still not fully conclusive. With agriculture practices in Africa being very inefficient, there is substantial biofuel production potential simply through increased productivity on existing lands. Additional research is required to provide a more nuanced and disaggregated understanding of the challenge. Technical studies on biofuels feedstocks – supply and sustainability will, therefore, be an important element of this Action Plan.

Key outputs and activities include reports, studies, assessments in both hard-copy and online versions. A key indicator will be the available of a widely available and regularly updated and verified resource assessment database.

3.4 Capacity Building and Awareness

Biofuels development hinges on the availability and accessibility of efficient technologies and investments. Low technical skills hinder dissemination and sustainability of biofuel technology as advanced technical skill and knowledge is required in the design, installation, commissioning, operation and maintenance of biofuel plants. This is especially true for embryonic options such as biodiesel and gasification which have few successful scaled-up investments in Africa to point to as verifiable demonstrations for replication.

There is need to support the transfer of new and efficient biofuels technologies, mobilize stakeholders and innovative finance to develop biofuels through various strategies including public-private partnerships. In addition, South-South and South-North cooperation in designing and establishing biofuels programmes, in particular between countries situated in similar ecosystems, can deliver significant benefits. Activities should be geared towards establishing long-term training programmes on biofuels at local and regional level. In addition, exchange of skills and experiences (South-South and South-North) on biofuels technologies should be enhanced.

Further, a number of pilot and demonstration projects should be implemented in the region, to provide flag-ship initiatives that can stimulate the expansion of Africa's biofuel industry. The experience of successful biofuels projects which are already in place should also be more widely disseminated. Research and development on biofuels technologies should be supported. Other activities will include training workshops and study tours, based on the specific country needs.

Key outputs and activities will include the number of African biofuel specialized that are trained and the level of technological development. An additional indicator would also be the

⁷ **Land Availability for Food and Fuel:** The availability of land for the production of biomass in developing countries is determined by the demand on land for food production. With increasing population, food production and consumption in developing regions is expected to increase (FAO, 1995). Estimates by the Response Strategies Working Group of the IPCC indicate that the use of land for food production in developing regions (Asia, Africa and Latin America) will increase by 50% by the year 2025 (IPCC, 1996). In addition, the demand for biomass energy is also expected to increase with population increase. Estimates by the WEC indicate that by 2100, about 1,700 million hectares of additional land will be needed for agriculture, while about 690-1,350 million hectares of additional land would be needed to support biomass energy requirements (UNDP, 2000). The challenge, therefore, is ensuring sustainable biomass supply to meet growing energy demand, without taking up land for food production. Some of the options for avoiding the competition for land between food and fuel are: increasing food production on current agricultural lands; the establishment of large tree plantations; and, the use of modern forestry practices (IPCC, 1996).
Sources: Sudha and Ravindranath, 1999

proportion of equipment used in biofuel investments that is locally designed, assembled and/or manufactured.

3.5 Networking/Knowledge and Implementation Platform – Moving to a Regional Biofuels Network

A Regional Biofuels Network will coordinate and monitor the implementation of the action plan. The Biofuels Network could be hosted by UNIDO, in collaboration with the AU and ECA, AfDB, UNEP, and UNDP and designed to include membership from key concerned sectors in Africa, as well other biofuel leaders in developing countries, specifically Brazil. The Biofuels Network can establish centres of excellence for each biofuel option and/or each major sub-region, which will spearhead development of biofuels and provide sub-regional nodal points for action and follow-up. Over time the Network is expected to widen its representation and bring on board key stakeholders involved in the development of biofuels in Africa. These include:

- African Governments (Technocrats and Policy Makers) - Ministries in-charge of Agriculture, Energy, Industry, Finance, Environment;
- Agro-industries (Private and Public Sector)
- Regional Bodies (AU, UNIDO, UNDP, UNEP, ECA)
- International organizations (World Bank and EU)
- Financial institutions such as the African Development Bank (AfDB)
- Other stakeholders - Refineries and fuel distributors; Farmers associations; Automobile industry; Quality and Standards Boards; Private entrepreneurs and banks, Media (print/electronic, TV, Radio)

African Governments can play a key role in spearheading policy formulation, based on technically sound assessments and studies by technocrats. Governments have a key role to play in establishing appropriate incentives for biofuels, and underwriting any subsidies that are offered to the biofuels industry. Policy makers can ensure enactment of appropriate legislation to support the development of biofuels.

Agro-industries have central role as project developers and would be expected to take a lead in the development of biofuel greenfield investments which can be used as demonstration projects. Agro-industries can also be instrumental in ensuring reliability in the supply of biofuels feedstocks, and should be included in the development of biofuels policies.

Regional and international bodies such as AU, UNIDO, UNEP, UNDP, ECA, World Bank and EU can provide important platforms for coordination of the various institutions/stakeholders involved in the development of biofuels. In addition, regional and international institutions can assist countries in the region to expand local markets for biofuels, as well as access international markets, by lobbying relevant commercial and marketing bodies on behalf of producer countries. These regional and international agencies can also assist in mobilizing financing for development of biofuels in the region and promotion of investment and joint ventures for the development of biofuels in the Africa.

Regional and international bodies can utilize their continent and global networks of experts and specialized experts institutions, to coordinate a cost-effective exchange of skills and know-how within African countries, across various African countries as well as promote south-south and south-North exchange and sharing of experiences, technologies and expertise particularly with world biofuel leaders such as Brazil.

Financial institutions such as the African Development Bank (AfDB) can provide the requisite guidance on the investment strategy for biofuels development. AfDB is particularly well placed to assist African Government and private sector companies to undertake rigorous assessment and prioritization of biofuels investments opportunities as well as channel finance to attractive investment opportunities that meet AfDB's technical, financial, environmental and social criteria. In addition to mobilizing its own resources finance sound biofuel investments, AfDB is particularly well placed to assist African Governments and private sector companies mobilize additional co-finance from international, regional and national financial institutions.

a) Enabling policy and institutional framework

Existing gaps	Actions	Activities/Outputs	Key Actors and Stakeholders	Roles
<ul style="list-style-type: none"> - Absence of clear policies and strategies for bio-fuels development - Lack of a supportive and well coordinated institutional framework - Existing policies and strategies cut across different government sectors (e.g. energy, forestry, environment, agriculture, trade & industry) and hence difficult to coordinate their roles in biofuels development. - Lack of proper channels for sharing and disseminating lessons and experiences of different players and countries 	<ul style="list-style-type: none"> - Develop detailed country specific policies and strategies to guide the development of biofuels in the region. - Develop country specific targets for biofuels contribution to the energy sector - Streamline policies on biofuels - Enhance coordination of institutions and stakeholders involved in development of biofuels - Enhance exchange of experiences (South South and South North) on biofuels policy development 	<ul style="list-style-type: none"> - Technical Studies on policies and institutional structures - Proven set of successful policy measures and institutional initiatives - Number of countries with pre-defined prices (\$/litre and \$/kWh) for biofuels - Number of countries with stated targets - Policy sessions/presentations - Training workshops and sessions - Study tours 	<p>Key Actors – African Governments (Technocrats and Policy Makers) Agro-industries Regional Bodies International organizations</p> <p>Stakeholders – Ministries incharge of Agriculture, Energy, Industry, Finance, Environment; Refineries and fuel distributors; Farmers associations; Automobile industry, Quality and Standards Boards; Private entrepreneurs and banks</p>	<p>African Governments to spearhead policy formulation, based on technically sound assessments and studies by technocrats;</p> <p>Policy makers to ensure enactment of appropriate legislation</p> <p>Regional bodies and international organizations can play a neutral role in coordination of the various institutions/stakeholders involved in the development of biofuels.</p> <p>All stakeholders relevant to the growing, processing, distribution and use of biofuels to provide inputs to the process.</p>

b) Financing mechanisms

Existing gaps	Actions	Activities/Outputs	Key Actors and Stakeholders	Roles
<ul style="list-style-type: none"> - Lack of guaranteed, reliable and competitive markets in Africa and at international level. - Limited financing as traditional banks are unwilling to provide finance due to market uncertainties and associated risks. - Lack of standard and guaranteed prices for biofuels across the region - Limited data and information on the biofuels industry to guide investors and financiers in making sound judgments and decisions in biofuels projects development 	<ul style="list-style-type: none"> - Expanding local market for biofuels - Enabling access to international markets - Mobilizing financing for biofuels assessments and project implementation - Streamlining pricing of biofuels - Incentive mechanisms for biofuels development - Promoting investments and joint ventures for development of biofuels - Assisting in financial analysis of biofuels projects. 	<ul style="list-style-type: none"> - Pre-feasibility and Feasibility studies on viability of bio-fuels projects - Technical studies on pricing and incentives for biofuels - Additional investment funds successfully mobilized for biofuel investments - Number and capacity of Greenfield biofuel investments (joint venture or other options) that are successfully initiated. - Training workshops and sessions - Study tours 	<p>Key Actors – African Governments (Technocrats and Policy Makers) Agro-industries Regional Bodies International organizations Financial institutions</p> <p>Stakeholders – Ministries incharge of Agriculture, Energy, Industry, Finance, Environment; Refineries and fuel distributors; Farmers associations; Automobile industry, Quality and Standards Boards; Private entrepreneurs and financial institutions</p>	<p>African governments to spearhead detailed feasibility and assessments on biofuels, as well as technical studies on pricing and incentives for biofuels</p> <p>Regional bodies and international organizations can assist countries in the region to expand local markets for biofuels, as well as access international markets, by lobbying with the relevant commercial and marketing bodies on behalf of producer countries. Regional bodies and international organizations can also assist in mobilizing financing for development of biofuels in the region and can also play an important role in promoting investment and joint ventures for the development of biofuels in the Africa.</p> <p>All stakeholders relevant to the growing, processing, distribution and use of biofuels to provide inputs to the process.</p>

c) Resource assessment - feedstock availability and sustainability

Existing gaps	Actions:	Activities/Outputs	Key Actors and Stakeholders	Roles
<p>- Limited data and assessments of feedstock availability and supply</p>	<p>- Optimization of current biofuels resources and feedstocks</p> <p>- Expansion of biofuels feedstocks</p> <p>- Research and development of feedstocks for biofuels</p>	<p>- Reports, studies and assessments on biofuel resource assessment</p> <p>- Widely available, regularly updated and verified resource assessment database</p>	<p>Key Actors – African Governments (Technocrats and Policy Makers) Agro-industries Regional Bodies International organizations</p> <p>Stakeholders – Ministries incharge of Agriculture, Energy, Industry, Finance, Environment; Refineries and fuel distributors; Farmers associations; Automobile industry, Quality and Standards Boards; Private entrepreneurs and banks</p>	<p>African governments to spearhead detailed assessments on biofuels feedstocks</p> <p>Agro- industries Project developers - including private project developers) to take a lead in development of feedstocks for biofuels</p> <p>Regional bodies and international organizations to utilize their continent and global networks of experts and specialized experts institutions, to coordinate the exchange of skills and know-how within African countries, across various African countries as well as promote south-south and south-North exchange and sharing of experiences, technologies and expertise particularly with world biofuel leaders such as Brazil.</p> <p>All stakeholders relevant to the growing, processing, distribution and use of biofuels to provide inputs to the process.</p>

d) Capacity Building and Awareness

Existing gaps	Actions:	Activities/Outputs	Key Actors and Stakeholders	Roles
<ul style="list-style-type: none"> - Absence of a critical mass of skilled personnel - Limited successful demonstration projects - Identification of successful show-case biofuels projects - Implementation of pilot and demonstration projects - Research and development on biofuels technologies 	<ul style="list-style-type: none"> - Long-term training programmes on biofuels - Enhance exchange of experiences (South South and South North) on biofuels policy development - Selection of biofuels for dissemination and development taking into account the existing technical expertise and country settings 	<ul style="list-style-type: none"> - Number of African biofuel specialized that are trained and the level of technological development. - Proportion of equipment used in biofuel investments that is locally designed, assembled and/or manufactured. - Training workshops and study tours on biofuels technologies organized based on the requirements of specific countries 	<p>Key Actors – African Governments (Technocrats and Policy Makers) Agro-industries Regional Bodies International organizations</p> <p>Stakeholders – Ministries incharge of Agriculture, Energy, Industry, Finance, Environment; Refineries and fuel distributors; Farmers associations; Automobile industry, Quality and Standards Boards; Private entrepreneurs and banks</p>	<p>African governments to spearhead detailed assessments on biofuels feedstocks</p> <p>Project developers (including private project developers) to take a lead in development of biofuel projects which can be used as demonstration projects</p> <p>Regional bodies and international organizations to utilize their continent and global networks of experts and specialized experts institutions, to coordinate the exchange of skills and know-how within African countries, across various African countries as well as promote south-south and south-North exchange and sharing of experiences, technologies and expertise particularly with world biofuel leaders such as Brazil.</p> <p>All stakeholders relevant to the growing, processing, distribution and use of biofuels to provide inputs to the process.</p>