



BIOFUEL POLICY AND STRATEGY FOR MOZAMBIQUE

Presentation

by

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INTRODUCTION

- ❑ The challenge of energy security and sustainability around the world today calls for concerted efforts at national, regional and international levels, with a view to identify and develop alternative options for energy security;
- ❑ African countries, whether oil importers or exporters, are severely affected by the volatility of the international oil prices;
- ❑ The Forum of Energy Ministers of Africa (FEMA) in their second conference in March 2007 have adopted the Maputo Declaration that emphasizes the imperative and urgent need to accelerate the diversification of the energy matrix, with impact on energy security.
- ❑ Both the developed and developing countries are equally affected by the negative impact of the GHG emissions;



INTRODUCTION (cont)

- ❑ In Africa there is abundance of energy resources. However, most of these resources are currently either under-exploited or exported without benefiting the vast majority of Africa's citizens;
- ❑ Mozambique as a net oil importing country, with an annual consumption of 700 000 m³ of petroleum products, is highly dependent on the international oil market conditions and has been severely hit in global economic terms, as well as in terms of the negative impact on the poor;





Motivation

- ❑ The main motivation for Development of biofuels policy and strategy for Mozambique:
 - a. Unstability and volatility of the oil price in the international market;
 - b. Energy security that conduct to alternative solutions to reduce the depedence on the fossil fuels;
 - c. Global warming - determine the need for development and use of clean energy.



MOZAMBICAN CONTEXT

- Mapping/ Zonning (1: 1.000.000) were undertaken (land, water, climate and other relevant conditions for biofuels production;
- On going mapping (1:250.000)
- The promotion of development and use of existing infrastructures and facilities (deep water ports, railways, roads and pipelines) adequate for the supply of liquid fuels, including biofuels to SADC region;
- Favourable climatic conditions to develop biofuels programme in the country.





MOZAMBICAN CONTEXT

- ❑ Provide to small growers an opportunity for income generation and respond to their energy needs,
- ❑ Strengthen technologies centres and research development;





MOZAMBICAN CONTEXT

- The Mozambican approach is based in four pilares:
 - a. The involvement of the private sector alone or in public-private partnerships (PPP);
 - b. The encouragement of cross-sectoral cooperation in Mozambique through the strengthening of the existing inter-institutional framework comprising ME (coordinator), MINAG, MCT, MIC, MICOA, Universities, Banks, NGOs and the civil society, for biofuels development,
 - c. The reinforcement of cooperation with development partners, including to South-South and North-South partnership;
 - d. The deployment of the Kyoto Protocol mechanisms and other instruments, with a view to stimulate a rapid development of bio-fuels in terms of both production and use, in order to contribute to the effective reduction of Green House Gas (GHG) emissions in the world.





ACTIVITIES DEVELOPED

Knowing the challenges linked to correct land use avoiding community conflicts, and environmental negative impacts. We have been developing concrete actions in order to implement a solid programme of production and use of biofuels in Mozambique.

a. In 2007 a study on biofuels evaluation was carried out study, focused on technical, socioeconomical and environmental feasibility, including crop selection;



ACTIVITIES DEVELOPED

- b.** The production of policy and strategy on biofuel recently approved by the government May 2009;
- c.** was done land mapping in 1/1000000
- d.** ongoing land mapping that will cover food and other use, including biofuels crops 1/250000;





POLICY AND STRATEGY OBJECTIVES

- a. Reduce the dependency on imported fossil fuels;**
- b. Estimulate the sustainable local energy resource use to substitute ou compliment the imported fossil fuels;**
- c. Promote the rural development through investment in biofuels;**





BIOFUEL POLICY AND STRATEGY

VISION AND MISSION

Vision

Contribute to the energy security and sustainable socio-economic development of the country.

Mission

Exploration of the agro-energetic resources to stimulate the energy matrix diversification, contributing to social and economic development, in particular in the rural area.



POLICY AND STRATEGY PRINCIPLES

- ❑ The Biofuels Policy and Strategy principles are:
 - ❑ **Inclusiveness** – establishment of business opportunities for private investors, rural community and producers;
 - ❑ **Transparency** – ensure the that pricing mechanism is handled in as transparent a fashion as possible, and to overole management of the National Biofuels Program allows for the participation of all stakeholders;
 - ❑ **Environmental and social protection** – to provide mechanism to enhance the environmental and social beneffits of biofuels production and use, while avoiding or mitigating any negative impacts;
 - ❑ **Incrementalism** – development of biofuels should be gradual and flexible, allowing all shareholders to develop institutional capacity as the process unfolds.



POLICY AND STRATEGY PRINCIPLES (cont)

- ❑ **Fiscal Sustainability** – the development of the biofuel sector should pose a short term financial burden to the state as possible, and in the long term it should make a positive contribution in fiscal as well as macro economic terms;
- ❑ **Innovation** – to foster agriculture and industrial innovation, attracting investment in commercial proven technologies that are new to the country;





BIOFUEL FEEDSTOCK

The assessment done in the biofuel study identified several crops and selected suitable for biofuel feedstock in Mozambique:

☐ Etanol Production :

- Assessed crops: a) *sugar cane*; b) *sweet sorghum*; c) *cassava*; d) *maize*;
- Selected crops: *sugar cane and sweet sorghum*

☐ Biodiesel Production:

- Assessed crops: a) *jatropha curcas*; b) *coconnut*; c) *sunflower*; d) *soya*; e) *peanut*;
- Selected crops: a) *jatropha curcas*; b) *coconnut*



POLICY IMPLEMENTATION

Legal Framework:

- The level of blending for Biodiesel and Ethanol;
 - The starting period for implementation of mandatory blending;
 - Establishment of a National Biofuel Commission, including the condition for the operationalization;
 - Establishment of a National Program for Biofuel development;
 - The criteria for sustainable biofuel production;
 - The guidelines for land allocation on biofuel projects approval;



POLICY IMPLEMENTATION

- National legislation related to:
 - Biofuel quality;
 - Certification of biofuel production;

- Regional coordination Agreements:
 - Establishment of common biofuel norms and guidelines;
 - Establishment of a common vision for sustainability criteria;





ACTION PLAN

- Phased mandatory blending:
 - Pilot Phase (2009-2015) – increase the level of blending up to 10% ethanol (E10) and 5% of biodiesel (B5);
 - Operacional Phase (2015-2021) - E10 e B5 available national wide and possible increase up to E20 e B20;
 - Expansion Phase de (from 2021) development of paralel distribution network for blending above E75- E100 e B100;





The main Aproved Projects

- Project name: PROCANA
- Area :30.000 ha
- Activity: Ethanol production
- Level of production 221million litres/yr
- Investimet USD 510 million
- Employment 7.000 workers
- Location :Gaza Province





The main Aproved Projects

- Project name: ENERTERRA
- Area :18.508 ha
- Activity : Biodiesel production
- Production level: 1.2 million l/yr
- Investment USD 53 million
- Employment 2.042 workers
- Location: Sofala province





The main Aproved Projects

- Project name: GROWN ENERGY
- Area :15.000 ha
- Activity : Ethanol production
- Level of production 100 million l/yr
- The Investiment USD 224 million
- Employment 2.139 workers
- Location :Sofala province





The main Aproved Projects

- Project name: PRINCIPLE ENERGY
- Area :18.000 ha
- Activity :Ethanol production
- Nível de production level: 213 millions l/y
- The Investiment USD 280 million
- Employment: 2.650 workers
- Location :Manica province





THANK YOU !

Ministry of Energy

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