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POTENTIAL AND LOCATION OF NEW SUGAR MILLS IN MOZAMBIQUE AND SOUTH AFRICA

The Mozambican case.

- In May 2009:

The government of Mozambique approved a new 'Policy and Strategy for Biofuels' (Government of Mozambique, 2009). The objective of the Ministry of Energy to develop a national energy sector, reduce oil imports and enhance energy security.

The Mozambican case.

- The policy declares that the biofuel sector will be developed in three stages:
- a pilot phase from 2009 until 2015,
- an operational period from 2015 until 2020,
- and expansion afterwards

Methods

- Selection of the main sugar cane production regions.
- Selection of the potential sugar cane production regions for expansion.

Six Provinces (Maputo, Tete, Nampula, Zambezia, Manica, Sofala, Gaza, Inhambe).

Rehabilitation, expansion and modernisation of:	
<ul style="list-style-type: none"> Nacala – 100,000 m³ storage facility PetroMoc Beira – 50,000 m³ storage facility PetroMoc Maputo – 500,000 m³ storage facility PetroMoc 	★
In construction:	
<ul style="list-style-type: none"> Beira – 95,000 m³ storage facility Inpetro 	★
Study/ exploration phase:	
<ul style="list-style-type: none"> Vandúzi (Manica) – 7,000 m³ storage facility PetroBeira Beira – 77,000 m³ storage facility PetroMoc Maputo/ Porto de Dobela – 1,500,000 m³ storage facility PetroMoc 	★
Planned biodiesel refineries:	
<ul style="list-style-type: none"> Biodiesel – Biodiesel refinery Beira Galpbuzi – On-site biodiesel refinery Búzi Sun Biofuels – On-site biodiesel refinery Gondola 	★
Planned ethanol distilleries:	
<ul style="list-style-type: none"> Petrobuzi/ PetroMoc – Búzi (Sofala) PROCANA – Massingir (Gaza) Principle Energy – Dombe (Manica) Grown Energy Zambezi – Chemba (Sofala) 	★



Figure 2. Location of existing and planned processing and storage facilities

Methods

- Using data from Mozambican institution it will be built a geo-referenced data bank with the *software* ArcGIS 9.3.1 in order to do the graphic representation in maps.
- Geo-referenced maps with the production regions, sugar mills, railroads, roads, rivers, land use, labor force, literacy, income., Schooling.
- A Table will be elaborated with the potential production of sugar cane in each region in order to define a preliminary location of ethanol distilleries.

Methods

- For the step of localization of new sugar can mills the analytic hierarchy process (AHP) approach will be used.

The AHP is one variant of multi-criteria analysis that uses a number of pairwise comparisons between quantitative or qualitative criteria to assess the relative importance of each criterion. These comparisons can be arranged in a hierarchical manner to form sets of attributes, and qualities (levels) within these attributes

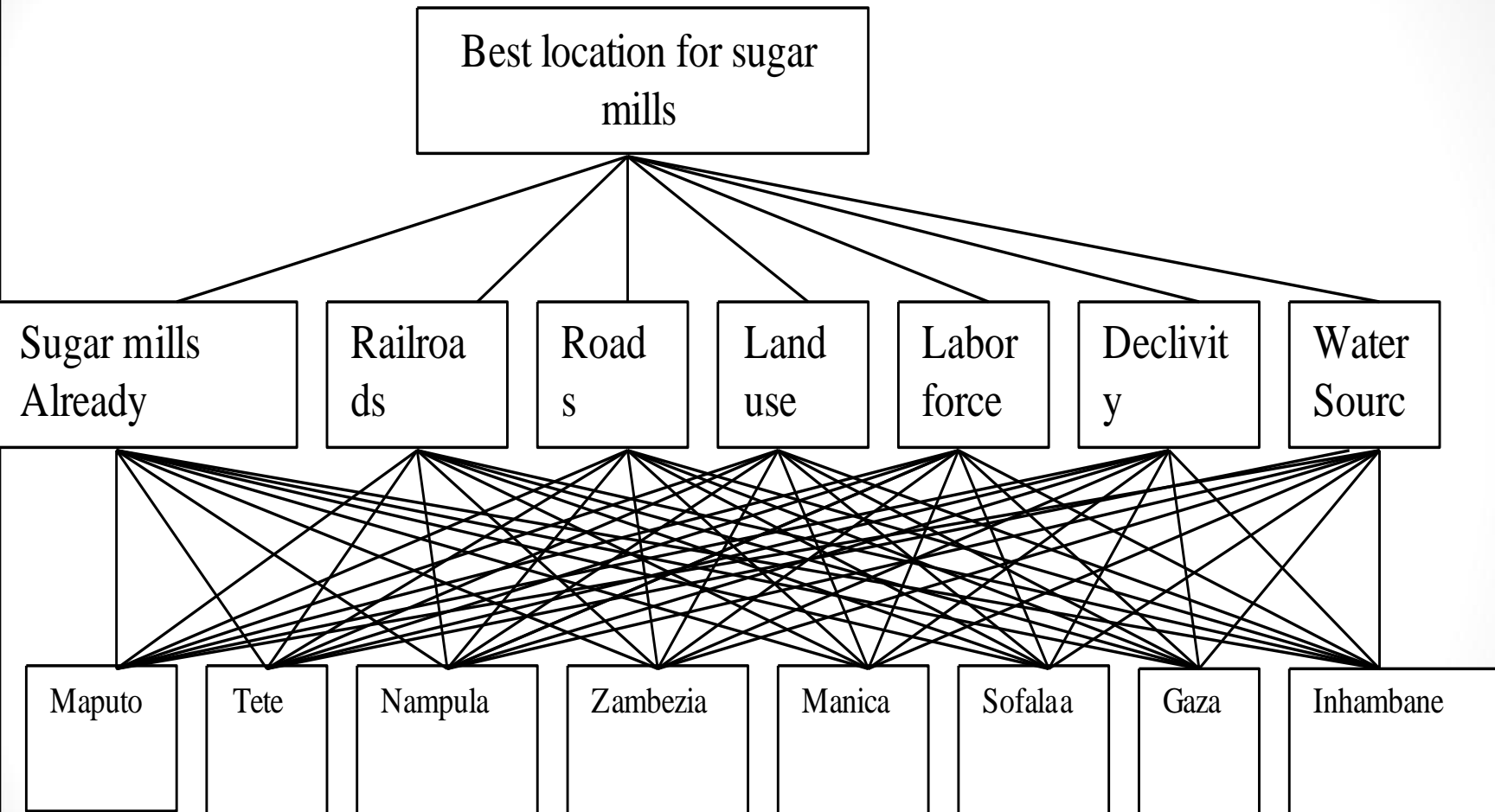


Figure 1 Decision hierarchy for sugar mills location decision in