TOWARDS A SADC FUEL ETHANOL MARKET FROM SUGARCANE: REGULATORY CONSTRAINTS AND A MODEL FOR REGIONAL SECTORAL INTEGRATION

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Presentation overview

- What’s happening globally with fuel ethanol?
- Why develop a regional fuel ethanol market?
- Why choose sugarcane as the primary feedstock?
- Key constraints to the development of a SADC fuel ethanol market
- What initial actions can make it a reality?

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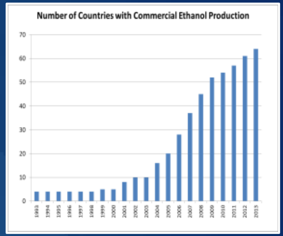
What’s happening globally with fuel ethanol?



- World consumption of gasoline/petrol current 1.3 trillion litres, could rise to 1.4 trillion litres by 2020
- Fuel ethanol estimated worldwide average blending rate of around 6% in 2013, could rise to 11% by 2020
- Feedstock in 2012: sugarcane 59%, grains 33%, other (sugar beet, whey, raw alcohol, cassava chips) 8%
- Cellulosic biofuels (grasses etc) still impractical
- Commercial production, 60 countries in 2013

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What's happening globally with fuel ethanol, continued…

- Key producers: Brazil, Canada, China, the EU and the USA. Key consumers: USA & Brazil. Mauritius best SADC example
- Oil companies investing: BP $750 mln in Brazil alone
- Flex-fuel engine technology, up to 100% ethanol. 3.1 mln vehicles in Brazil
- Sub-Saharan African (SSA) production is 0.2% of world
- Ethanol use as cooking gel could equal fuel use in SSA by 2020, reducing deforestation

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What's happening globally with fuel ethanol, continued…

Country	Blend rate
Malawi	20%
Mozambique	10%
South Africa	2–10%
Swaziland	10%
Tanzania	Possible 10% blend by 2030
Zambia	10%
Zimbabwe	5%

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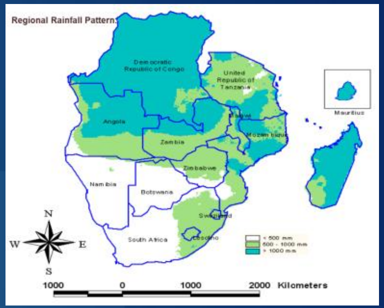
Why develop a regional fuel ethanol market?



- SADC region highly dependent on fuel importation
- Small fuel markets, little alternative. Expensive to refine
- Between 50 - 60% of new SADC petrol needs over the next 18-20 years, could be met using 3 – 6% of cropland (SADC has more cropland than Brazil)
- 3 mln direct jobs (1.8mln permanent), 4 mln indirect jobs
- R70 billion per annum added to the SADC rural economy
- Ethanol is multifaceted, bio-chemicals, gel, bio-plastics

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Why develop a regional fuel ethanol market, continued…

- Massive investment in large scale industrialisation & beneficiation. R20-30 bln in South Africa alone
- Large scale agri-business creation, trigger for other sectors. Related large scale training in farming skills
- Significant reduction in regional carbon emissions
- Market integration: large SA fuel market, small supply + small other SADC national markets with large supply potential
- Reduced regional SA trade deficit & SADC fuel import bill

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Why choose sugarcane as the primary feedstock?

- Sugarcane > energy efficient than palm oil, sorghum, jatropha
- Ethanol from cane has lower capital cost requirement than fuel from an oil refinery fuel or gas-to-liquids plant
- Regional industry well established: competitive large scale sugarcane & sugar production + existing ethanol production
- Logistics of sugarcane production = rural mill location
- Highly competitive & some established access to finance

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Why choose sugarcane as the primary feedstock, continued…

- Most highly integrated agricultural sector in SADC
- Unique institutional framework
- Only SADC commodity group with a regional regulatory trade framework (Annex VII to the Protocol on Trade)
- Private-public (+SADC Secretariat) collaboration in Technical Committee on Sugar (TCS), which reports to the SADC Trade Negotiating Forum, and thereby to SADC Trade Ministers

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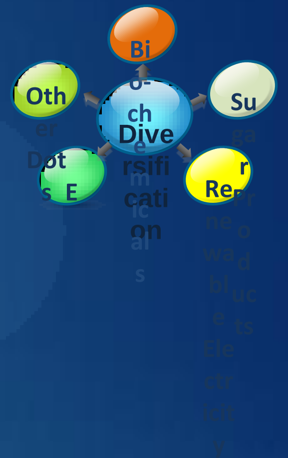
Why choose sugarcane as the primary feedstock, continued…



- Annex VII & SADC Regional Sugar Strategy & Action Plan, capable of expansion to include ethanol
- Significant established research and training capacity, largest in continent
- Diversification underway as part of global trend to bio-energy complex (sugar, ethanol and electricity) + next stage: bio-chemicals, bio-plastics, polymers, bio-solvents & alcohol
- 8000 – 10000 MW electricity could be generated in SADC

Key constraints to the development of a SADC fuel ethanol market

- Key constraint is regulatory uncertainty
- Regulatory framework is prerequisite for investment:
  - Companies won't even undertake feasibility studies with certainty provided by blending mandates and pricing
  - Entrenched interests in domestic fuel markets; often necessitates regulation
- E.g. SA – Biofuels Strategy 2002, but investor interest only seen after blending regulations in 2012

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Key constraints to the development of a SADC fuel ethanol market, continued…

- Failure of SA market to develop as anchor market
- National versus regional market prioritisation:
  - Domestic market focus would delay economies of scale
  - Would delay regional policy harmonisation
- Access to finance: region capital markets are illiquid & cost of borrowing high. Would require PPPs & renewable energy development agencies + FDI (SA, Brazil, Mauritius?)

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What initial actions can make it a reality?

- Regulation at national level (blending mandates, pricing arrangements). SA agrees to be anchor market
- Establish renewable energy development agencies
- Regional database of best regulatory practice
- Inclusion of ethanol in regional institutional frameworks
- Regional technical taskforce to tackle technical constraints
- Use of carbon emission reduction funding

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Thank you!

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