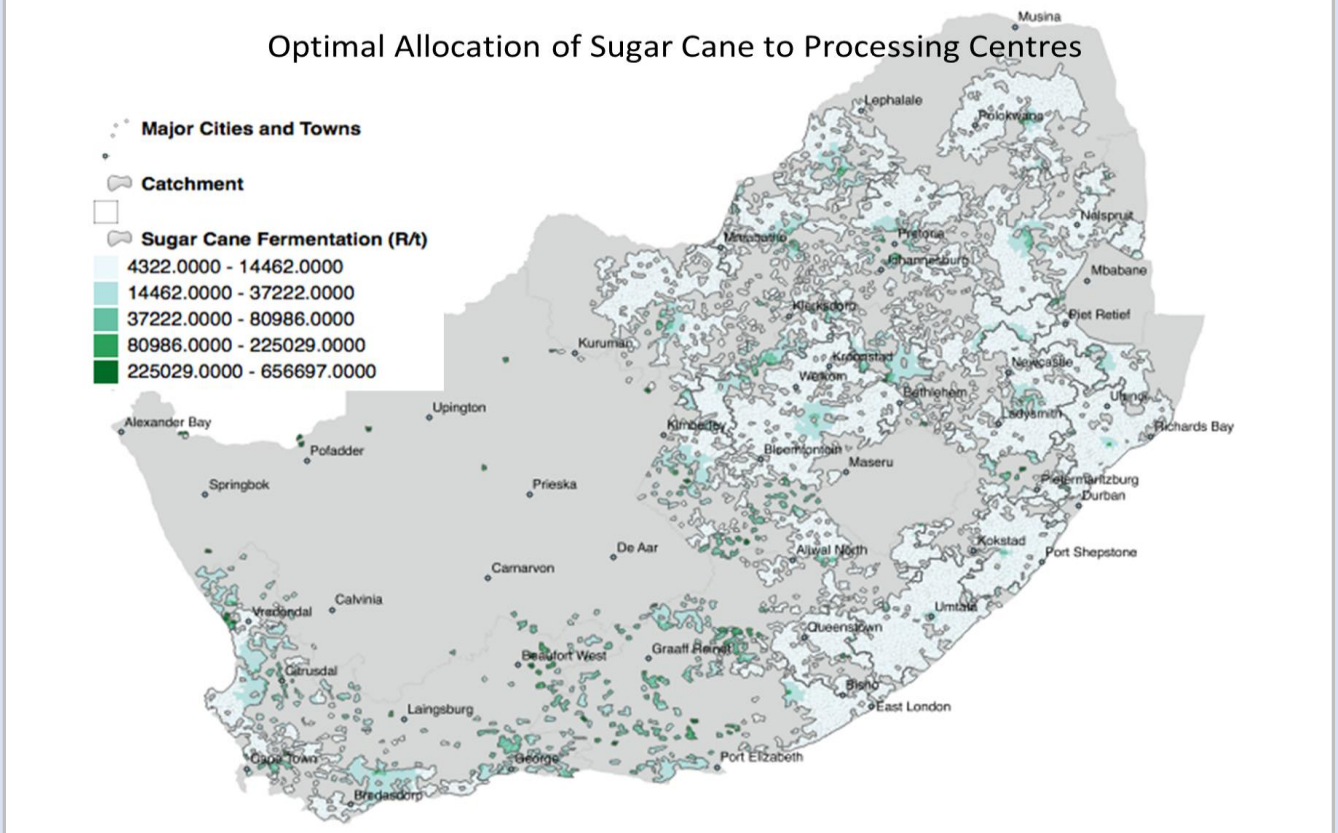
THEME: FEASIBILITY	Prepared by: Wim Hugo, SAEON

Ethanol Fermentation from Sugarcane



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Date: 2015

Meta-Data

Title	*Ethanol Fermentation from Sugarcane*
File(s)	*WP10_07_SUG_MOL_02.shp, WP10_07_SUG_MOL_02_catch.shp*
Author(s)	*Hugo, W*
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Abstract	** Technical Challenges -* *Rapid development of the feedstock source will be required, since the ethanol content of fuel cannot be increased incrementally. In the lead-up to full production at a facility, the sugar may be processed through traditional channels.* ** Cost Challenges -* *None of the projects are feasible; producing ethanol within the cost range of petrol in the recent past is only possible through subsidisation of the sugar input costs. Capital costs are low but operating costs are high. Utilising bagasse for electricity generation can offset the high operating costs.* ** Policy Challenges -* *Regulation of ethanol production similar to the wine industry will be required with regulation of a large number of small producers.* ** Environmental Challenges -* *Greenhouse gas mitigation depends strongly on (1) co-generation of electricity from bagasse to supply process energy and (2) whether land use change is minimised. Converting subsistence cropland to sugar cane cultivation will have a significant impact on biodiversity and water use.*
Keywords	*crops, ethanol, fermentation, feasibility, model outputs, sugarcane*
Caveats	http://bea.dirisa.org/resources/metadata-sheets/WP10_07_META_SUG.pdf
Web Meta-Data	
Web Resource	http://app01.saeon.ac.za:8086/geoserver/BEA/wms?service=WMS&version=1.1.0&request=GetMap&layers=BEA:WP10_07_SUG_MOL_02&styles=&bbox=16.451920000028533,-34.83416989569374,32.892531746697685,-22.125030000001036&width=512&height=395&srs=EPSG:4326&format=application/ope

Methodology/ Protocol

Processing/ Provenance	*As described above*

Important Attributes

MESO_ID	Meso-zone ID
PRICOST	Optimal Allocation of Sugarcane to Processing Centres, R/ton
ALLOC	Catchment ID

References and Sources

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[4]	Durand, 2010. Drought adaptation measures and risk tolerance of commercial, small-scale and subsistence maize farmers in the Free State and North West Provinces of South Africa, ARC-Grain Crops Institute, http://cnas.ucr.edu/drought-symposium/presentations/Agronomy-1-So%20Africa.pdf
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[7]	Ethanol Fermentation from Sugarcane - Catchments: http://app01.saeon.ac.za:8085/geoserver/WP10/wms?service=WMS&version=1.1.0&request=GetMap&layers=WP10:WP10_07_SUG_MOL_02_catch&styles=&bbox=17.46207884684932,-34.82092890158508,32.44577285817367,-22.738459142010466&width=512&height=412&srs=EPSG:4326&format=application/openlayers