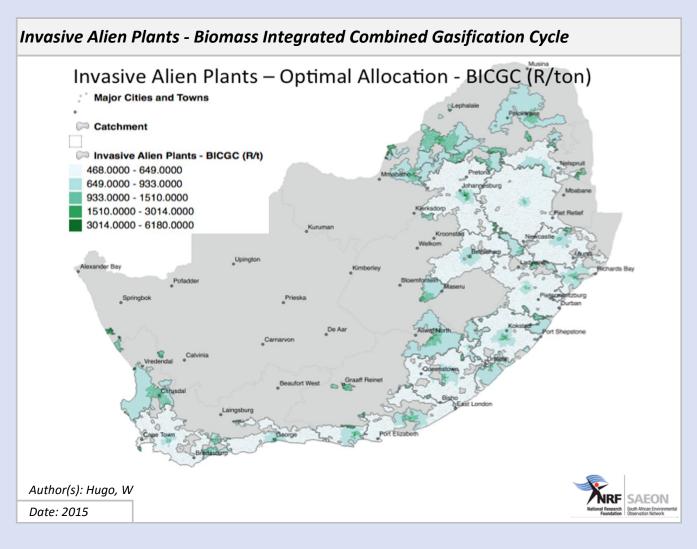
THEME: FEASIBILITY

Prepared by: Wim Hugo, SAEON



Meta-Data

Title	Invasive Alien Plants - Biomass Integrated Combined Gasification Cycle
File(s)	WP10_07_IAP_BIC_02.shp, WP10_07_IAP_BIC_02_catch.shp
Author(s)	Hugo, W
Publication Date	2015
Citation	Hugo, W. 2014. Feasibility of BioEnergy production in South Africa, BioEnergy Atlas for South Africa, DST/ SAEON 2014, Section WP10_04
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Abstract	* Technical Challenges -
	Existing expertise and infrastructure in respect of 'Working for Water' programmes in respect of
	harvesting and eradication, projects required for conversion to electricity. It may be simpler and less
	risky to generate new sources of renewable electricity rather than converting existing power
	stations to co-firing.
	* Cost Challenges -
	There may be as many as 40 viable projects, all having a 20-year lifetime - with significant capital
	investment required.
	* Policy Challenges -
	The projects are feasible and well aligned with existing expertise and infrastructure in respect of
	'Working for Water' programmes. Integration with DEA 'Working for Energy' required and
	incorporation into IPP programmes needed.
	* Environmental Challenges -
	The net impact on greenhouse gas emissions is large, despite land use change effects, given the
	significant reduction in GHG as CO2 equivalents in comparison to coal.
Keywords	BICGC, feasibility, invasive alien plants, model outputs
Caveats	http://bea.dirisa.org/resources/metadata-sheets/WP10_07_META_IAB.pdf
Web Meta-Data	
Web Resource	http://app01.saeon.ac.za:8086/geoserver/BEA/wms?service=WMS&version=1.1.0&reque
	st=GetMap&layers=BEA:WP10_07_IAP_BIC_02&styles=&bbox=16.451920000028533,-
	<u>34.83416989569374,32.892531746697685,-</u>
	22.12503000001036&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 Invasive Alien Plants to BICGC Installations, R/ton
ALLOC	Catchment ID

References and Sources

[1]	Croezen, H and van Valkengoed, M. GHG Emissions due to deforestation, Delft, 2009 - http%3A%2F%2Fwww.ce.nl%2F%3Fgo%3Dhome.downloadPub%26id%3D932%26file%3Dghg- emissions-due-to-deforesta.pdf
[2]	Von Maltitz, G. Estimates of Land Use Effects of Major Products and Feedstocks, Work Package 9, in BioEnergy Atlas for South Africa, W Hugo (ed), DST 2013
[3]	Witi, J and Stevens, L- Greenhouse Gas Inventory for South Africa, 2000-2010, Department of Environmental Affairs, 2013 - https://www.environment.gov.za/sites/default/files/docs/greenhousegas_invetorysouthafrica.pdf
[4]	US Environmental Protection Agency, Emission Factors for Greenhouse Gas Inventories, EPA, 2014 - http://www.epa.gov/climateleadership/documents/emission-factors.pdf
[5]	Invasive Alien Plants - BICGC - Catchments: http://app01.saeon.ac.za:8085/geoserver/WP10/wms?service=WMS&version=1.1.0&request=GetM ap&layers=WP10:WP10_07_IAP_BIC_02_catch&styles=&bbox=17.386870191252598,- 34.83416989569374,32.486439930764284,- 22.782962485548683&width=512&height=408&srs=EPSG:4326&format=application/openlayers