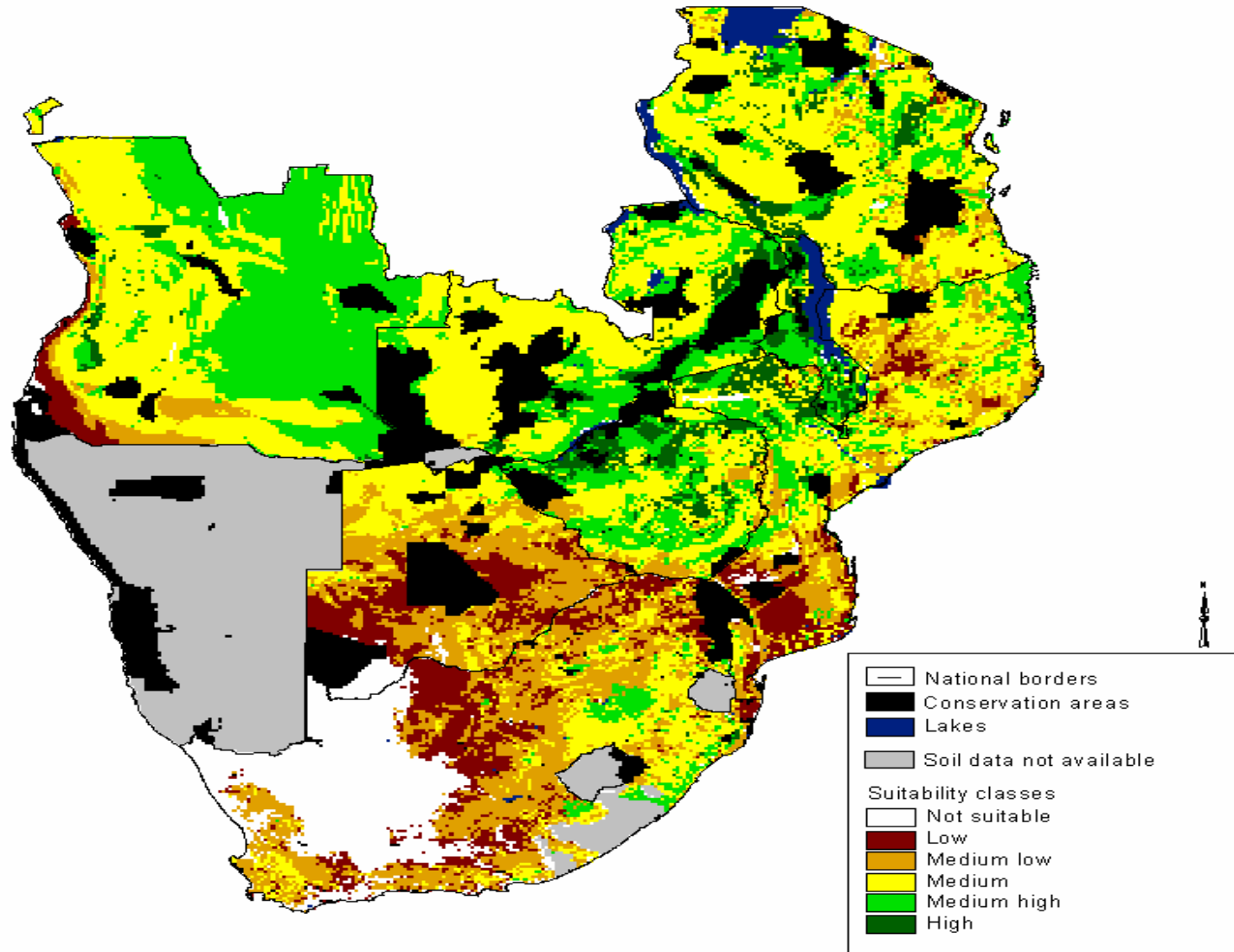




Biofuel developments in the SADC region

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	Africa Total	Ang.	Bots.	Mal.	Moz.	SA	Tanz.	Zam.	Zim.
High	161,783	65,895	0	3,445	30,858	136	29,645	28,805	2,135
Med	82,179	18,878	163	2,398	15,355	6,757	17,587	8,880	13,433
Low	54,293	8,463	4,868	823	7,088	7,685	12,420	318	12,628
Total Arable	298,255	93,236	5,031	6,666	53,301	14,578	59,652	38,003	28,196
% of Total Arable		31.26%	1.69%	2.24%	17.87%	4.89%	20.00%	12.74%	9.45%



Conclusion:

- Objectives of government: Land reform, establishment of small emerging farmers, and Kyoto Protocol
- Governments lack capacity to design and implement policies - industry the main driver behind most of the projects and incentives (in SA some partnership)
- First generation biofuels in SADC will follow same path as ag sector has followed over past – poor policy framework, lack in infrastructure and limited potential for profit with current technology.....unless



Outline:

- Policies, potential and concerns in
 - South Africa
 - Mozambique
 - Zambia



South Africa biofuel strategy:

- Industrial Biofuels Strategy approved in December 2007
- Crops to be used – Sugar cane, Sugar beet, Sunflower, Soybeans, Canola.
- Target of 2% nationally but 8% ethanol regionally by 2013 – approx 400 million litres pa





South Africa incentives:

- Incentives – 100% fuel levy exemption for bioethanol and 50% for biodiesel (...but biodiesel production not profitable)
- No protection against biofuel imports – 0% tariffs!
- No forced mandates until the industry can secure supply.
- Hope that deregulation of the ethanol price (floating price) can create a market – cheaper than petrol



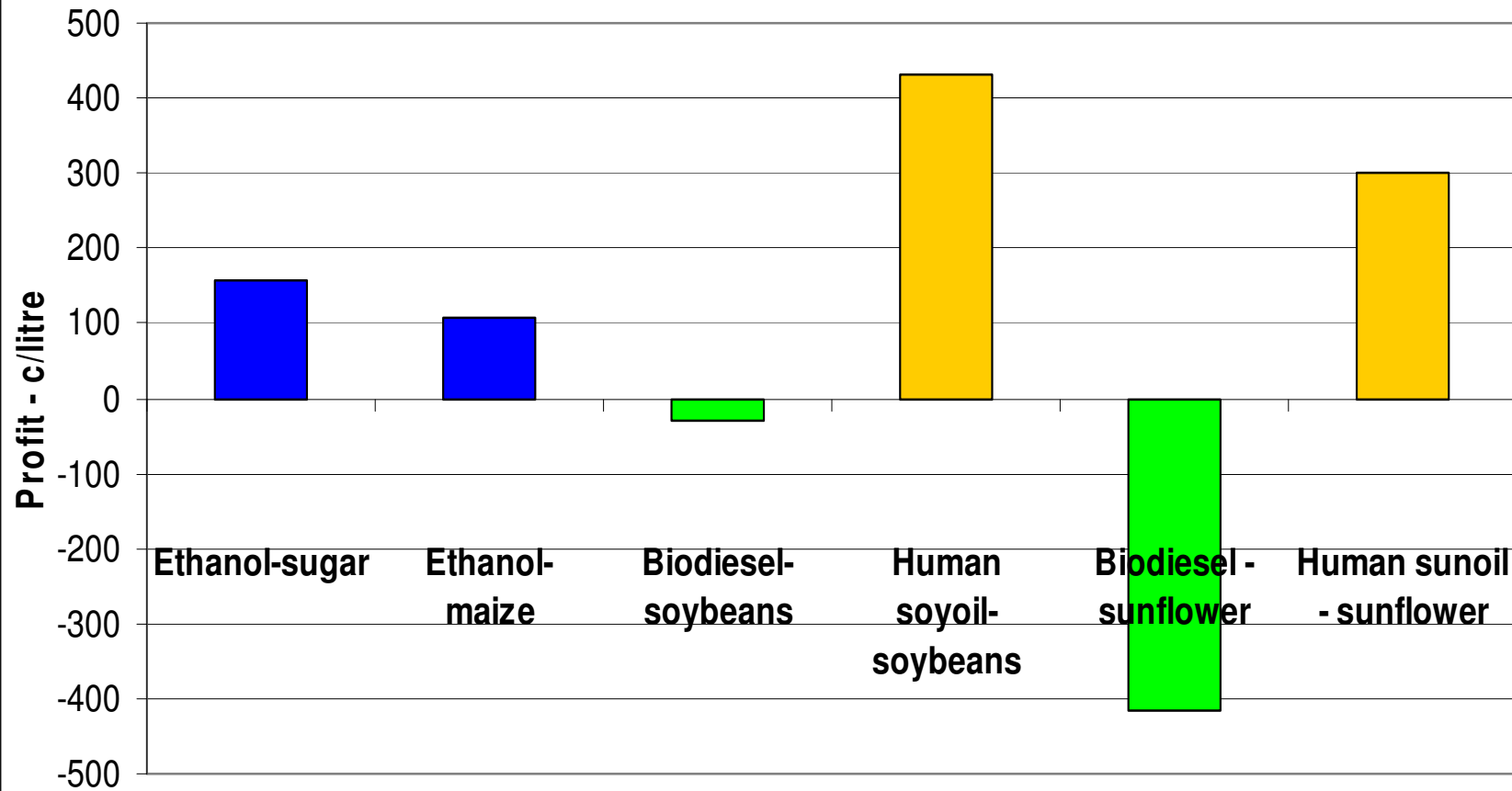


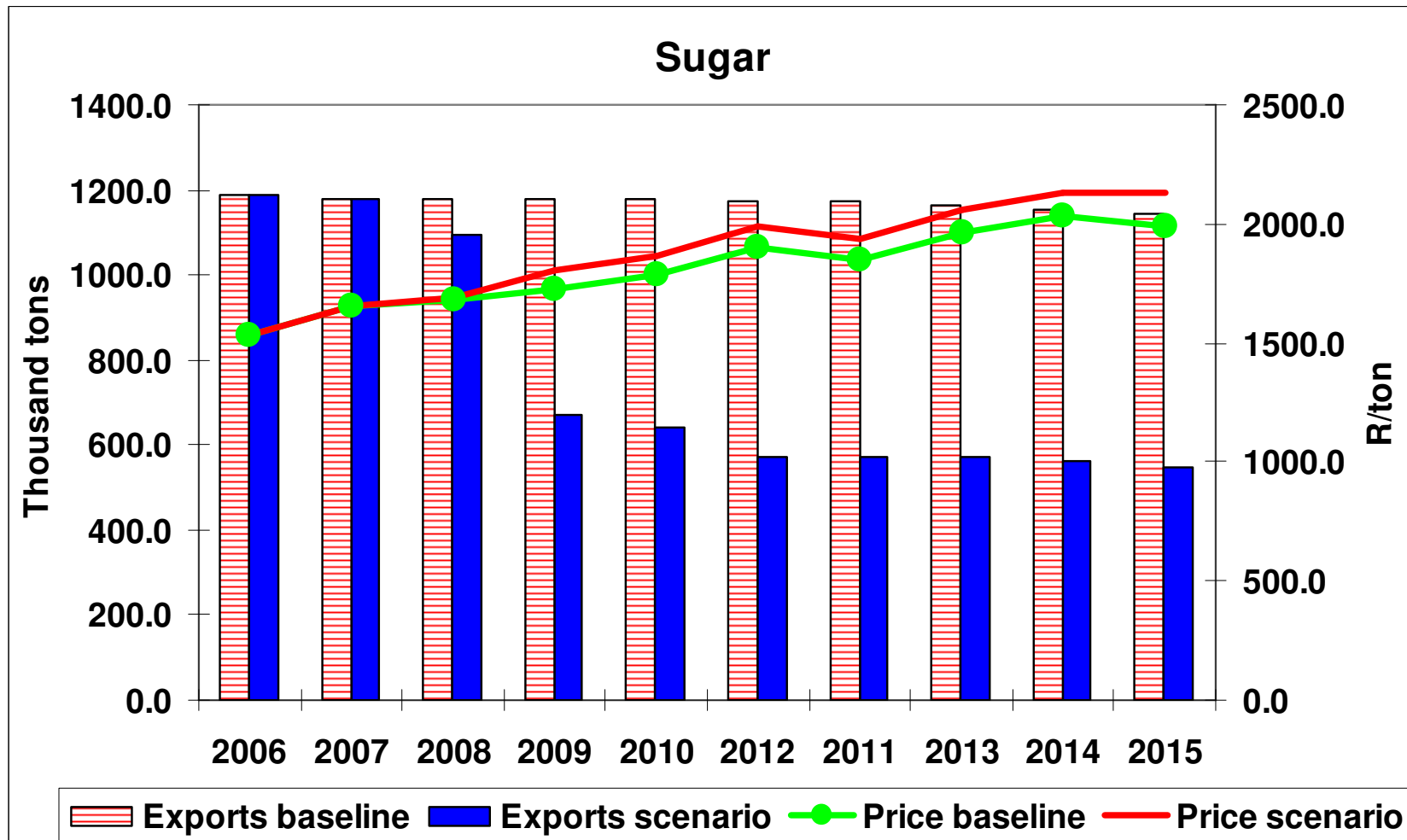
South Africa goals:

- Goals: Establish new small black farmer settlements, uplifting of the rural economy by creating an additional market, and meeting energy targets
- Commercial maize farmers tried the “Iowa approach”.
- However.....apart from 2 or 3 projects (sugar and maybe oilseeds), very little is going to happen due to limited profitability and high risk due to deregulated market.



SA Plant profit - 2008 (Biofuel Strategy incl)







Mozambique potential:

- 36 million ha of arable land – presently 9% in use
- 3.3 million ha of land with the possibility of irrigation of which 1.6 million ha are currently irrigated
- Favourable climatic conditions in Mozambique for Agricultural crop production





Mozambique biofuel policy:

- Gradual implementation of biofuel mandates for both bioethanol and biodiesel of between 5 to 10% - policy in pipeline.
- Cogeneration of electricity – e.g. sugar mills of SA sugar companies
- Supplying poor households with these fuels – ethanol gel etc. to curb deforestation.
- Tax incentives, including exemptions of up to 10 years
- Special economic zone regime – production in dedicated zones





Mozambique possible projects:

- Deulco – 10 000 ha – Inhambane e sofala (Jathropa)
- Mozambique Biofuels Industry – 1 500 to 4 500 ha (mixture of sugar cane, jathropa, etc.), in all provinces
- ECOMOZ – 3 000 ha (mix), in the Maputo province
- Grown energy Zambezi – 160 000 ha (mix) – Zambezia province
- Others – 430 ha





Zambia potential and policies:

- 16.5 million hectares of arable land
- Constituted inter-ministerial steering committee for biofuel development
- Facilitated formation of Biofuels Association of Zambia (BAZ)
- Allocation of 150 000 US\$ for research on biofuels
- Revised energy policy to accommodate biofuels
- Drafting of biofuels legislation





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Zambia incentives:

- Target to blend bioethanol and biodiesel by 5% and 10% respectively in 2011
- Increase the production of sugarcane by 70% in order to meet local demand, supply to EU and produce ethanol (Large SA sugar companies are moving in)
- Other crops include Jathropa for biodiesel
- Studies on the use of sweet sorghum as an alternative





Drivers, concerns and issues:

- Ill-designed policies and ongoing debates
- **Food vs fuel**
 - **Maize:** Modelling results show average increase (2012 – 2015) of 12%-14% in yellow maize and 8% in white maize prices and +-300 000 ha of additional land. Relates to 6% increase in feed costs. Very small positive economic growth but welfare only positive in rural areas.
 - **Sugar and Oilseeds:** No big price effects – net exporter / importer
- Governments lack capacity to design and implement policies - industry the main driver behind most of the projects and incentives.



Drivers, concerns and issues:

- Oil refineries are focusing on countries with high resource potential but see SA as a possible platform to provide the infrastructure.
- Region has the resource potential but not the infrastructure.
- Business as usual:** US universities and EU industry get the money.
- What is different:** Asian interest and need for African resources.
- E.g. of miss understanding of policy implications in SA with inflation up at 8%
 - SA Reserve Bank increased interest rates by 400 bases points over past 18 months to “curb inflation” – currently above set target (6%)
 - Food and fuel are the main drivers of inflationand are imported.