



## Africa's potential of biomass, and production of sustainable biofuels



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Production in Tropical and Subtropical Countries



## **Addax Bioenergy – Sierra Leone**

- **Addax&Oryx 20 years experience of investing and operating in Africa**
- **Sugar cane plantation with ethanol factory in Sierra Leone**
  - **Project in the final stages of feasibility study**
  - **Production start 2011**
- **Production destined for export to the European Union**
  - **Tariff advantage Brazil**
  - **EU-Africa Free-Trade Agreements**
- **Strong local and Government support for the project:**
  - **Job prospects, positive social impact**
  - **Investments in infrastructure**
  - **Health care, schools, vocational training etc.**
- **Excess electricity – Cogenerating power from biomass – up to 20 MWh**

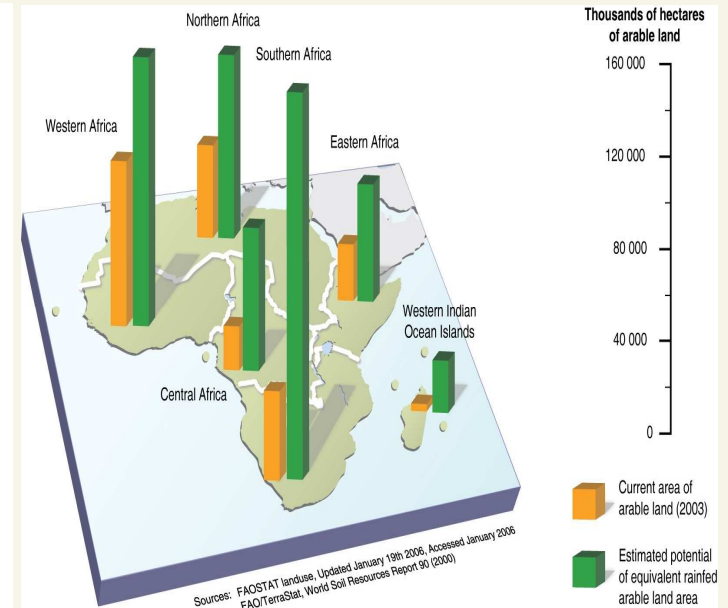
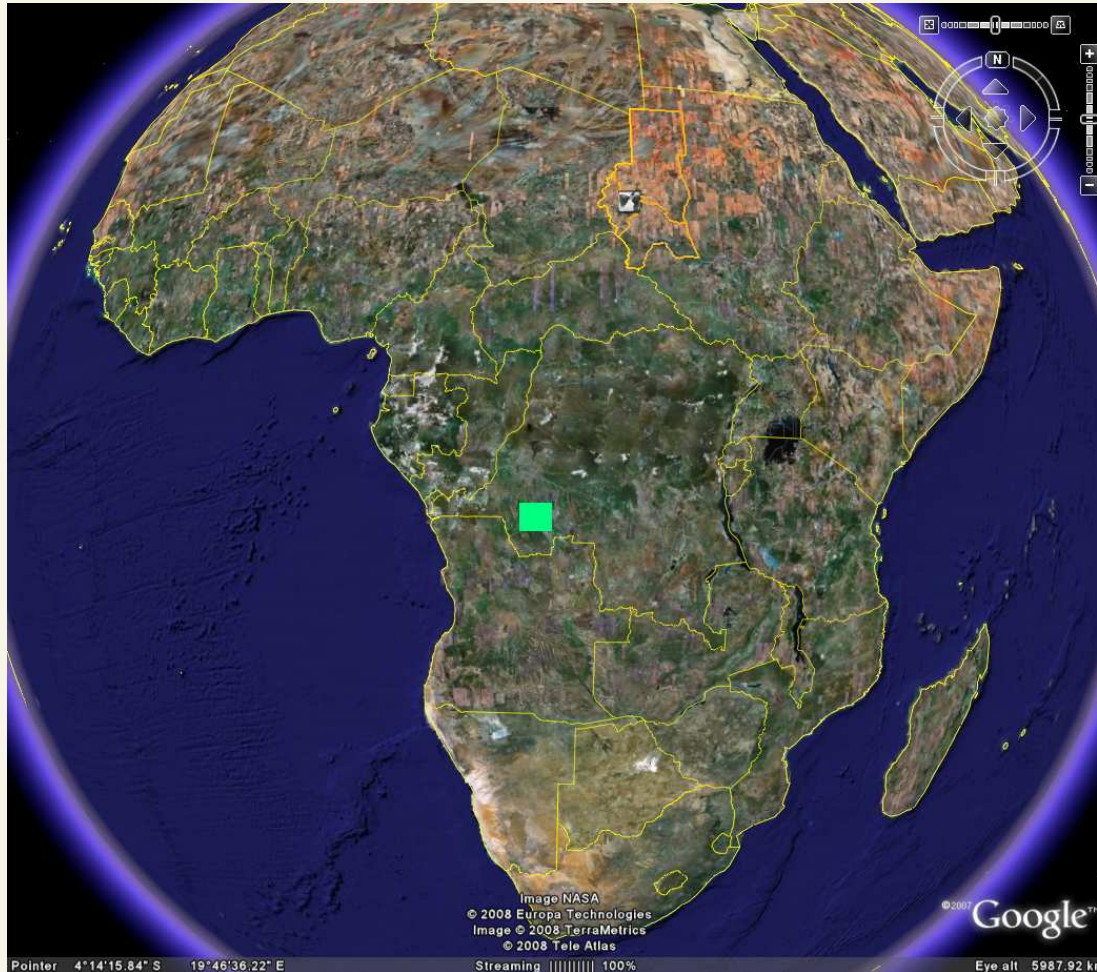


## **EU 10 % target - Can Africa deliver ? YES**

- **10 % bioethanol in 2020 = 25 million cubic meters**
  - **25 million cubic meters ethanol need 4.2 million hectares of land**
  - **FAO: potential arable land (excluding forest, cities etc) = 750 million hectares**
  - **Land suitable to grow sugarcane without irrigation = 166 million hectares**
  - **Very low productivity (less than ½ of Latin Am): make better use of the land**
- There is enough land for nature, for agriculture, for people and for biofuels**



## Putting land needs in perspective



### Land needed to supply 10% EU target =

<b>Africa:</b>	<b>0.2 %</b>
<b>Democratic Republic of Congo:</b>	<b>2%</b>
<b>Angola:</b>	<b>3%</b>
<b>Tanzania:</b>	<b>4%</b>
<b>Cameroon:</b>	<b>8%</b>



## EU sustainability criteria – Africa can do better

<b>Ecosystems</b>	<b>=</b>	<b>No-go zones Sugarcane does not grow well in rain forest and wetlands</b>
<b>CO2</b>	<b>=</b>	<b>Sugarcane as feedstock, modern bio-refinery concepts that use all biomass side-products deliver highest available CO2 savings (80% +)</b>
<b>Land Use Change</b>	<b>=</b>	<b>Millions of hectares of degraded, ill-exploited arable or pasture land with low carbon stock available</b>
<b>Social impact</b>	<b>=</b>	<b>Subsistence farming is a poverty trap Biofuels = attractive cash crop Outgrow and secure job opportunities</b>
<b>Food versus Fuel</b>	<b>=</b>	<b>Transfer of know-how lifts overall productivity Fuel/Food crop rotation increases food output</b>



## EU sustainability - Recommendations

**We welcome strong but fair sustainability criteria – essential for consumer acceptance**

- ⇒ Don't use sustainability as trade barrier: EU water spec is one**
- ⇒ Why not apply sustainability to oil, food, cosmetics, tobacco ?**
- ⇒ Carbon savings now have economic value: we need clear rules on who and how to measure them (CDM model ?)**
- ⇒ Fossil benchmark does not take into account tar sands / heavy oil**
- ⇒ Land Use Change: take into account human practices before / after**



## **EU 10 % mandate – key to develop sustainable biofuels**

- **Free-trade agreements are key to the African biofuel opportunity**
- **But investments in Africa are risky**
- **We need a secure and predictable outlet where we can achieve market prices**
- **Sustainability criteria can be met: 35 % CO2 savings even too low !**
- **Sky-high oil prices trigger strong demand for biofuels**
- **EU is leader in sustainability discussion**
- **If EU target is dropped: NOT LESS but LESS SUSTAINABLE Biofuels**
- **If Biofuels are Sustainable then Europe should want as many as possible !**



## Biofuels – an opportunity for Africa

**Sierra Leone** : **Brutal civil war 96-02**  
**Last on UN Human Development Index**  
**70 % live on less than 1 USD a day**

**We have hope** : **War is over**  
**Democratic transition**  
**Donor assistance**

**But** : **We still depend on mining sector (diamonds)**  
**Nobody wants to invest in agriculture**



⇒ **So Biofuels are a great opportunity for our country: Foreign investment, jobs, education, infrastructure and they could kick-start other investments too**

⇒ **We want to get out of the poverty trap, not depend on donor aid**

⇒ **We love our nature and our people as well and want to protect them**

⇒ **We finally have no trade barriers with the EU: biofuels can be traded equitably**

⇒ **Don't shut the door on us once again !**



## Conclusions

- 1. Africa has a strong potential in producing sustainable biofuels**
  - **Size, suitable soils and climate, and low levels of current utilisation of cultivable agricultural lands**
- 2. Part or all of European demand for biofuels can be supplied by Africa**
  - **In full compliance with the EU sustainability criteria**
- 3. Tropical biofuels have a high greenhouse gas savings potential**
  - **Much in excess of the proposed low 35 % in the EU Directive**
- 4. Biofuels present a huge opportunity to kick-start Africa's neglected agricultural sector**
  - **Foreign investment, transfer of knowledge and best practices and trade opportunities**
- 5. Biofuels can actually help improve the food security through**
  - **Productivity spill-over effect into staple crop production**
- 6. African biofuels present an opportunity for many African nations**
  - **Reduce their fuel bill and increase their revenue**



Q & A

**Thank you for your attention!**

