



Pressures on West African Land
Reconciling development and investment policies
Bamako, Mali 9. Dec. 2009

Steinar Kolnes, CEO co-founder BioFuel Africa Ltd.



Brief overview of our Ghana operations.

- **Independent Ghanaian company, sole owner Solar Harvest AS (Norway), focused on upstream biofuel production from jatropha**
 - Jatropha is possibly the most sustainable feedstock for large-scale biofuel production
 - Business model hinges on leasing large tracts of managed land in Africa, primarily Ghana
 - Biofuel Africa Ltd. pursues a Food First policy by:
 - i) Providing local farmers with mechanical farming assistance to maintain and extend their farms
 - ii) Produce food products on most suitable land.
- **Contract for lease for 154,778 hectares (382,464 acres) of own managed land in Ghana**
 - 55,161 hectares (136,306 acres) surveyed
 - EPA permit no: CA002080104 comprise 23,762.45 hectares (58,718.29 acres)
 - Registered in lands commission: 10,696.32 hectares (26,431.18 acres) per April 2009.
- **Continuously cultivation campaign ongoing on the registered land**
 - First juvenile oil (non-commercial) extracted in Q4 2008
 - Cultivation campaign proves ability of local organization to implement growth
- **Ambition to cultivate 17,000 hectares (42,000 acres) by end of 2011**
 - Expected to yield 35,000 metric ton (mt) per annum jatropha oil when trees are fully mature in 2013 (equivalent to 652 barrel per day oil production)



Land ownership in Northern region, Ghana.

- *The land belongs to the community, but held in custody by a traditional chief system. Also called stool land (or more correct skin-land in the North region of Ghana)*
- *All contracts a subject to an internal consultation between chiefs, elders and opinion leaders.*
- *During the Environmental Impact Assessment (EIA), public community meetings where held, where all stakeholders was invited.*
- *Without an Environmental Protection Agency (EPA) permit, your operations are limited to 40 hectare!*
- *Lease contracts are typically for 25 years with first right of refusal for another 25 years. Maximum lease length which have been upheld in Ghana supreme court is 50 years.*
- *Immediately benefits for local communities includes; Job opportunities, water dams, plowing new land for indigenous farmers, maize grinding mill, spin-off micro industries.*



Relation to local farmers.

- *Local farmers can still farm, even though Biofuel Africa pays the lease.*
- *For new land cultivation, we have offered free clearing and plowing, following years offered for a favorable price.*
- *Within the first 400 ha we planted, there was 25 farmers with a total of 22 ha of land (~5%). We expanded the land to 218 ha (mainly maize).*
- *Our plan is to elevate the local farmers from “hand to mouth farming” to invest excess proceeding in their land for better yielding (E.g. Increase the maize yield from <1 ton to >4 ton ha).*



Above from left: Local farmers Maize and groundnuts



Biofuel Africa Ltd. have adapted the 12 principles for sustainable biofuel

Roundtable on Sustainable Biofuels (RSB)

- **Principle 1:** *Biofuel production shall follow all applicable laws of the country in which they occur, and shall endeavour to follow all international treaties relevant to biofuels' production to which the relevant country is a party.*
- **Principle 2:** *Biofuels projects shall be designed and operated under appropriate, comprehensive, transparent, consultative, and participatory processes that involve all relevant stakeholders.*
- **Principle 3:** *Biofuels shall contribute to climate change mitigation by significantly reducing GHG emissions as compared to fossil fuels.*
- **Principle 4:** *Biofuel production shall not violate human rights or labor rights, and shall ensure decent work and the well-being of workers.*
- **Principle 5:** *Biofuel production shall contribute to the social and economic development of local, rural and indigenous peoples and communities.*
- **Principle 6:** *Biofuel production shall not impair food security.*



Biofuel Africa Ltd. have adapted the 12 principles .. Cont.

- **Principle 7:** *Biofuel production shall avoid negative impacts on biodiversity, ecosystems, and areas of High Conservation Value.*
- **Principle 8:** *Biofuel production shall promote practices that seek to improve soil health and minimize degradation.*
- **Principle 9:** *Biofuel production shall optimize surface and groundwater resource use, including minimizing contamination or depletion of these resources, and shall not violate existing formal and customary water rights.*
- **Principle 10:** *Air pollution from biofuel production and processing shall be minimized along the supply chain.*
- **Principle 11:** *Biofuels shall be produced in the most cost-effective way. The use of technology must improve production efficiency and social and environmental performance in all stages of the biofuel value chain.*
- **Principle 12:** *Biofuel production shall not violate land rights.*

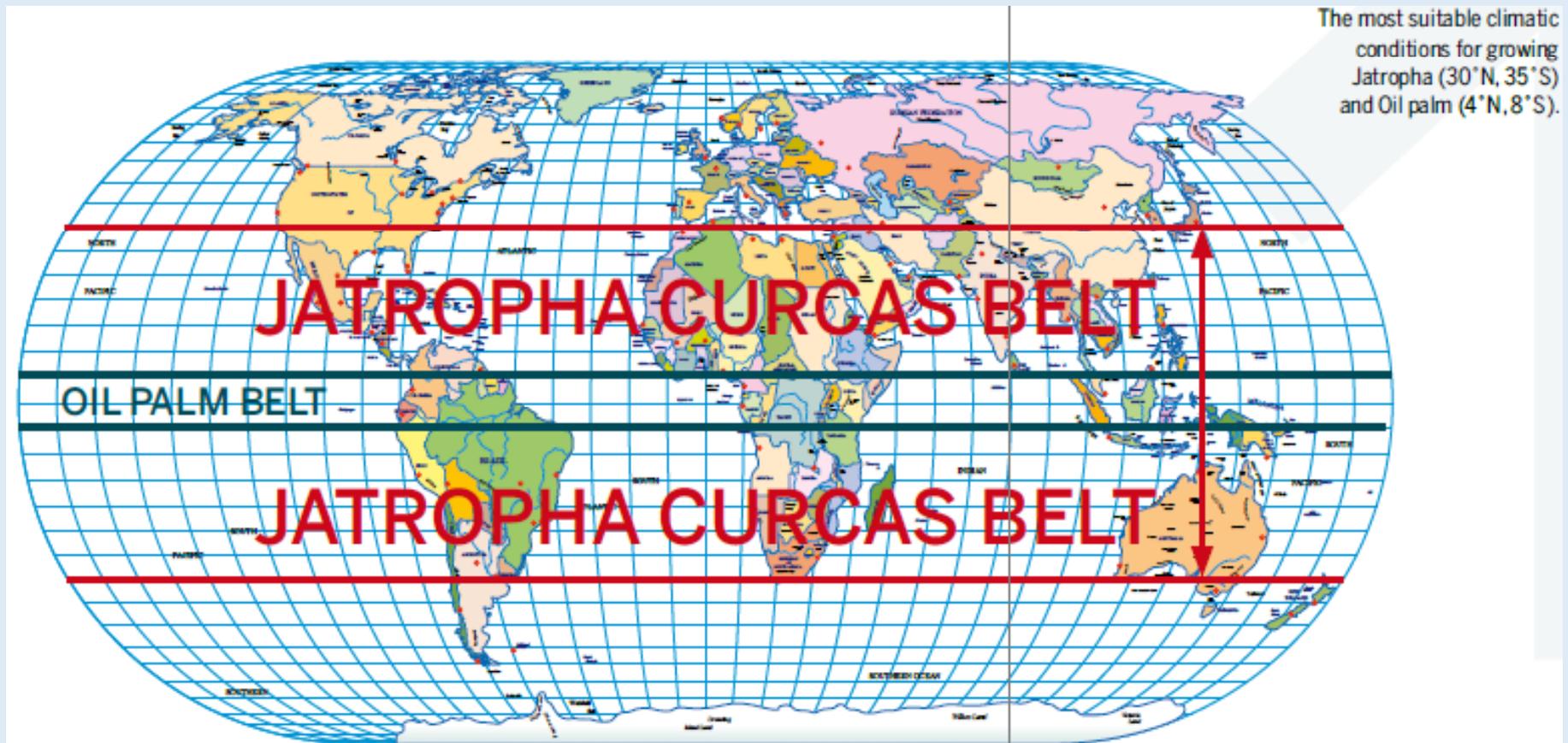


Benefits for the local communities

- **Community projects are administrated by a Company Community Committee**
 - Currently 8 communities with 2 representatives each.
 - 2 representatives from BioFuel Africa Ltd. Total 18 members.
- **Immediate benefits for local communities includes;**
 - job opportunities (approx. 1 person per 10-15 ha for mechanized farming)
 - water dams
 - plowing new land for indigenous farmers
 - maize grinding mill
 - courses in tractor driving licensee (BFA approved as a training facility).
 - tree planting; Moringa, Sheanut, etc.
 - health station
- **Future projects**
 - Beehives and honey production
 - Fire briquettes production
 - Electrical power generation
 - Schools



Jatropha curcas belt





Testfarm in Sugakope in partnership with Worsornu Foundation





Intercropping between jatropha rows.





Community projects





Honey production





Mechanized for higher productivity



Crawler tractors for soil preparation



Rows of newly planted jatropha seedlings



Planting team



Questions?

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