

Mitigating negative impacts of oil palm expansion in Kalangala, and complementary livelihoods options



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Summary

This paper identifies mitigation measures to oil palm expansion, and suggests complementary livelihood options. Findings showed negative impacts of monoculture oil palm plantations from unclear land acquisition processes, increased pressure on remaining land; emigration of especially men, and reduced food security. There were also social issues related to increased immigrant labour, child labour and burdens on women. And whereas there has been infrastructure development, it is vital to establish social and environmental sustainability before oil palm plantations are expanded, with lessons drawn from Bugala island. The government is changing

its perception of large scale oil palm plantation agriculture, and is considering other options for improving livelihoods, based on experiences in Kalangala district. This paper proposes complementary options, including agroforestry with high value crops like vanilla, cardamom, black pepper, as well as coffee, honey, vegetables and pineapple, livestock, and ecotourism. Training will be crucial for smallholder farmers to develop and maintain sustainable livelihoods. Natural forest areas and native tree species nurseries must be established to conserve beneficial species, and better land use planning and zoning of Buvuma island is needed to reduce the loss of natural forests.

Background

In the 1970s, Bugala island had more than 13 natural tropical forest reserves, very fertile soils and abundant water resources (FoE, 2012). The Kalangala district state of environment report (2005) noted that in 2000, forests still provided a variety of ecosystem goods and services, and local communities benefitted from timber, medicinal plants, firewood (Republic of Uganda, 2005), and wood for making boats for deep water fishing and transport. However, since then, up to 10,000 hectares of oil palm has been planted on Bugala island (FoE, 2012, 2013), impacting food and nutrition security, biodiversity and soil quality. Also, natural forests which used to be communal are now either gazetted government forest reserves or privately owned with restricted community access. Deforestation for oil palm has also come with other environmental, social, political and economic consequences for which mitigation measures are urgently needed.

The study included a field visit to Bugala island, interviews with opinion leaders and farmers involved in oil palm or other agricultural activities, 'scenarioing praxis' (Ison et al., 2014), and a review of reports on oil palm impacts, mitigation measures and alternative livelihoods options with ex-post-scenario following a landscape approach (Kusters, 2015). This was followed by a stakeholder workshop and meeting of researchers which gave very useful comments. Results provide guidance to development planning for Buvuma island and other areas targeted for future expansion of the oil palm industry.

Impacts and issues

While some farmers willingly sold their land for oil palm development, others said that they were 'hoodwinked', and not adequately compensated for their land (FoE, 2012, 2013). This indicates that land acquisition processes were unclear, though all citizens have a right to land and democratic means to implement land and other public policies (Olson and Lyson, 1999). This apparently implies a failure to recognize fundamental human rights as stipulated in the 2008 United Nations Declarations on the Rights of Indigenous Peoples (UN, 2008). Furthermore, displacement has led to increased pressure on remaining land for settlement and agriculture, and many smallholder farmers who became landless have had to camp in landing sites, with a shift to (over)fishing due to limited land availability for small scale agriculture and few available jobs, with 95% of oil palm plantation workers being from other parts of Uganda (FoE, 2013) or foreigners. Emigration of especially men has resulted, creating a labour-force vacuum affecting food security and leaving broken families behind.

Forests provide a wide range of benefits ranging from food income and watershed protection (Lipper, 2000), but oil palm expansion has led to deforestation, reduced soil quality, species diversity and increasing carbon emissions (Kaimowitz and Angelsen, 1998). And when forest biodiversity is impacted, many other livelihood options are disturbed. For example, to visit a doctor costs at least US\$2 excluding the cost of drugs and transport, whereas herbal remedies previously available from the forest were free or low cost. Firewood and timber have become scarce with people now dependent on purchased charcoal for cooking at a cost of US\$10 a sack which few can afford. Also, a single piece of hardwood timber once available from the forest can now cost UGX 80,000 (US\$22), imported from DR Congo.

Current oil palm development on Bugala island has disrespected environmental law by failing to conclude an environmental impact assessment and by not consulting with stakeholders (FoE, 2012, 2013). The aim of large scale industrialized agriculture is to meeting food requirements of growing populations, and of course, for investment profits. But as seen from the identified consequences, local people often do not benefit. For instance, priority is given to investors and large scale farmers, though 96% of Ugandan farmers are smallholders with less than two hectares of land (Niwaqaba, 2017). This implies that it would be wise that the government changes its perception of blindly promoting large scale oil palm plantation agriculture, and considers other options of improving livelihoods. But for the emergence of viable long term good practices, there is a need for extensive research and consultation with community leaders, farmers, farmer groups and other market players.

Community views

Farmers on Bugala island found that the best way to mitigate negative impacts from oil palm expansion was to form farmer associations. They would then have a unified and much stronger voice for negotiation, lobbying and advocacy to pursue their aims of no further conversion of forests and forest land to oil palm, to restore degraded landscapes, to advocate for holistic land use planning approaches, and to consider small scale rather than large scale plantations. Kalangala district leaders feel that to mitigate negative impacts of oil palm monoculture, it is important to focus on adequate land use planning, with 'zoning' to separate oil palm from areas left as natural forests or devoted to cropping or animal husbandry. And whereas oil palm spared gazetted forests, the pressure on remaining natural forest resources resulted in massive degradation of gazetted, private and cultural forests, including the near extinction of some very valuable timber

species such as *Manilkara.butugi* (nkalati), *Lovoa brownie* (nkoba) and *Cordia* spp. (mukebu) that were used to make fishing boats.

Some smallholder farmers grow cassava, sweet potatoes, vegetables especially cabbage and aubergines (eggplant), and some fruit trees like mango and jackfruit (Namanji, 2012), improving incomes and food security. Livestock husbandry was identified as the best alternative livelihood option with 15 respondents. The raising pigs, cattle and fish was recommended, on small plots with little investment required, and offers multiple products, quick returns, and sources of protein previously provided only by fishing. The second best alternative was crop cultivation with nine respondents, of coffee and food crops such as maize, banana, cassava, tomato, pumpkin, groundnut, potato, with a good market demand guaranteed due to increased population and pressure on land. The third best alternative was developing different small businesses with two respondents, which is possible without the need for land which is now in short supply.

Agroforestry, sustainable farming and ecotourism

Results indicate a need to advocate the benefits of agroforestry, mixed cropping, and establishing tree nurseries. The case of Sezibwa Agroforestry provides an excellent example, with native trees mixed with high value crops like cocoa, vanilla, cardamom, black pepper, coffee and vegetables. And with its characteristic aroma, Ugandan vanilla is now sought after, and the estate also has a network of several hundred smallholder outgrower farmers. And where many high value native timber trees have been removed, there is growing demand for timber on the islands and mainland. Furthermore, bananas are currently brought into Kalangala from the mainland and sell for not less than UGX 15,000 (US\$3) per bunch. So, farmers can earn good income from such agroforestry systems that offer viable alternatives to oil palm. These could be sustainable if farmers are trained, but on Bugala island, smallholder farming has not performed well because the sandy clay loam soil does not retain water and crop growth is more dependent on rainfall. Also, less available land does not allow rotational agriculture and fallowing as was the case before, so there are additional needs to improve soil fertility.

The 84 islands, beaches and wildlife of Kalangala have high tourism and ecotourism potential. Naidoo and Adamowicz (2005) established that the tropics had high species diversity but low conservation costs compared to the developed world, and in their study on Mabira forest reserve, it was established that investments in an ecotourism centre increased the number of tourists,

with nearby local communities sharing proceeds from the centre. In addition, development in the ecotourism industry creates local jobs. This implies that in areas such as Buvuma Island, instead of deforestation for oil palm plantations, it would be more sustainable to increase forest reserves coupled together with agroforestry provisions that would attract tourists as a way of providing alternative livelihood options. Tourists would also provide a sound alternative market for high value agroforestry products.

Ways forward

Sustainable Development Goal 2 is to 'adopt economic strategies that increasingly build on sustainable best practice technologies, appropriate market incentives, and individual responsibility...and sustainable food systems' (Sachs, 2012). To support this, there is need for advice on sustainable farming for food security and which can be done through offering trainings on sustainable farming systems. This way, people are empowered to utilize their land sustainably without being misled to sell land to large scale industrialized agriculture. In addition, it combines "improving living standards and ecological imperatives" (Sachs, 2012).

However, as the above stated options have failed to materialize to date, the government is resorting to mobilizing smallholder farmers to form associations to produce palm oil with a guaranteed market to BIDCO. This would imply a shared ownership of the project, which would probably help to solve some of the land disputes, empower smallholders towards self-enforcement of effective land rights, and improve incomes through community-commercial agricultural projects. Such an approach worked in Liberia where the indigenous people refused to surrender their land to oil palm companies, but instead, planted oil palm which they sold to the company. However, this option should be taken with caution because oil palm requires high initial investment and is difficult to manage.

The following recommendations could maximize mitigation measures and complementary livelihood options.

1. Organize communities into inclusive multi-sectorial association for roles in environment committee, with direct involvement of local leaders and extension workers.
2. Establish natural forest areas to conserve species at risk, using if possible mechanisms that benefit from carbon credit schemes, and improve land use planning and zoning to limited loss of natural forests to infrastructure development.

3. Create more awareness about the value of existing tree species and their market potential, prepare silviculture knowledge of native forest species and share with communities, and establish native tree species nurseries for restoration and agroforestry, and make them accessible especially to women.
4. Provide secure land tenure to forest communities through certification of sustainable management, such as RSPO for palm oil, and FSC for timber.
5. Promote agroforestry, and provide knowledge and planting materials for alternative shade tolerant high value crops like coffee, cocoa, cardamom, vanilla, black pepper, rattans, and yams, and develop forest ecosystems into an ecotourism product.

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