Appendix 3b

Policy Brief

QUALITREE - research based oil production

- Women in rural Africa traditionally extract oil from seeds of native trees
- Local knowledge about numerous oil trees is confined to few people
- Screening of oils from 32 native native tree species was conducted
- Native oil trees have a good potentials for ameliorated use and production
- Less known important oil trees are e.g. *Adansonia digitata, Balanites aegyptiaca*, *Carapa procera*, *Combretum* spp, *Lophira lanceolata*, *Ximenia americana*, *Khaya senegalensis*, *Lannea kerstingii, Lannea microcarpa*, *Pentadesma buteracea*, *Sclerocarya birrea*, *Ximenia americana, Sterculia setigera* and *Quassia undulata*
- Production of soap, cream and shampoo was established with local women groups
- A local company, Phytofla, participated in development of new oil products in collaboration with local communities
- Export potentials of several locally used oils and oil products are being explored
- There is an extraordinary potential for improving health and economic development in poor communities via increased and improved oil production
- Many native oil trees are threatened because of habitat destruction
- Protection and planting of native trees is necessary to maintain and improve local oil production
- Nature conservation and biodiversity can be additional advantages of sustainable oil production

Executive summary

Introduction

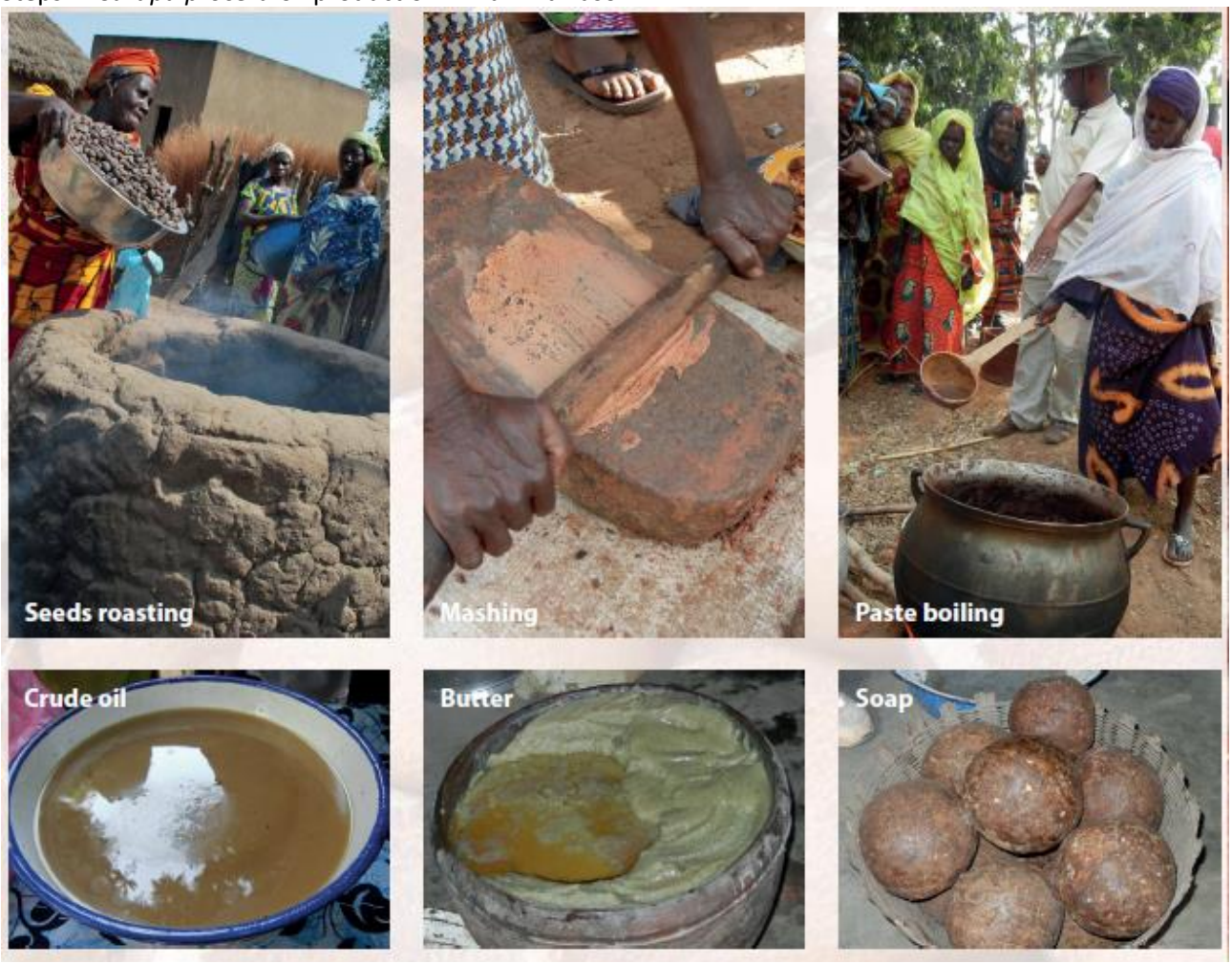
Women in rural Africa traditionally extract oil from the seeds of numerous native trees. The QualiTree project combined investigations of rural people's knowledge and analyses of physiochemical properties of oils to improve and promote production of native oils from West Africa for local use and export.

Interviews about native oil trees and their potentials

Results

Most local people know about common oil trees like shea and oil palm, but knowledge about the a variety of potential oil trees is confined to certain villages or to a few ethnic groups with a tradition to produce special oils. Traditional production processes are not optimal and can be improved to be more efficient and hygienic. Oil production from native trees has a considerable economic potential for rural women.

Steps in *Carapa procera* oil production in Burkina Faso.



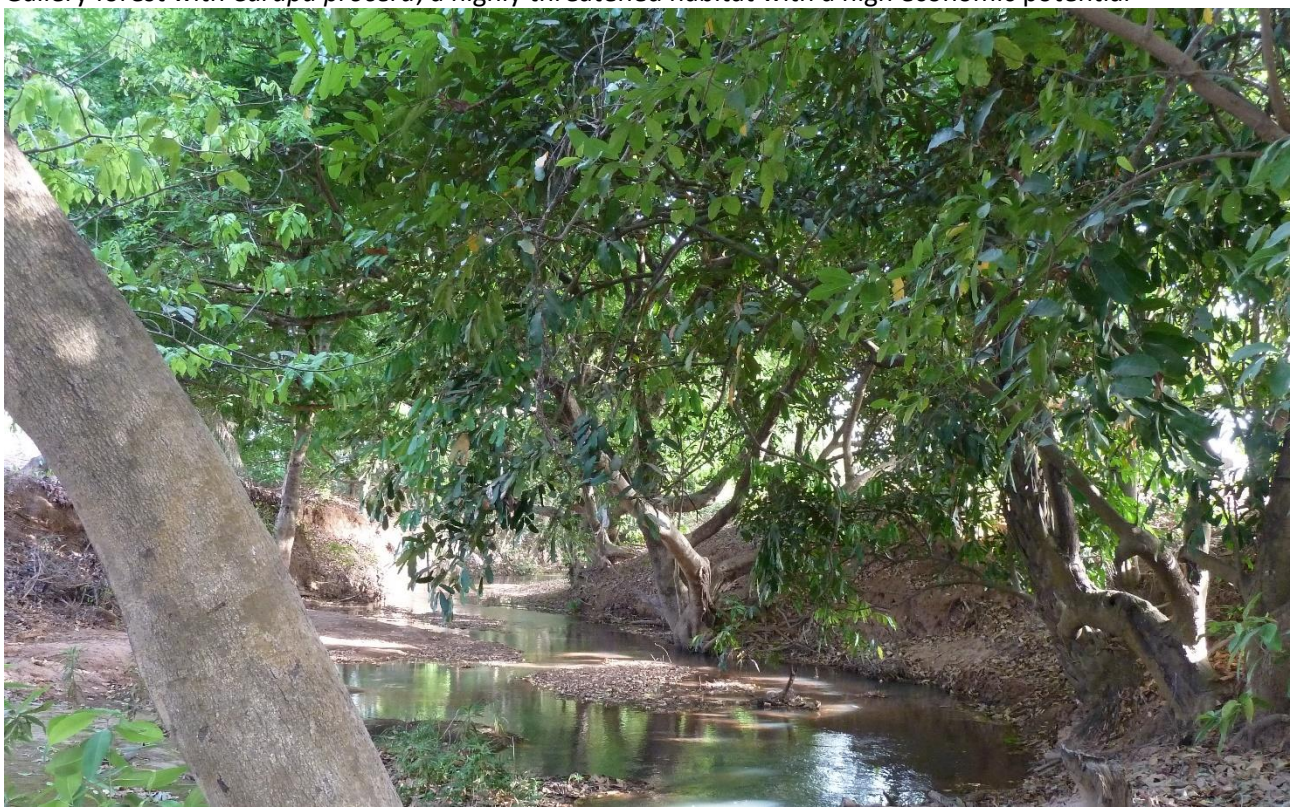
Screening of oils from 32 native West African trees revealed good potentials for ameliorated use and production. One example is *Lannea microcarpa* (african grape) with an oil content of 65% and high amounts of palmitic and oleic fatty acids giving potentials for food and cosmetics, furthermore the oil is stable and suited for cooking. People in Mali traditionally eat the oil in the morning to prevent hunger during long days of hard work in the field.

Many native oil species are highly valuable and have properties that are unexploited, and in some cases unknown. Fx nine *Combretum* species have shown new and interesting properties for cosmetics and soap, this is to our knowledge new to science. Three *Lannea* species give very stable oil with a high potential for frying, which makes them good alternatives palm oil. *Caprapa procera* has good qualities for soap and skin care. *Pentadesma butyracea* has a composition similar to shea butter, which is a highly valued export commodity. Some species are presently not exploited, but might have interesting properties, such as *Khaya senegalensis* that has oil with a composition similar to olive oil, however, the seeds are small and difficult to exploit. There are many other treess with potentials.

Oil properties of native oils from West Africa are generally not well known, and there are large unexploited opportunities for native oil products for local use and export. Improved production of soap, cream and shampoo based on *Carapa Procera* has been established with a private company and a series of cosmetic products based on this oil is a sales success in Burkina Faso. New products with *Lannea* and *Combretum* species have shown great potentials.

One main concern for native oil production is the availability of plant materials which are disappearing because of overuse, climate change and poor management. Many of the most valuable species grow in habitats that are disappearing. In this way practical production activities are directly related to natural resource management as efficient production is impossible without a continuous and reliable supply of fruits from the local area.

Gallery forest with *Carapa procera*, a highly threatened habitat with a high economic potential



Conclusions

There is an extraordinary potential for improving health and economic development in poor communities via increased and improved oil production. Nature conservation and tree planting, however, is needed to ensure sufficient and continuous supplies. Protecting and planting native trees maintain and improve local biodiversity as an additional advantage of the sustainable traditional oil production.

Recommendations

Planning and establishment of local production facilities in West Africa must work on three strategies at the same time: 1) improved and new oil products with the local producers to ensure a good and constant supply, 2) establishment of contact to local and international trading companies with interest in buying and importing locally based oil products and 3) protection and planting of native trees to maintain and improve the oil source. Habitat and biodiversity conservation can be additional advantages of sustainable oil production.