Sustainable charcoal production in community-based forest management areas in Tanzania

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Context: increasing demand

- ~ 2 million tonnes of charcoal are consumed annually in Tanzania
- >80 % of urban households use charcoal
- Urbanisation is driving an increase in demand
- Consumers like charcoal because it is cheap and reliable

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Context: unsustainable supply

- Most charcoal comes from unmanaged natural woodlands
- Charcoal production contributes to forest degradation
- Governance: low government charcoal revenue capture rate
- No mechanism to reinvest revenues from charcoal into sustainable management

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Context: policy

- Energy - national energy policy focused on promoting an energy transition away from biomass and towards electricity and fossil fuels.
- Charcoal – until 2021, no strategic plan or policy to guide the supply of charcoal, in the context of growing demand.
- Forests – national forest policy supportive of community-based forest management
- Many policy-makers perceive charcoal to be incompatible with a modernising agenda.

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What is sustainable charcoal?

- Produced in community-managed miombo woodlands.
- Different tree species used, mostly *Brachystegia spiciformis* and *B. boehmii*.
- After harvesting, woodland regenerates, mainly through coppicing and root sprouting.
- Post-harvest natural regeneration is encouraged by protecting regenerating areas from disturbance.
- Piloting began in 10 villages in 2012 with scaling-up to >30 villages since 2016. Led by 2 NGOs, TFCG and MJUMITA.

MJUMITA

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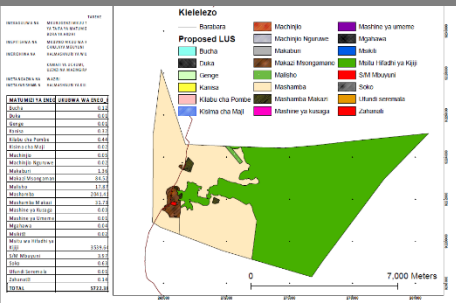
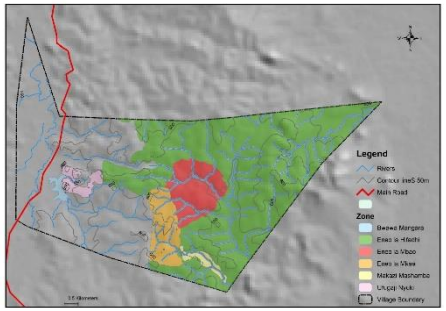
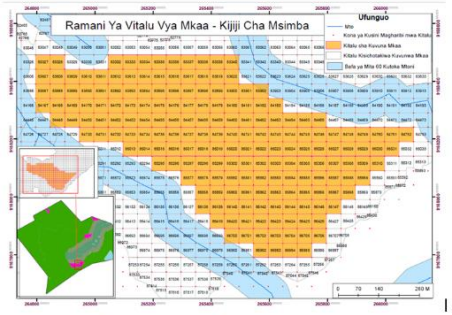
Simple steps for villages to establish sustainable charcoal production







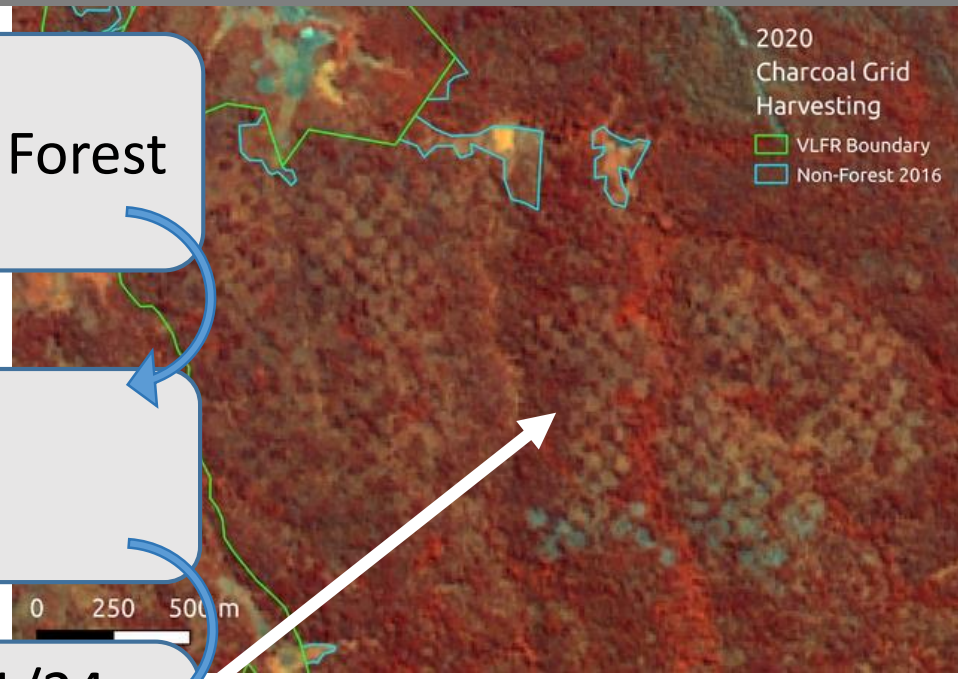
Map of charcoal harvesting coupes for Msimba Village Land Forest Reserve also showing 60 m buffer zones around water courses.

1) Villages prepare a village land use plan including land designated as a Village Land Forest Reserve.

2) ~ 20% of the Village Land Forest Reserve (VLFR) is allocated for charcoal production.

3) Based on a 24 year rotation, every year 1/24 of the charcoal management unit is harvested for charcoal in a chequerboard pattern.

4) Annual charcoal quotas per village are set based on biomass assessments – oversight provided by District staff.



Satellite image of a charcoal forest management unit in Kitunduweta Village (May 2020 Sentinel-2 Imagery)

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5) Training to village natural resources committees and village councils on forest management, governance & financial management,

6) Governance and monitoring systems established, with links to Local Government Authorities.

7) Capacity building for charcoal producers on compliance, efficient harvesting and production techniques and business skills.
Charcoal producer associations formed.

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Sustainable charcoal revenues are used to pay forest management costs

Revenue to the village from sustainable charcoal harvesting fees pays for the management of the whole village forest reserve including the 80% where no charcoal production is permitted.

Mean annual revenue from fees per active village in 2020: US$ 3,859 (max: US$ 18, 250 / village).

Total fees earned by villages since 2013: US$ 0.75 million

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Sustainable charcoal revenues collected are used to pay for improved social services

Health

A selection of community development projects paid for using village revenues from sustainable charcoal fees

Education

Water

Governance

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Challenges

- Negative perceptions of charcoal.
- Tensions between centralised vs decentralised forest policy.
- Weak inter-sectoral coordination between energy, forests, land, agriculture and local government.
- Low revenue capture rates on charcoal not produced in CBFM areas => price of charcoal in the market does not reflect statutory fees.
- Deforestation, driven by agriculture, causing forest loss and fragmentation threatens potential to scale up.

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Lessons learned

- Charcoal will remain a key source of energy for the foreseeable future.
- Sustainable charcoal production is possible in miombo woodlands and can generate multiple benefits.
- Potential exists to improve the environmental sustainability, governance and economic benefits of charcoal value chains.
- Scaling-up sustainable production is possible and could be accelerated with political buy-in and investment in capacity building.
- Pilot projects are important in demonstrating potential benefits to policy-makers. Tanzania is on track to adopt a National Charcoal Strategy and a National Community-Based Forest Management Action Plan that are supportive of sustainable charcoal production, in 2021/22.

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Recommendations

- Support more communities to establish sustainable charcoal production and community-based forest management.
- Strengthen policies that support sustainable charcoal production and intersectoral coordination.
- Professionalise production by promoting best practices; providing professional training; adopting standards; and increasing compliance.
- Broad stakeholder dialogue and cooperation to move towards sustainable charcoal production and overcome barriers to scaling up.
- Develop financing models to support scaling-up and ongoing technical support

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For more information:
http://www.tfcg.org/what-we-do/develop/coforest/

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References and further reading

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