



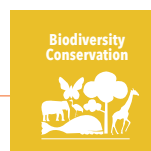
Community Participation in Forest Conservation and Management: Saving the Mopane Woodland



Figure 1: Clearing of Mopane woodland for charcoal production in the south of Angola (source: Isaias de Sousa)

KEY MESSAGES

- There is a need for the government to develop a forest management and monitoring plan that incorporates local communities.
- There is a need to promote and strengthen the coordination mechanisms among institutions, stakeholders, and users in managing and conserving forests in Angola.
- There is a critical need to increase the number of forest rangers and equally the need for awareness and capacity-building for the local communities.
- There is a need to introduce incentives such as tariffs, and tax regimes and allocate fixed quotas to charcoal producers.
- There is a need to establish a communal forest project in each village in combination with agroforestry systems.



INTRODUCTION

The mopane is a shared ecosystem that sprawls across a vast expanse of land from Angola, Botswana, Malawi, Mozambique, and Zimbabwe, to South Africa and Namibia. Angola is gifted with a plethora of diverse ecosystems. Among these is a salient ecosystem that is ranked second largest in sub-Saharan Africa only after the Miombo and that is the tropical Mopane ecosystem. These woodlands form a part of the rain catchment for the region and are part of a significant drainage system for the Kunene and Cuvelai rivers. These basins are also rich in fish and crustaceans. It is therefore imperative to protect these ecosystems as they are ecologically rich, have economic value, and have water sheds that are major water sources for the surrounding communities. These woodlands also provide poles for constructing structures, and fuel wood and charcoal, which are both primary sources of energy for cooking and heating for many rural and peri-urban communities.

In Angola, this ecosystem is predominantly covered by tree species named *Colophospermum mopane* which makes up an area of about 112,500 square km and extends from the province of Huíla, descending to the base of Serra da Chela, towards Namibe, Benguela and Cunene.

PROBLEM

Most of the mopane ecosystems are currently threatened by anthropogenic activities such as agriculture, urbanization, and over-harvesting of firewood for charcoal production. In recent years, charcoal production activity has turned out to be one of the main causes of deforestation leading to the extinction of some native and endemic species within the study area albeit with little evidence. The major key drivers resulting from charcoal production are;

1. The need to earn a livelihood in situations of increased poverty exerts considerable pressure on the mopane ecosystem.
2. The study area is predominantly dry with recurrent drought spells thus, resulting in very low agricultural productivity, with severe implications for food security.
3. A rapidly growing population increases pressure over scarce energy resources.

Instead of these and many other uses of the woodland, the Mopane ecosystem ought to be a top priority for conservation.

This policy brief intends to show the extent of the charcoal production business and the significant threats this activity poses to the ecosystem, while also elucidating measures to mitigate and ameliorate this threat to the mopane.

The study area is Cunene province, and it was selected due to its climatic conditions and recurrent drought which contribute significantly to food insecurity thereby paving the way for communities to explore alternative sources of income and livelihoods such as charcoal production. It is important to mention out that the increased charcoal production activities in this region, are somewhat motivated by businessmen in market centres.



Figure 2: Study area (Cunene) Intervention

The intervention to resolve the current problem consists of creating (i) an enabling environment through instruments legal permits, tax, and tariffs all along the charcoal value chain and (ii) government intervention related to improving technology for the kilns and cookers and subsidising those who conserve the forest instead of producing charcoal or introducing the carbon trade schemes.

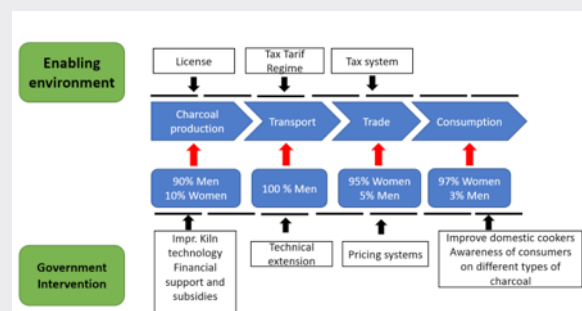


Figure 3: Value chain of charcoal production in Angola and actors along the value chain.

RESULTS

A summary of published articles, reports, and data from the GFW and UN agencies that address mopane woodland resource utilization in rural areas and the results from task 154 (**Plant and vegetation assessments in the southern region and elaboration of regional vegetation database and vegetation maps**) forms the backbone of this policy brief. This was partly done to best understand the factors triggering charcoal production activities and the degree of deforestation and degradation of the mopane ecosystem in Cunene province.

Therefore, in an attempt to determine forest cover changes throughout (2001-2022), the team resorted to Global Forest Watch (GFW) data and satellite images and observations showed that during the period in reference;

- Angola lost 3.68Mha of tree cover, equivalent to a 6.7% decrease in tree cover and generated about 1.26Gt of CO₂ emissions.
- GFW, WWF Terrestrial Ecoregions, between 2015 and 2019 and the Copernicus Global Land Cover show the same trend-tree cover loss of 16%.
- Estimates from GFW point out that the province of Cunene shows that in about 12 12-year period, it lost 82.9ha.

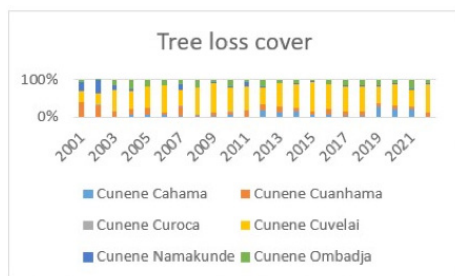


Fig 4: Tree cover loss by municipality-GFW data

Figura 4. Perda da Cobertura florestal por municípios -GFW data

- UN data (1990-2020) on charcoal production indicates a clear increase in charcoal production from 659 MT in (1990) to 1175 MT in 2020.

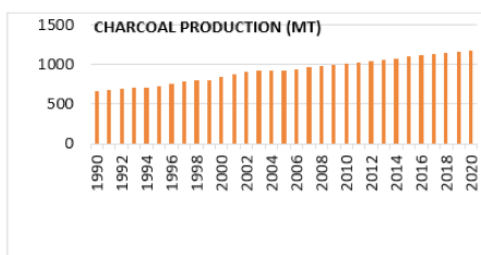


Fig 5: Charcoal production-UN data(<http://data.un.org/Data.aspx>)

CALL TO ACTION

1-The Ministry of Agriculture and Forest (MAF) should develop a roadmap leading to the development of a forest management and monitoring plan

2-The MAF should pave a pathway that would lead to better coordination strategies among institutions, NGOs, the private sector, and charcoal producers

3-The MAF should promote capacity building and hire additional personnel who will provide better services with respect to forest management and monitoring

4- The MAF is hereby challenged to introduce incentive strategies such as tariffs, and tax regimes aimed at the sustainable exploitation of natural resources

5-The Institute of Forest Development (IDF) should work closely with communities to promote the establishment of communal forest projects at each village in combination with agroforestry systems

PAPER INFORMING POLICY BRIEF

Reports from task 154 on **Plant and vegetation assessments in the southern region and elaboration of regional vegetation database and vegetation maps**

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