

Impacts of Uncontrolled Logging on the Miombo Woodlands of the Niassa Reserve in Mozambique

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Overview

This study evaluated the impact of logging in the miombo woodland of the northern part of the Niassa reserve, around Negomano, by assessing the remaining standing timber of 8 priority species after uncontrolled harvesting. The potential to develop sustainable community forestry as a livelihood option was evaluated.

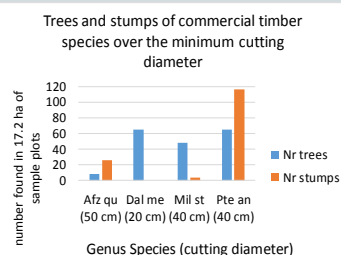


Figure 1. Trees and stumps of commercial timber species over their minimum cutting diameters.

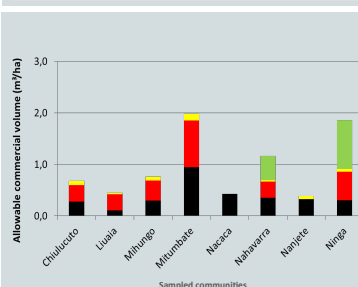


Figure 2. Commercial volume still standing around sampled communities, by species.

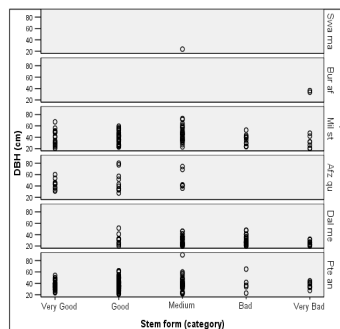
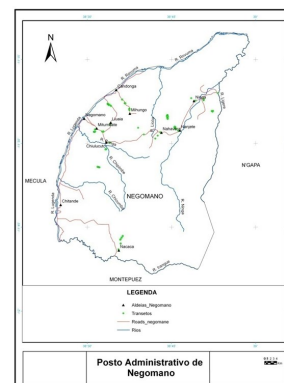


Figure 3. Stem form of trees of different diameters for 6 timber species



Methods 2

- 173 respondents in 12 villages were interviewed about logging and its benefits.

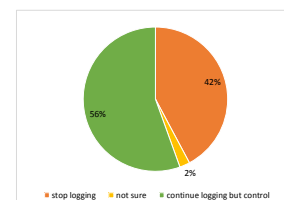


Figure 4. Responses to the question "What should be done to address uncontrolled logging?" (173 respondents)

Results

Trees had been sawn into planks at pitsaws where they were felled, and then transported on foot to Tanzania to be sold or further processed. *C. imberbe* was not found in the study area, and both *B. Africana* and *S. madagascariensis* were essentially absent even though these species occur in areas of the Niassa Reserve.

Impacts of uncontrolled logging resulted in:

- 41% of the trees above 20-50 cm dbh had been removed, depending on the species (Fig 1)
- In the 8 communities, less than 2 m³/ha of standing volume remained in trees that had reached the minimum cutting diameter (Fig 2); fewer of these had good form (Fig 3)
- The stumps revealed that the best trees had been logged
- Pitsaws were widespread and large quantities of waste wood were left on the ground
- Fewer than half of the respondents were in favor of a complete stop of timber logging. Their main concerns were lack of control and transparency regarding timber exploitation in the area, which did not leave benefits to them as communities or individuals (Fig 4).

Conclusions

- Remaining standing trees of commercial species have poor form and represent insufficient volume for community forestry to be a viable option. Furthermore, growth rates of trees are low (0.25 cm/year; Ribeiro, unpublished data), so precommercial trees would take a very long time to reach the minimum cutting diameter (20 to 50 cm, depending on species);
- It may be worthwhile to improve the skills of the local people so they can use the waste wood left behind after pit sawing; however, this could encourage logging, which is illegal in this reserve;
- This methodology could be used to evaluate the impact of logging, to monitor, and to decide whether to issue logging licenses for a specific area.