

A sustainable alternative for the Chiquitano forest in Bolivia: the Cusi palm (*Attalea speciosa* Mart.)

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Introduction

- The Bolivian Chiquitano dry forest provides multiple ecosystem services to the Amazon rainforest and the Gran Chaco and Pantanal. However, this forest is increasingly threatened by anthropogenically induced degradation and forest fires (Fig. 1a).
- The forest is characterized by the abundance of some Non-Wood Forest Products (NWFPs), such as the Cusi palm (Fig. 1b).
- Objective:** To analyze stakeholders' perspectives on cultivating Cusi palm as a sustainable alternative for the Chiquitano dry forest in Bolivia.



Figure 1. a) Wildfires at the study site b) Cusi palm fruits

Methods

- Fuzzy cognitive mapping (FCM): to explore the knowledge of the relevant stakeholders (indigenous communities, government, NGOs, private sector, and academia) about the production of Cusi palm in the Chiquitano dry.
- NWFPs sustainability approach: to analyze the local perspectives on the limitations and potential of the future sustainable production of the Cusi palm (Fig. 2).
- Scenario development: based on the results of the previous stages, different scenarios for the sustainable production of the Cusi palm and to support biodiversity conservation in the study area were developed.

Results

- Twelve FCMs were co-constructed with 59 participants of the main stakeholders.
- 83.33% of the stakeholders perceived the role of the Chiquitano dry forest as an essential element in the sustainable production of Cusi palm.
- Local perspectives have the tendency towards over-dependence on NGOs and the perception that sustainable management has a linear relation with biodiversity.
- Stakeholders identified 34 key elements, commonly known as driver variables, for the sustainable production of the Cusi palm and to support biodiversity conservation in the study area.

Conclusions

- The proposed future scenarios show that, without the support of NGOs, there is a tendency for projects not to follow the sustainable management approach of the Cusi palm.
- Key stakeholders agree on the relevance of biodiversity in the system but do not conclude that biodiversity conservation is necessary for the sustainable management of the Chiquitano dry forest.
- The scenarios indicate that an agroecological approach can be successful when first addressing this knowledge gap, focusing on capacity building of the local stakeholders about the link between biodiversity conservation and successful sustainable Cusi palm production, leading to a more resilient Chiquitano dry forest.

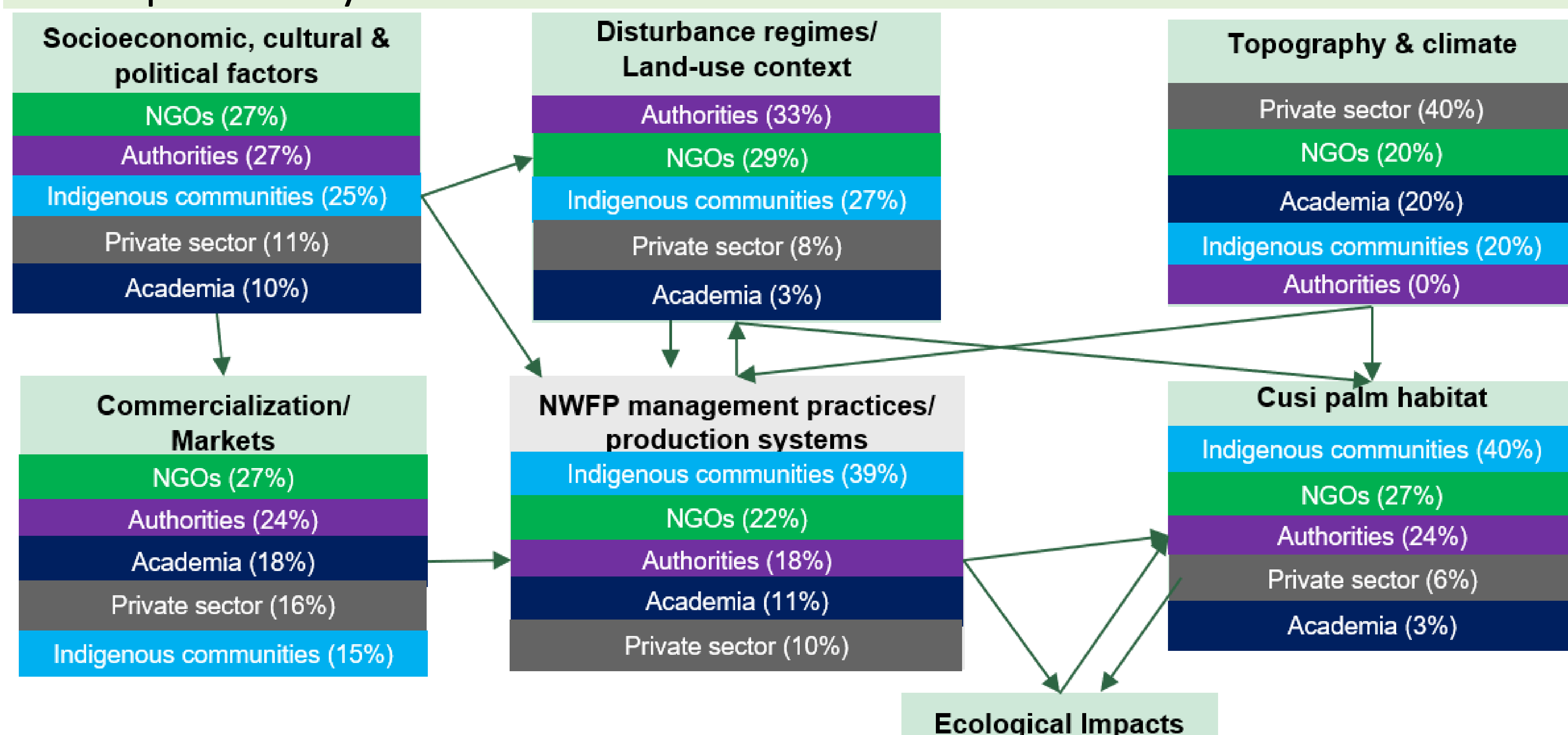


Figure 2. Relationships among some of the social and ecological factors that affect NWFP sustainability

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Acknowledgments: This study was supported by the German Agency for International Cooperation (GIZ) within the framework of the PROBOSQUE II project.

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