

Sustainable livelihoods in protected areas

The case of Allspice (*Pimenta Dioica*) in the Maya Biosphere Reserve

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Introduction

- The Maya Biosphere Reserve (MBR) in Peten, Guatemala comprises part of the 5 great forests of Mesoamerica, and has been a model for community-managed forests in the region since 1990.
- Thousands of families rely on timber and non-timber products from the MBR for their livelihoods.
- Local communities, public, private and cooperation actors have been developing sustainable forest value chains to improve local livelihoods as means to ensure its conservation, as cattle production, wildfires and agricultural expansion increase the pressure on the reserve.
- Allspice (*Pimenta dioica*) has been gaining traction due to its increasing demand and prices. Nevertheless, key information for improving the value chain is scarce and dispersed.

Results

- Allspice is a species with origins in the Americas and produced mostly in Mexico, Guatemala, Jamaica and Honduras. Its use is mainly in the food industry, but also has pharmaceutical and cosmetic uses.
- Due to its low traded volumes, there are few reliable statistics and the fruit is often misclassified or grouped with other species. Only the USA publishes detailed trade statistics, reporting an increase in imports from 1,600 t to 3,361 t between 2013 and 2022.
- Yearly production in Guatemala is estimated between 1,500 and 2,000 t, mainly from the north of the country, with a harvesting season between June and August. Exports to the U.S. in 2022 amounted to nearly 1,000 t and USD 3.1 million.

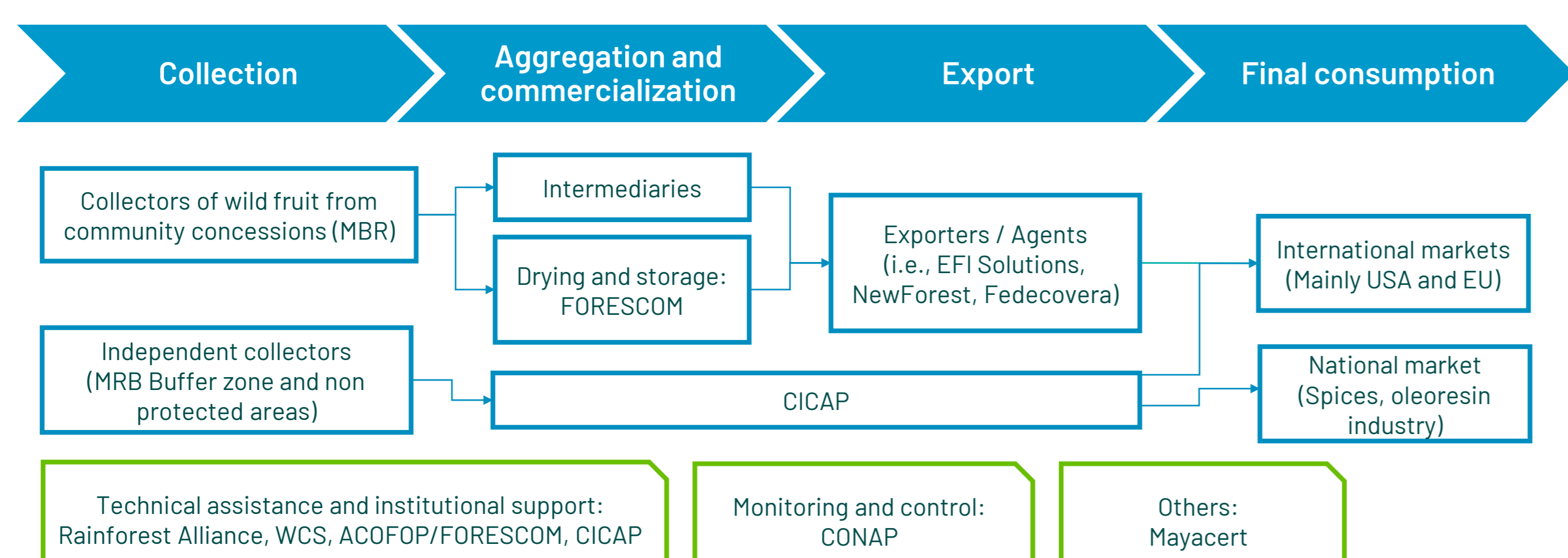


Figure 2. Peten's Allspice Value Chain Map.

- Nearly 500 families collect the fruit in the reserve and 3,000 in the rest of Peten. Collected by families or groups of 2 to 4. The group can collect 100 to 200 lb. daily, representing daily incomes of USD 6 to 12. Product from the reserve is certified organic, allowing higher prices for all actors.
- Trade is overseen by the forest authorities, but a large share goes unregistered and traded informally.
- The fruit is dried and exported mainly to USA and the EU (mostly Germany).



Figure 3. Indicative sale prices in 2023 by actor per kg of dried fruit (in USD).

Objectives and methodology

- This study examined the value chain of *Pimenta Dioica* in Guatemala, with a specific focus on the MBR, identifying the main actors, activities, trade flows, price points, margins, markets, trends, challenges, and opportunities for sustainable harvesting and marketing of this valuable resource.
- The study used a literature review, semi-structured interviews with key informants along the value chain, and focus group discussions with community representatives and collectors.

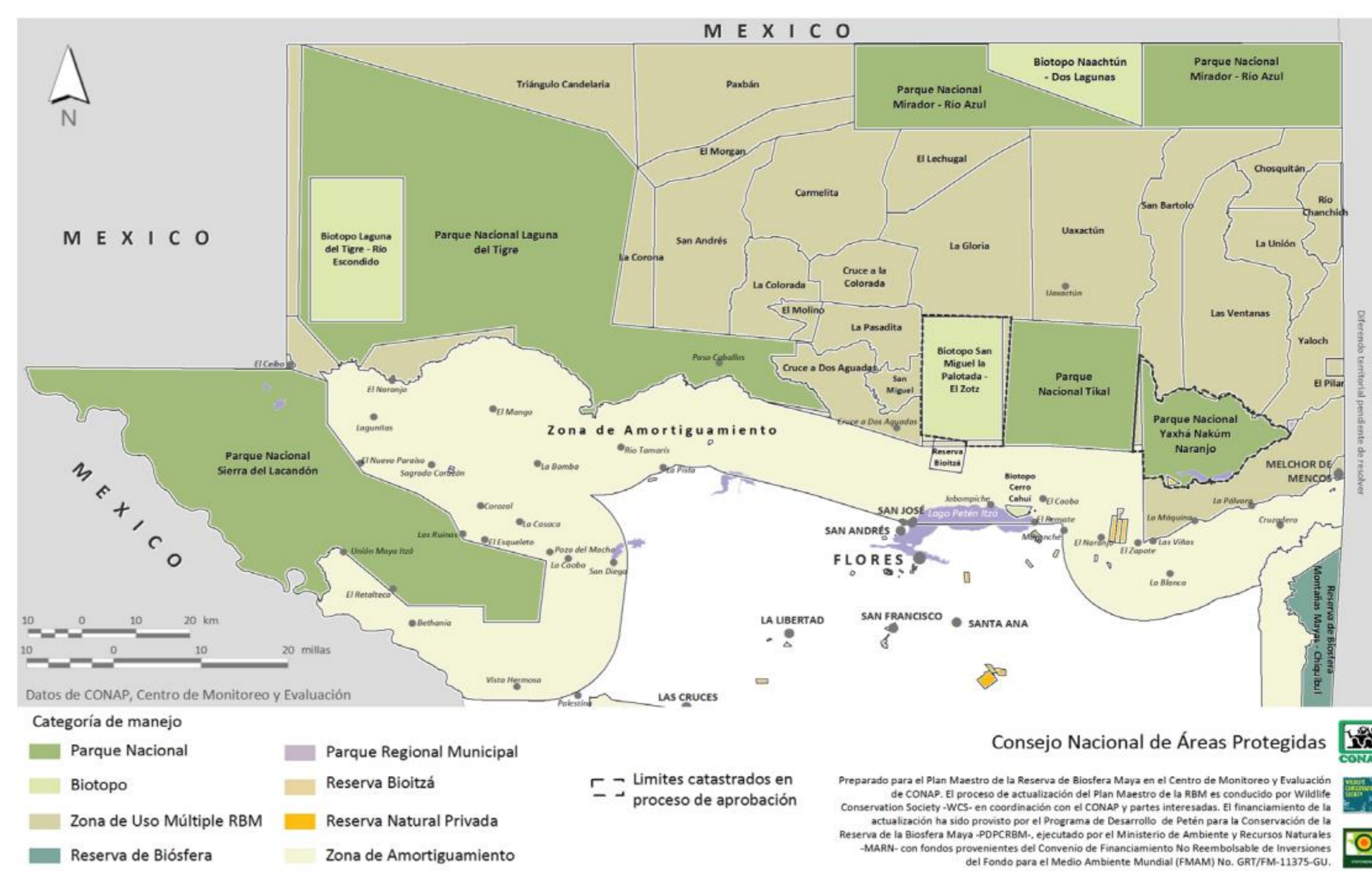


Figure 1. Maya Biosphere Reserve limits and management categories. Source: CONAP, 2017.

Conclusions

- Climate factors seem to be affecting wild production. Evaluating climate change effects on plant physiology and increase forest enrichment in protected areas is recommended to increase supply flows from the reserve. The feasibility of establishing plantations outside of the reserve must be assessed. Higher potential for the species is found at the buffering zones.
- Market concentration and potential substitutes may have favored the highly unequal value distribution along the chain. Higher prices and increased supply at the source will be necessary for the activity to provide sufficient income to the families during the harvest season.
- Establishing additional drying centers in high production areas is recommended to reduce transport costs and increase captured value for the cooperatives.
- In spite of high demand, lack of sectorial coordination and availability of reliable information for potential customers hinders the development of the value chain.
- Exploration of oleoresin and other markets at national and regional level is recommended to increase market outlets for the product.

Further Reading

- Charry, A., Claros, L., Wiegel, J. (2023). Perfil del mercado y de la cadena de la pimienta gorda (*Pimenta dioica*) en Petén, Guatemala. International Center for Tropical Agriculture (CIAT). Unpublished.
- USAID-ACCESO. (2011). *The Market for Allspice*. Market Survey #01.

Acknowledgments



This publication has been produced with the financial support of the European Union. Its content is the sole responsibility of the authors and does not necessarily reflect the views of the European Union.