

# Traditional charcoal production in agroforestry systems: What can we learn from global experiences?

Yeyetsi F. Maldonado Caballero<sup>1</sup>, Karen Kainer<sup>2</sup>, Citlalli López Binnquist<sup>3</sup> & Glenn Galloway<sup>1</sup>

<sup>1</sup>Master of Sustainable Development Practice, University of Florida

<sup>2</sup>School of Forest Resources and Conservation and Center for Latin American Studies, University of Florida

<sup>3</sup>Centro de Investigaciones Tropicales, Universidad Veracruzana

## Introduction

- More than **2.4 billion** people rely on the traditional use of firewood and charcoal worldwide.
- Fuelwood is considered one of the main drivers of deforestation.
- **Agroforestry systems** are managed areas that integrate trees into agricultural landscapes. These trees are a sustainable source of fuelwood.
- It is vital to revalue the importance of these systems for biodiversity conservation, protection of traditional ecological knowledge, energy security, and rural livelihoods.

## Sustainability

Charcoal production and consumption have multiple social, economic, and environmental impacts that are closely linked to at least eight of the Sustainable Development Goals. For example:



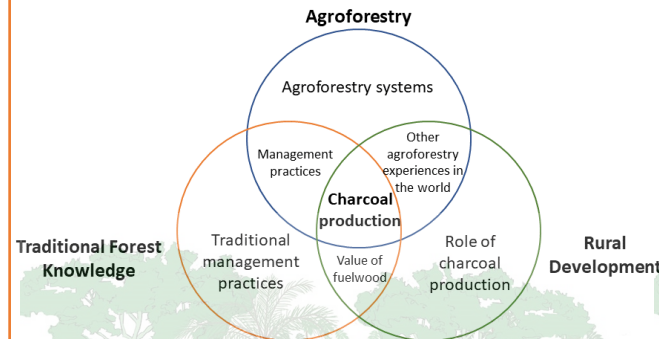
## Results

- In addition to charcoal, tree species provide other valued local resources.
- The use of these systems for charcoal production diminished in the middle of the 20th century. The most common causes were accessibility to fossil fuels, more labor intensive, mechanization of agriculture, and migration to urban areas.
- There is an increasing demand for charcoal from urban areas.
- Production of charcoal in these systems is important for forest conservation, energy security, and rural livelihoods.

## General Objective

Highlight global agroforestry experiences and management techniques for charcoal production.

## Framework



(Modified from Lopez-Binnquist, Gerez-Fernandez, & Cerdan 2017).

## What is next?

The results of the literature review will be integrated into a flipbook. This flipbook will be discussed and evaluated by college students from Sierra de Zongolica, Mexico.

## Methods

Literature review of scientific journals, books, and gray literature. The selection criteria for was based on content focused on agroforestry systems used for charcoal production.

## Conclusions

- The valuation of agroforestry systems and the knowledge associated with them are key to their preservation.
- Charcoal produced in these systems can be a sustainable source of energy.

## References

- FAO (2017). The Charcoal Transition: greening the charcoal value chain to mitigate climate change and improve local livelihoods. Food and Agriculture Organization of the United Nations.
- Lopez-Binnquist, C., Gerez-Fernandez, P., & Cerdan, C. (2017). La producción tradicional de carbón vegetal en la Sierra de Zongolica : un enfoque socioambiental. Informe Semestral (Enero-Junio 2017) Proyecto Carbon En La Sierra de Zongolica.