

Knowledge and Practices for Pollinator Conservation and Sustainable Land Management in the Eburu Ecosystem

Kenya



2024

TABLE OF CONTENTS

Introduction	1
Bee facts in Kenya	2
Pollinator floral resources.....	3
Nesting sites.....	4
Bee keeping for honey production in Eburu forest..	5
Ogiek cultural practices of honey harvesting.....	6
Bee products and uses of honey.....	7
Land degradation neutrality	8
Hedgerows - An approach to biodiversity conservation in farms.....	9
Local practices enhancing land and soil management ...	10
Approaches towards nature conservation in farms.....	11

Acknowledgements

The Kenya National Trialogue (KNT) is a network of policy, science and practice communities formed after the [Anglophone Africa Regional Trialogue](#) convened by the Biodiversity and Ecosystem Services Network (BES-Net) in May 2019 in Nairobi.

The objective of the Trialogue was to raise awareness and promote the application of the findings of the interlinked assessments produced by the [Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services \(IPBES\)](#) on pollinators, pollination and food production as well as on land degradation and restoration.

Following the Regional Trialogue, KNT was formed to promote national action towards pollinator-friendly sustainable land management. KNT is domiciled at the Ministry of Environment, Climate Change and Forestry. Current members of the KNT secretariat include the Kenya Forestry Research Institute, the National Museums of Kenya, the Kenya Plant Health Inspectorate Service, and the Ogiek Peoples' Development Program. KNT activities are coordinated by the United Nations Development Programme Kenya office.

[BES-Net](#) works to build capacity and accelerate coordinated action of policymakers, scientists and practitioners for biodiversity and ecosystems conservation worldwide, supporting countries in translating the latest IPBES products into tangible action at regional, national and local levels to help deliver healthier and more resilient ecosystems.



This photo essay and the views in it do not necessarily reflect the opinions or views of the implementing, BES-Net partners and the donor.

Introduction

This photo essay showcases in pictorial form the Indigenous and local knowledge and good practices of pollinator conservation and land management in the Eburu ecosystem, Nakuru County, in Kenya.

The good practices were captured through a community-led walking workshop held in Eburu from 29 September to 1 October 2022 led by KNT in collaboration with the BES-Net consortium partners of the United Nations Educational, Scientific and Cultural Organization and the United Nations Development Programme.

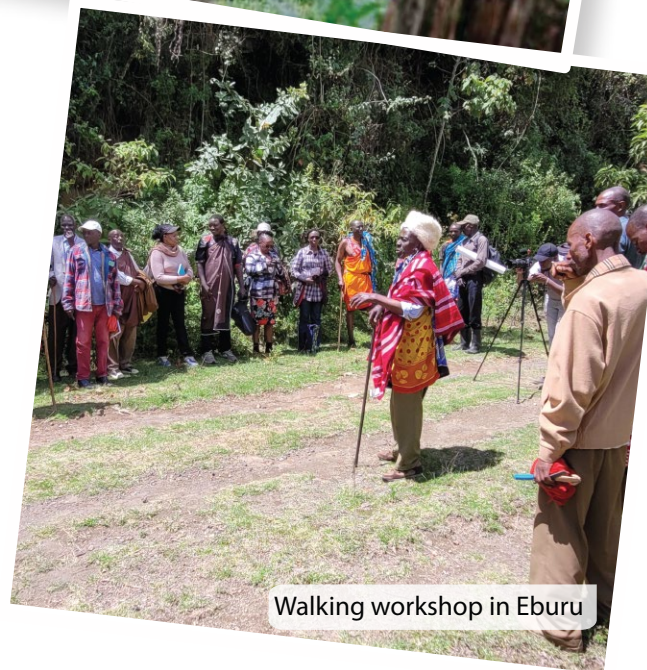
The overall aim of the walking workshop was to strengthen KNT's knowledge platform for effective production, coordination and exchange of biodiversity and ecosystem services information by weaving multiple knowledge systems, and thereby to contribute to Kenya's efforts towards land degradation neutrality and pollinator conservation, which in turn promote and enable living in harmony with nature.



Endangered Mountain Bongo



Steam shrine in Eburu



Walking workshop in Eburu



Geothermal power plant near Eburu forest

Bee facts in Kenya

Values of bees and bee products

- Honey produced by bees is used as food by different communities, e.g. eaten raw or included in beverages.
- Honey is used as medicine, ingested or topical application.
- Honey is used in many cultural ceremonies by different communities, e.g. in traditional marriage.
- Bees are essential pollinators, and in some instances commercial pollination services are reported.
- Beekeeping has increasingly been promoted as livelihood that works in harmony with nature as a source of food and income.

Bee status and trends

- Beekeeping can be traced to the migration and settlement of communities in Kenya. Indigenous communities, such as Ogiek, are estimated to have handled bees as early as 2000 BC.
- Modern beekeeping in Kenya started in the 1960s. Kenya produces about 100,000 metric tons of honey annually. This accounts for only 20% of the country's potential. 80% of the honey comes from the traditional log hive.
- Three sub-species of honey bees that have been documented in Kenya:
 - Apis mellifera manticola*
 - Apis mellifera litorea*
 - Apis mellifera scutellata*
- The country has high potential in honey production as 70–80% of its land mass is classified as arid and semi-arid lands, which have an abundance of bee flora.



Threats to bees

- In Kenya, bees are threatened by:
- Pesticides and agrochemical use
 - Land use change, deforestation and habitat loss resulting in reduction of bee floral resources
 - Invasive species/locust invasions

Pollinator floral resources



Nesting sites



Dombeya torrida



Crotalaria spp



Grass flowering



Plectranthus barbatus



Maesa lanceolata

Forage and nesting sites for bees and other pollinators

Bee keeping for honey production in Eburu forest



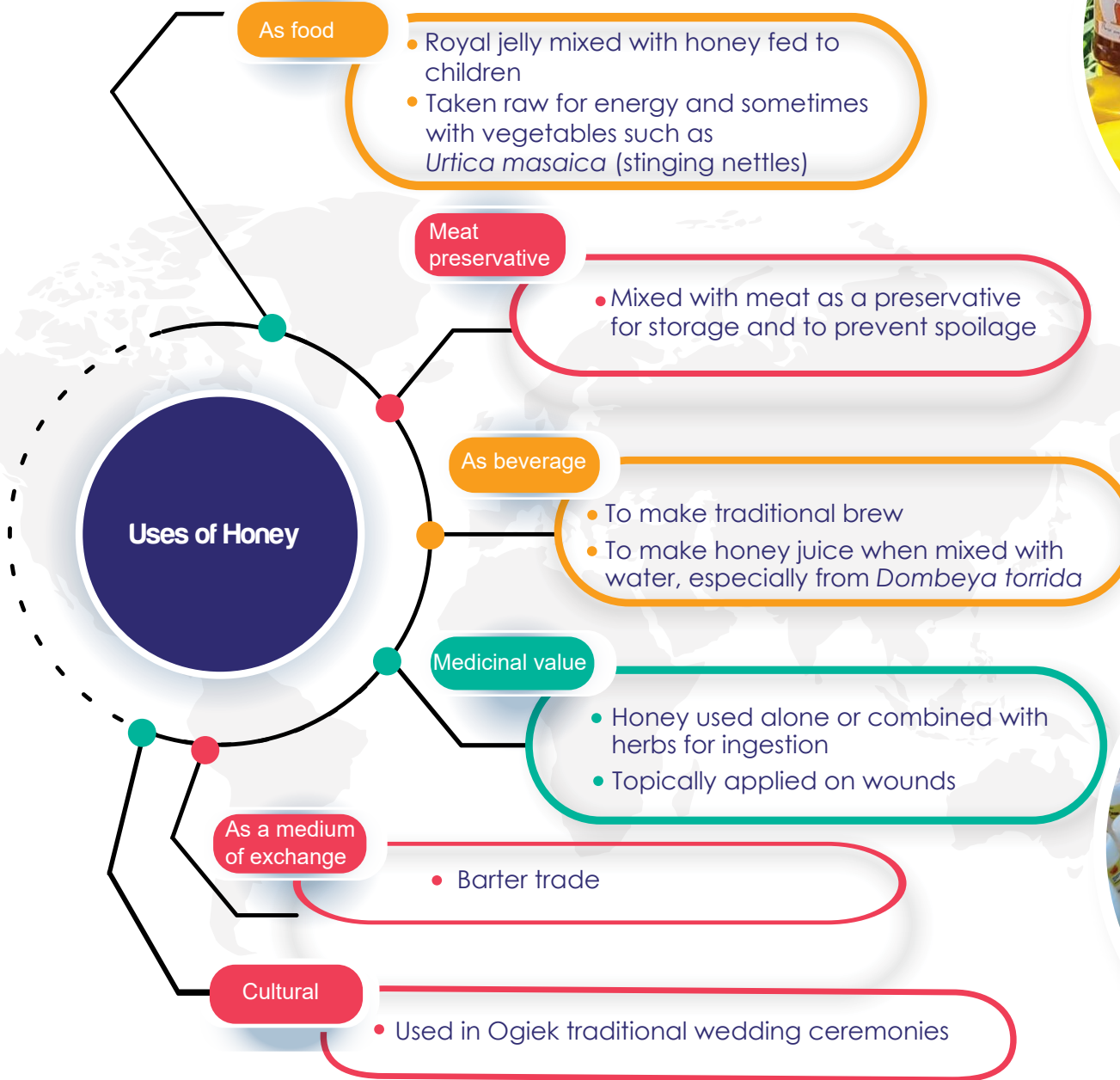
Common beehives in Eburu: Kikuyu hive, Ogiek log hive and the conventional Top bar hive. Honeybees are major pollinators in Eburu farmland.

Ogiek cultural practices of honey harvesting



Honey harvesting involving fire making, preparation of the bee smoker, lowering of the hive and extracting of honey. Honey harvesting is mostly carried out in the morning or late in the evening when the bees are calm. However, it can sometimes be carried out at other hours of the day during cold weather as this helps calm the bees.

Bee products and uses of honey in Eburu



Land use and conservation practices on farms



- a. Eburu forest - impact of land degradation viewed from Ole Sirwa
- b. Eburu forest - Land use practices in Songoroi



- c. Eburu forest - loss of vegetation in Ole Sirwa landscape
- d. Farming practices to minimize soil erosion at a community member's farm
- e. Mixed cropping



Hedgerows - an approach on biodiversity conservation in farms



Aloe Species



Carnissa Spinarum

Mixed species hedgerows



Caesalpinia decapetala



Plectranthus barbatus

Hedgerows

- Support pest control
- Provide windbreaks
- Storing carbon and reducing impact of climate change
- Provide soil stability, reduce soil erosion and regulate surface runoff
- Forage and habitat for pollinators

Local practices enhancing land and soil management



Agro-forestry



Cover crop sweet potatoes vines



Trash line



Fallow system

Terraces

Soil conservation measures to prevent soil erosion and increase infiltration

Approaches towards nature conservation in farms



Mixed/integrated farm practices



Agroforestry, hedgerows, inter-cropping and keystone species



Developed by

Indigenous Peoples & Local Communities in Eburu



In partnership with



Supported by:



based on a decision of the German Bundestag

Contribution by: **Kenya National Trialogue and BES-Net**

Peris Kariuki, John Samorai, Joseph Karanja, Washington Ayiemba, Marlyn Omondi, Mercy Gichora, Wanja Kinuthia and Mary Guantai

Photography credit: **Kenya National Trialogue**

Designed by: Stephen Maina