



THINK NAMIBIA
Sustainable Forest
Management

FOREST ECOSYSTEM SERVICES

POSTER #1

WHAT ARE FOREST ECOSYSTEM SERVICES?

Forest Ecosystem Services are the direct and indirect benefits that are obtained from forests. They can be described as having **direct use value** (directly using forest products, such as collecting fruits) or **indirect use values** (benefits from the forest functions that are beneficial without direct interaction, such as climate regulation). Forest Ecosystem Services are classified into four categories, namely **provisioning, supporting, regulating, and cultural services**.

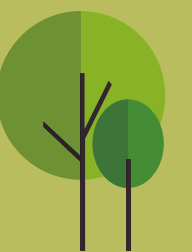
It is estimated that there are about 2 tonnes/ha of carbon stock in the forests of northern Namibia and about 97 tonnes/ha of above ground biomass.

There are an estimated 24.07 m³/ha of growing stock in the natural forests of Namibia.



It is estimated that by 2034 the value of standing forest resources is:

- 10.2 million m³ of fuel wood
- 2 million of m³ of poles
- 634 million m³ of timber
- 5,857 m³ of non-timber forest produce



Namibian forest biomass acts as a carbon sink and sequesters 10,560 Gg of Carbon Dioxide (1 Gg=1,000 tonnes) per year.

The Namibian forestry sector employs about 5,600 people in rural and urban areas.



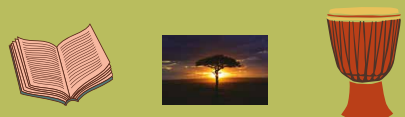
Community Forests on average generate N\$ 100,000 per year. With 43 registered Community Forests in Namibia, this amounts to N\$ 4,300,000 in the Community Forests sector.



CATEGORIES OF FOREST ECOSYSTEM SERVICES

CULTURAL SERVICES

Environmental services that help enrich the lives of people:



- Spiritual value
- Aesthetic value
- Educational value
- Recreational value
- Sense of place
- Cultural heritage

REGULATING SERVICES

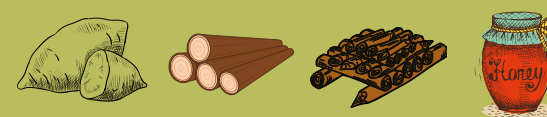
Services that result from the regulation of ecosystem processes and the environment:



- Climate regulation
- Carbon sequestration
- Flood regulation
- Water purification
- Pollination

PROVISIONING SERVICES

Services in the form of products that are collected from the ecosystem:



- Food (fruits, tubers, and honey)
- Fresh water
- Fuel, wood
- Building materials

SUPPORTING SERVICES

Services that allow for other ecological functions to occur:



- Biomass production
- Habitat provision
- Nutrient cycling
- Soil formation

ENVIRONMENTAL IMPORTANCE OF ECOSYSTEM SERVICES

Forests are important in their support of local biological diversity and climate regulation. Climate change threatens Namibia, already the most arid country in southern Africa, with increasing desertification, is susceptible to the impacts of climate change. The country's forest resources are important in helping to reduce the impacts of climate change.

SOCIAL IMPORTANCE OF ECOSYSTEM SERVICES

Rural communities in Namibia are largely dependent on forest resources for their day to day provisions. Most traditional houses or homesteads in the northern part of the country are built with wood, thatch and reeds. Several cultural practices involve the use of specific plants. The commercialisation of forest resources further encourages social cohesion and empowers women in rural communities by giving them opportunities to generate an income.

ECONOMIC IMPORTANCE OF ECOSYSTEM SERVICES

In central Namibia, a land degradation problem in the form of bush encroachment has created a N\$ 160 million charcoal industry that employs around 6,000 people and produces over 120,000 tonnes of FSC (Forest Stewardship Council) certified charcoal annually. The Namibian charcoal sector is internationally recognised as producing the cleanest charcoal in the world owing to the producers' adherence to standards and regulations.

'Promoting Sustainable Forest Management in the Kavango-Zambezi-Region in Namibia'



Hanns Seidel Foundation
This project is funded by the European Union



Author: Miya Kabajani
July 2021

This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of the Hanns Seidel Foundation (HSF) Namibia and the Desert Research Foundation of Namibia (DRFN) and do not necessarily reflect the views of the European Union.

FOR MORE INFORMATION CONTACT THE NSFM-PROJECT:

Hanns Seidel Foundation (HSF) Namibia, House of Democracy
70-72 Dr Frans Indongo Street, Windhoek West; P.O. Box 90912, Klein Windhoek, Windhoek, Namibia

Tel: +264 (0) 61 237 373 Email: sustainability@hsf.org.na www.thinknamibia.org.na

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