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**KOMBOUW WOOD (*Ficus nodosa Teijism. & Binned*)  
WHICH IS ECONOMIC VALUE FROM SENTANI,  
JAYAPURA DISTRICT,  
PAPUA PROVINCE, INDONESIA**

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**Abstract**

*Ficus nodosa Teijism & Binned* is a type of tropical wood that grows and develops around Lake Sentani. The bark of the tree is used as a work of art for the manufacture of handbags by the Sentani indigenous people. This plant reproduces using seeds and is very easy to reproduce. However, considering the high utilization by stripping the bark, it is important to conserve this tree vegetation so that it does not become extinct.

**Keywords:** *Ficus nodosa Teijism & Binned.*, tree vegetation, bark, Sentani indigenous people

## **Introduction**

Many of us don't know much about the types of wood in Papua which have high economic value so they can be used for daily purposes but as part of the natural wealth products that we can enjoy and pass on to our children and grandchildren in the future in the form of a cultural heritage that can be inherited. peerless. This knowledge inheritance is often known as "local wisdom" or local wisdom. Many of our forests in Papua have potential that can be exploited such as Kayu Kombouw or Ficus nodosa Tejjism & Binned. Kombouw wood is a local name by the Sentani community.

Kombouw wood is a type of tree vegetation that is widely used for its bark for making handbags and as arts and cultural crafts with high artistic and cultural value. Currently the bag product has been commercialized as one of the best-selling souvenirs in the market. The high utilization of the wood with a lot of taking the bark, so it is feared that it could threaten the sustainability of the wood in the future. For this reason, it is important to carry out species conservation efforts in order to preserve the Kombouw wood species. The importance of studying the chemical and biological aspects of vegetation is important for the preservation of plant species (Perevozchikov. 2017)

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aspect for the Sentani community. Efforts to conserve tree vegetation are important at this time.

## **Ecology of Kombouw Wood**



**Figure 1. Profile of Kombouw (*Ficus nodosa* Teijism & Binned)**

Kombow wood grows and spreads naturally in lowland forests with an altitude of 3-500 meters above sea level. Lives in rocky, clay, and sandy areas in Papua. In the forest area of the Gunung Meja Natural Tourism Park, Manokwari, West Papua, namely: in primary and secondary forests with an altitude of 50-160 m above sea level and grows on various types of soil but is very rarely found on calcareous or rocky soils (Lekitoo et al, 2008). Kombouw wood also grows well and evenly along the coast of Lake Sentani to the buffer zone of the Cycloops Mountains Nature Reserve. Kombouw's growing area ranges from lowlands, highlands to hilly areas. Rocky and loamy soil types are the growing zones for this type of Kombouw.

## **Community Utilization**

Sentani people use kombouw wood, which is the bark, to make bags and household furniture. The bark is taken from the fiber and carved and usually exhibited or sold during the Lake Sentani Festival (FDS) and is gaining popularity. Now, these wood products have also been

sold in souvenir shops (Art Shops) in the City and District of Jayapura. In the future, kombouw wood can be used more widely so that it is possible to penetrate foreign markets. Tree vegetation can provide benefits for reducing emissions by 37% for Nitrogen dioxide (NO<sub>2</sub>) and 6% for Ammonia (NH<sub>3</sub>) (Jones et al, 2018). Pinto et al (2018) explained in their research that communities can improve their welfare by managing forests through the development of environmental services.

### **Land conversion and shifting cultivation endanger Kombouw .'s existence**

The increasing use of land for residential activities and the construction of road and building infrastructure has resulted in many conversions to forests and land. In addition, the high community activity in shifting cultivation activities by cutting and burning forests around the Buffer Area which is currently a trend for some time can also jeopardize the regeneration power of Kombouw to grow and develop both in primary and secondary forests. The attack on pests and diseases is a natural factor that is also likely to occur. *Amarasca bigutulla bigutullaa* is an important sucking pest of the okra crop. An experimental study was conducted during 2018 to check the comparative toxicity of nitenpyrem and neem oil against jassid under okra field conditions (Sajid et al 2021). Antoh and Raunsay (2019) need to preserve the Cycloop nature reserve with biodiversity through the development of a yard landscape to reduce pressure on the land. This condition encourages people to be more careful about the future of this wood in the future.

### **Kombouw Preservation**

The kombouw tree has a high regeneration power when compared to other plant species around the Cycloops Buffer. Kombouw grows and reproduces using seeds. However, increasing land use can be a concern for this species. Therefore, Kombouw conservation activities also need to be accommodated by seeding and preparing planting sites for Kombouw conservation in the future. For this reason, from now on we must think about species that have an economic impact on the lives of local people, but there is also a need for in-depth studies to examine how these species can be cultivated in the future. Understanding the character of the species becomes important in conservation efforts of tree vegetation types (Baycheva et al. 2018).

## Conclusion

Kombouw wood is a vegetation that has known benefits. It is necessary for the Kombouw Tree to be protected for its sustainability so that its use can be sustainable from generation to generation.

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## References

- [1] Antoh AA., Raunsay EK. 2019. Diversity of Yard Plants in the Buffer Zone of the Cycloop Nature Reserve, Jayapura City, Papua Province, Indonesia. *AAB Bioflux*, 11 (3),Pp157-161. <http://www.aab.bioflux.com.ro/docs/2019.157-161.pdf>
- [2] Baycheva O., Samaliev H., Udalova Z., Trayanov K., Zinovieva S., Folma G., 2018. Selenium and Its Effect on Plant-Parasite System *Meloidogyne Arenaria-Tyny Tim* Tomatoes. *Bulagrian Journal of Agricultural Science* 24 (2), Pp 252-258. <https://www.agrojournal.org/24/02-11.pdf>
- [3] Jones L., Alice., Jane H., Gina M., Allan P., Michael C. 2018. Valuing Improvement in Biodiversity Due to Controls on Atmospheric Nitrogen Pollution. *Ecological Economics*, Pp152, 358-366. <https://doi.org/10.1016/j.ecolecon.2018.06.010>
- [4] Lekito K., Matani OPM., Remetwa H., Heatubun CD., 2008. Keanekaragaman Flora Taman Wisata Alam Gunung Meja Papua Barat. Perbit Balai penelitian Kehutanan Manokwari. Pp 68.
- [5] Perevozchikov A., Batanov S., Atnabaeva N., 2017. The use of Vitamin-Mineral Preparation in the Feeding of Sows for Reproduction Level. *Bulagrian Journal of Agricultural Science*, 23 (2), Pp 298-303. <https://www.agrojournal.org/23/02-18.pdf>
- [6] Pinto HNA., Joseph EH., Peter N., Rafael FB. 2018. Economic Impacts of Payments for Environment Services on Livelihoods of Agro-Extractivist Communities in the Brazilian Amazon. *Ecological Economic*, 152,378-388. <https://doi.org/10.1016/j.ecolecon.2018.05.016>

- [7] Sajid, Z., M.A. Ul Haq, Q. Farooq, Y. Sultan, U. Sher, M. Tayyeb and M. Ramzan. 2021. Comparative Toxicity of Nitenpyrem and Neem Oil Against *Amrasca biguttula biguttula* in Okra. Arab Journal of Plant Protection, 39(3): 210-214. <https://doi.org/10.22268/AJPP-039.3.210214>