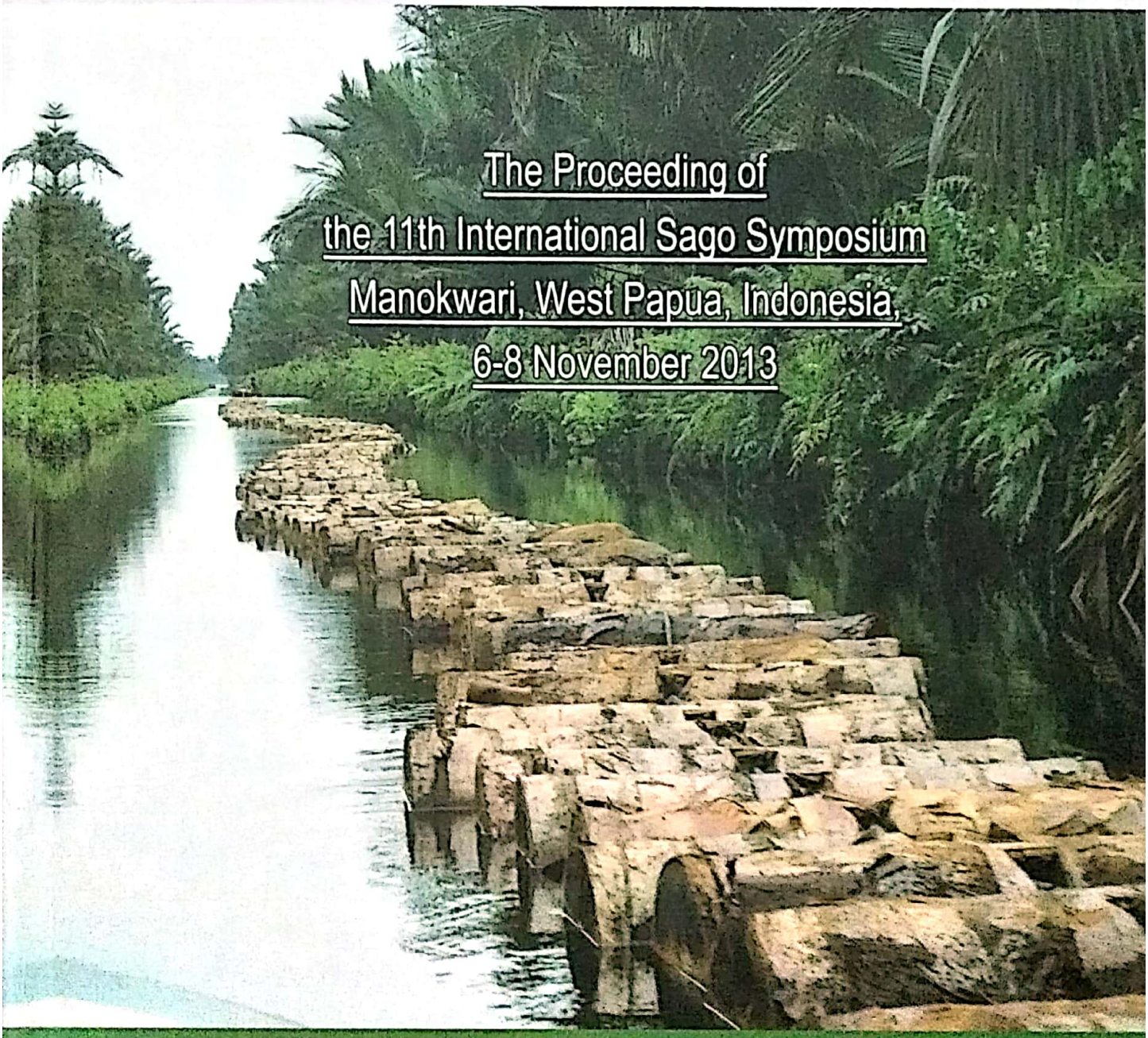
Unleashing Sago

Hidden Treasure of the World



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Edited by

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CONTENT

Sago Forest in Vogelkoop; Wildlife Habitat and Hunting System

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ABSTRACT

Sago forest in Papua is very widely distributed. In vogelkoop, especially Kebar, Maibrat and South Sorong, sago forest is natural habitat of some mammals such as Wildboar (Sus sp), Deer (Cervus timorensis) and Cuscus (Phalanger sp, Spilocuscus sp), fruits bats (Dobsonia sp, Pteropus sp) and reptiles such as Crocodylus spp. This paper aims to explore the simple relation of Sago forest, wildlife habitat and hunting activity of locals. The existence of mammals such as Cervus timorensis, Sus sp. has been contributing for economics of locals. In Kebar, Maibrat and South Sorong for instance, sago forest is the main hunting area. Generally, sago forest is used by wild boar species as a feeding ground, while on other hand; locals are using this forest as hunting area to hunt the wild boar using traditional weapons. The mature sago trees are left until it fell down. After one month; the sago starch will be melted, and it will be eaten by sago caterpillar as a feed. Caterpillar then will be eaten by wild boar, and wild boar will be hunted by local people. This situation can explain how the contribution of sago forest for livelihood of local people on indirect way.

Key words. Sago forest, Wild life habitat and wilidlife hunting.

INTRODUCTION

Sa*go forest* can be seen as natural resource that has important contribution to ecology, economic, and social culture of community around it. Basically, Sago (*Metroxylon* sp.) is one of the food sources of people in eastern part of Indonesia, especially in Papua, Moluccas, Sulawesi, and also some areas in Borneo and Riau. This plant is a staple food of Papua and Moluccas people.

Sago tree is a part of palm species which grow near a swamp forest, very close to mangrove area in tropical area. Sago plants grow on muddy land, mixed with water. Sago growths depend on the puddies on the land. Flach (1997) mentioned that sago can grow on dry land from 0-700 above sea level. It was explained furthermore that, sago grow better on a muddy land, containing mineral and organic matter. Sago trees also can clump and each clump consist of several phase.

Naturally, sago has strongest adaptation on marginal land and therefore it can become a conservative species not only for the soil but also for water (Suryana, 2007). Economically, sago tree produced starch. Starch is used for food product; therefore, it can be used as strategic food resources in a crisis as well as to reduce the dependency of community to rice. Sago can drive economic aspects of the locals when managed and developed in a proper way. Current situation shows that sago utilization is not only for economic of local people but also as basic material of food and non food (paper and textile) industry.

As a food source, sago starch is used as staple food of people in eastern Indonesia, especially in Moluccas and Papua. Therefore sago flour has been processed into noodles, bread, and other products. The other product of sago is dregs. Dregs can be used as animal feed, caterpillar and sago mushrooms. This mushrooms is used as vegetable protein source, sago leaf was used as roof material as well, while the trunk is used as floor for anchored house in coastal and estuarial area. In addition, it can also be used for hunting, gathering and till fishing.

Culturally, sago forest also has a cultural and social value in Papua. In Papua, it was known "kawasan dusun sagu – sago hamlet" which is controlled by traditional community. The ownership of sago trees are based on communal system. The borders of sago areas are also based on natural sign, such as river, mountain, valley, big trees, etc. Planting sago tree is also part of traditional culture. The traditional community has been planting sago for a long time. Despite only a small activity, traditional communities are very often carried sago when moving from one place to the other. The reason carrying the sago is to plant this species. Based on the social and cultural aspects above, it's very important for company to involved local inhabitants while extracting sago.

WIDESPREAD OF SAGO FOREST

Sago vegetation in Indonesia was distributed from Sumatera, Java, Borneo, Sulawesi, Moluccas, and Papua. Flach (1997) cited by Karafier (2007) mentioned that sago forest in Indonesia was one of the biggest in the world, namely 1.398.000 hectares (56,5%) of total of forest sago in the world. It is consist of 1.250.000 hectares of natural sago forest and 148.000 hectares of sago plantation. Sago in Papua can be found in

Jayapura (Sentani), Merauke, Mamberamo, Keerom and Sarmi, Salawati, Bintuni, Inanwatan, Maibrat and Fak-Fak. However, the total of sago area is still not identified yet. Based on estimation data, around 1.214.000 hectares of sago in Papua is consisted of 1.200.000 hectares of natural sago forest and nearly 14.000 hectares of sago plantation, Kertopermono (1996) cited by Barahima (2006), exposed that the total of sago forest in Papua was 1.406.469 hectares. The differences of total sago on the two group of author above could be due to estimation method. In addition, although the total of sago forest is dissimilar, nearly 90% - 92% of sago total belongs to Papua.

SAGO SPECIES

Generally, sago species were classified into two groups, one which bloom and bear fruit once and one which bloom and bear fruit twice. The first category has a high content of starch. This group consists of *Metroxylon rumpii* Martius, *M. sagos* Rottb, *M. sylvester* Martinus, *M. longispimum* Martinus and *M. micracantum* Martinus. According to Tokede and Fere (1997), *Metroxylon rumpii* Martius is a species that grown in all over Papua. There were 30 sago species in Papua which identified by Balai Penelitian Tanaman Kelapa dan Palma, it were reported that, 20 species of Sentani (9 species of spines sago and 11 species of non spines), 2 species of Manokwari, 8 species of Sorong (Suryana, 2007). Widjono *et al.* (2000) cited by Suryana (2007) mentioned that there are 61 sago species in Papua, which is consist of accession/cultivar of Jayapura, 14 accesion of Manokwari, 9 accession/cultivar of Sorong and 3 accession/cultivar of Merauke.

TRADITIONAL COMMUNITY AND SAGO FOREST RELATION PATTERN

An important function of forest as a resource is to provide a variety of forest products to support the traditional community life. One of these is 'Non Timber Forest Products' (NTFP), which provide a great contribution to human life, to both minimize ecological risks and enhance the economic households of the traditional societies (Arnold & Perez, 2001). Miah (2003) asserts that approximately 80% of people in developing countries use forest products as food and personal care. Furthermore, Belcher & Kuster (2004) inform that communities depend on varieties of forest products in both plants and animals, which are directly used as a consumption product in the household and a sale product for the market.

Sago forests in Papua have a close and dynamic relationship with the traditional community. In Vogelkoop, it can be look at as a natural resource that consists of;

- **Sago forest as habitat of plant and animals**

Our observation and literature study noted that sago forest was used as habitat of wildlife animals and plants. Naturally, some plants in sago forest contribute to support the existence of sago resources. In Kebar valley, South Sorong and Maybrat, nearly 60 % is occupied of wild boar (Sus sp), Deer (*Cervus timorensis*), Monitor lizard (*Varanus* sp) and *Crocodylus* sp). Those species frequently visited and used this ecosystem, for foraging, reproduction, play and hiding from predator.

Figure 1. Sago forest and wildlife animal, *Cervus timorensis*.

Based on our observation, it was seen that in South Sorong Selatan, arboreal mammals species: Cuscus timor (*Phalanger orientalis*), Spotted cuscus (*Spilocuscus maculatus*) used sago forest for foraging and habitat. Another species which used and occupied this forest are wild boar (*Sus* sp). It used sago forest as foraging area because of the availability of caterpillar (*Rhynchophorus sp)* species of sago tress. Sago that has fell down will be left by community for 1-2 two month, following that, the starch of the fallen trees are used by caterpillar as their habitat. The availability of sago caterpillar (*Rhynchophorus sp.)* is becoming a feed for species, like mammals and reptile.

- **Sago forest as gathering area of wild plants.**

In Papua, sago forest can be seen as attraction and gathering area of traditional community. The community regularly, harvested certain species of plant from sago forest for food material, vegetables and others. Communities in Kebar, South Sorong and Maibrat pick some species of ferns such as *Achrosticum aureum, Inocarpus vagiverus, Ficus tracypison.*

Figure 2. Fern (Achrosticum sp) species in Sago forest.

- **Sago forest as hunting area**

Traditional people in South Sorong, Kebar and Maibrat used sago forest for hunting purposes. Big mammals such as wild boar (*Sus* sp), Cuscus Timor (*Phalanger orientalis)* and spotted cuscus (*Spilocuscus maculatus*), Reptiles such as (*Crocodylus* sp) Monitor Lizard (*Varanus* sp) are the targets of hunting activities. Hunting methods of communities in Kebar, South Sorong and Maibrat are using dog as hunter, snare, and hunting with camouflage. **Lee (2000)** stated that hunting activity can be distinguished to be two types.

Figure 3. Hunter and hunting results wild boar (*Sus* sp) and Deer (*Cervus timorensis*) from sago forest.

Active hunting, According to Lee (2000), hunting activities can be classified into two groups: active hunting and passive hunting. Active hunting is the type of hunting that requires a lot of energy, strength and time to capture the prey. On the other hand, **passive hunting** only requires a short amount of time and the ideas to design and install the traps on the ground. Usually, after setting the trap, the hunters will wait until the prey trapped. In the those area above, the communities use both of these methods

- **Other value of sago forest.**

If we look at the sago forest deeper, it can be identified other economic value of sago, not only as food sources but also as holistic system of ecology. When sago is cut and extraction is done for starch production, the dregs of sago are dropped by community. When the dregs are dropped, it will be media for mushrooms (*Volvariella* sp.) to grow. Generally, the species of *Volvariella* sp. has suitable habitat of dregs. Traditional community often picks this condition on sago area for gathering these vegetables, these mushrooms was collected for personal and family consumption.

From the other perspective, Sago forest can be seen as holistic system of ecology process. Naturally, sago forest has been formulated based on supporting of estuarial area such as *creeks*. In South Sorong, Maibrat and Kebar, the creek which flow through sago forest, is known as habitat of fresh water biota. Freshwater biota such as eels, fishes and clams also shrimp. Traditional communities sometimes hunt for its freshwater biota depending on the weather. Mostly, hunting was conducted by "lobe". Lobe is a method for collection of Freshwater biota. Lobe is done by using traditional equipment such as pierced stick (kalawai-local name), Arrow and machete. Based on that activity it is known that the role of sago forest is not only for terrestrial species but also aquatic species. Thus, taking into account of the ecology, social culture and traditional economic, it is compulsory to have enough place on sago forest management planning in Papua.

Figure 4. Sago dregs after processing of traditional people.

According to De Beer and Dermod (1996), hunting, gathering and extracting forest products are the main characteristics of the methods used by traditional societies to maintain their life. Kuster and Belcher (2004) added that the main components of livelihood are divided into four sectors i.e. financial, social assets, physical, and human nature.

CONCLUSION

Existence of sago forest has become strategic position of traditional community in Papua. Therefore, management plant of sago forest should be able to synergize community relation with sago forest through economic productive activities. Development of natural sago forest management and sago plantation should be enabling the opportunities of traditional community for access and authority of sago forest in Papua.

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