The understudied mangrove palm *Nypa fruticans* (Thunb.) Wurmb.: which interactions exist between the Nypa forest and the local community in South Sumatra, Indonesia?

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Sumatra has the second largest mangrove areas in Indonesia, i.e. 19% of total mangrove and it is mainly located on the eastern side of the island (Giesen et al., 2006), notably in Banyuasin regency - South Sumatra (87.7% of total mangrove in South Sumatra) (Bakorsurtanal, 2009). Nypa fruticans (Thunb.) Wurmb. is one of the dominant species of mangroves in South Sumatra (Dennis *et* al., 2000; Forestry Department, 2006) and has an important role in the livelihood of local fisherfolk (Indriani, 2008). Due to transmigration programmes, plantations and agricultural expansion caused 80% high density swamp forest to become sparse in 1992, amongst others in Nypa forest in South Sumatra (Dennis et al., 2000; Ministry of Agriculture, 1982 in Ilman et al., 2011). The rapid mangrove loss and a lack of information on the relationship between local people and mangrove forests could threaten the sustainability of mangrove ecosystems. Therefore, information about the interaction and dependence of local communities on Nypa forest need to be prioritised in managing the mangrove ecosystems in South Sumatra in a sustainable way. The aim of this ongoing study is (1) to investigate the knowledge on Nypa uses, (2) the Nypa part used both for commercial and daily subsistence purposes, (3) the period in a lifetime that *Nypa* is used, and finally, (4) the respondent demography as background data. The study was conducted in twelve areas of four regencies (administrative divisions of the province) where Nypa had been reported to be used as traditional and commercial products. Data were collected by using semi-structured interview with questionnaires and visual observation by random sampling and was entered into SPSS v.20 to produce frequency tables. Chi-square tests were used to test the differences among the study areas. The study found out that Godong, Nipah and Pucuk were common local names that are being used based on type of Nypa leaf (mature or young) and related to final product. Utilisation as roof cover, food, cigarette wrapper and baskets were the most common local use of Nypa and this knowledge was transferred by parents. A majority of 72.6% of respondents was aware that Nypa was found in the mangrove ecosystem. Roof and wall filling were two common uses of Nypa as a daily use in the study areas. Nearly 60% of respondents used Nypa as source of livelihood. There were different commercial products of Nypa in different areas, including roof cover, cigarette wrapper and various baskets and sunhats. In addition, there were two main professions involved in Nypa harvesting, i.e. Nypa loggers and Nypa leaf craft makers. The interaction and dependence of local people on Nypa has been present for at least 83 years. The study showed that there was a strong interaction and dependence among local communities to Nypa forest both for daily needs and subsistence livelihood. Further research about the potential threat to Nypa as a subsistence product and to the sustainable Nypa forest utilisation will help to define sustainable management priorities for the mangrove ecosystem in South Sumatra.

References

Bakorsurtanal. 2009. Peta mangroves Indonesia (Indonesia mangrove map). Pusat survei sumber daya alam laut. 329p.

Dennis R.A., Y. Ruchiat, R.P. Permana, S. Suyanto, F. Kurniawan, P. Maus, F. Stole, and G. Applegate. 2000. The underlying causes and impacts of fires in Southeast Asia: Site 4. Musi Banyuasin, South Sumatra province. Indonesia. CIFOR. 43p.

Giesen W., S. Wulffraat, M. Zieren, and L. Scholten. 2006. Mangrove guidebook for Southeast Asia. FAO and Wetlands International. 186p.

Ilman M., I.T.C. Wibisono, and I.N.N.Suryadiputra. 2011. State of the art information on mangrove ecosystems in Indonesia. Wetlands International. Indonesia programme.58p.

Indriani D.P.2008. The potency of Nipah leaves craftmen (women) as motivators and decision makers in converservation of Nipah forest at South Sumatra province. Women in Public Sector. University of Gadjah Mada. Jogyakarta. p.631–641.