Birds in The Peat Swamp Rehabilitation Area in Sebangau National Park

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Background
Central Kalimantan has wide peat swamp land which has been damaged since the development of canal and made the water to flow out from the peat land to river, as the result peat land drying quickly and cause peat land subsidence, increasing of dry level and forest fire almost every year during dry season (Las., et al 2009, Suryadiputra et al., 2005). Land rehabilitation and canal blocking is the effort to improve the peat land ecosystem, and after years these activity show several evidence of improvement that can be identified by the richness of biodiversity, such as vegetation (Haapaalehto, 2010). The study in Tuanan area, Central Kalimantan by Posa (2011) and in north Selangor, Malaysia by Nee, et.al (1993) show the relation between vegetation succession and richness of birds species in peat swamp forest. In this study, two peat land condition that represent improvement after restoration and rehabilitation activity, and an area that didn’t had treatment are used to find richness of birds species in each.

Objectives
The aim of this study is to get data and information of birds in peat swamp rehabilitation area as a biodiversity indicator for ecosystem. Through this research, one indicator for improving rehabilitated peat swamp land can be explained by richness species number and population of birds by compare area that is improved after 6 years of treatment and area that did not have treatment.

Method
The research was conducted in SSI Research Station, Resort Mangkok, Sebangau National Park with Visual Encounter Survey (VES) method (Bismark, 2011). 3 lines representing different vegetation condition: rehabilitation area (A), natural succession (B) and open area (C), were observed for 5 days for each in the morning (5.30 - 9.30 am) and in the afternoon 15.00 - 18.30 pm). Every birds that had been seen was identified with Field Guide to the Birds of Borneo, Sumatra, Java, and Bali: The Greater Sunda Islands (Mckinnon, 1993). Every birds species and individual was counted and it was used to find the diversity index value of Shannon-Wiener.

Result
The result showed in all line are recorded 38 species of birds from 24 families. Line A was the line with highest number of species (28 species), followed by Line B (24 species) and Line C (13 species). Species diversity index in line A is higher (3.230341) rather than line B (2.469735) and Line C (3.051349). The higher diversity and abundance in line A was influenced by the vegetation condition which was abundant with pioneer species that supply much nectar and insect as birds’ weft.

Conclusion
The high of bird diversity index in the rehabilitation and natural succession site than open area that did not have treatment prove the rehabilitation process give positive effect to improve degraded peat swamp land.

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