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Wildlife conservation and sustainable tree crop plantations call for innovative planting designs

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Reforestation experiments and rehabilitation of riparian areas are key in retaining wildlife and improving local ecosystems in plantations-dominated landscapes [1; 2]. In parallel tree crop plantations are increasingly implementing agro-ecological approaches which rely on environmental services [3] thus asking for planting designs to change and integrate forest species. In the Sabah state of Malaysia, several groups including members of the PONGO (Palm Oil NGOs) Alliance have restored and reforested riparian areas for more than 10 years using native forest species including pioneer ones that quickly grow a canopy and fruit trees that provide food to wildlife.

In parallel, agricultural practices in plantations are changing as a response to growing social and environmental concerns. Plantation management increasingly relies on agro-environmental services, which means that basic agricultural functions such as soil preservation, pollination, or pest control can be performed by living organisms (plants, insects, microbes...) [3]. Changes in practices will have to involve new planting designs aimed at mixing selected forest species with plantation crops. A series of measurements will help in characterizing both the performance and the resilience of mixed agroforestry systems compared to traditional planting designs. Changes in wildlife diversity and abundance must be monitored together with the impact of agroforest designs on yields and resistance to both biotic and climatic stress



Wildlife is back to reforested riparian areas along Kinabatangan River in Sabah, Borneo island, Malaysia

Keywords: Agroforestry, Riparian areas, Wildlife, Tree crops, Oil palm.

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