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Title: The Role of Pioneer Vegetations in Accelerating The Process of Natural Succession

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Abstract: Problem Statement: Even though bioengineering technique has been regarded as one way to alleviate landslide and erosion problems, this process of revegetation is severely time consuming as the process of plant succession of the slopes may take decades or even hundreds of years. Approach: However, the process can be tremendously hastened by planting the right suitable pioneer species on the slopes. In this project, a natural succession experiment was conducted to determine the role of a potential slope colonizer, L. leucocephala, as a good pioneer in two years of observation. Results: In terms of the plant community, L. leucocephala had tremendously accelerated the plant succession of the slope. Within two years, 46 species comprising various species of grasses, shrubs and small trees colonized in the mixed culture treatment. The plant diversity increased drastically, about five (12 months) and eight fold (24 months) of its initial (0 month) diversity against 2.5 (12 months) and three fold (24 months) in the monoculture treatment. Related to this species-richness, LAI and biomass of the plant community was also enhanced in the mix-culture system. Conclusion: The results indicate that the species studied exhibits an outstanding pioneering characteristic by enhancing natural succession and the revegetation process which will be in turn, resulting in a more stable ecosystem.