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Vascular Plant Diversity of a Philippine Rainforest Fragment as a Potential for Local Land Rehabilitation

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Abstract

The global dimension of land degradation and its socio-economic consequences show that land rehabilitation is one of the most challenging tasks of our time. Although biodiversity issues are an important topic in reforestation as well as in agroforestry the species used are still few and mostly exotic.

The Philippines belong to the mega-diversity hotspots, but are at the same time one of the most seriously depleted tropical rain forest countries. The foothills of Mt. Pangasugan (1156 m) on the island of Leyte are exceptional for their rugged relief still harbors patches of lowland rain forest. The objective of this study was to assess their vascular plant species diversity and to evaluate the potential as seed bank for an alternative land rehabilitation concept ('rain-forestation').

Within 49 plots (100 m^2 each) 685 plant taxa have been encountered. That is about 8 % of the Philippine total. All five Philippine dipterocarp forest types as well as the Molave type were represented by typical tree species. 18 species of *Dipterocarpaceae* (Philippine mahogany) could be found. Legume species (4 spp.) — like rose wood (*Pterocarpus indicus*), or ebony (*Diospyros* spp.) produce valuable high grade timber. Other species are typical fruit trees (e.g. *Nephelium* spp.) or may be used for river bank stabilization (e.g. *Duabanga moluccana*, or *Terminalia microcarpa*). Besides trees other plant groups provide marketable products, like rattan (14 species) or some herbs which are searched for as medicinal plants (e.g. *Chloranthus erectus*).

The area harbors a pool of species providing a variety of goods and services and thus principally suited for land rehabilitation. The main obstacle to a successful cultivation will be the lack of ecological information, especially concerning site requirements and reproduction.

Keywords: Land rehabilitation, native species, seed source, rainforestation

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