

SILVICULTURAL INTERVENTIONS IN A TROPICAL MOUNTAIN FOREST IN SOUTHERN ECUADOR - DYNAMICS OF TREE REGENERATION

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Tropical mountain forests contain a high biodiversity and provide a variety of ecosystem services. However, they are also affected by unsustainable management, degradation and land use change. Therefore, concepts for sustainable management are urgently needed but little is known so far about the dynamics of tropical mountain forests and the impacts of management activities.

In 2004, a silvicultural experiment has been installed on an area of 13 ha in the tropical mountain forest of Southern Ecuador. Promising individuals of selected tree species have been released from their competitors in order to investigate the effects on the individual increment and stand dynamics. Moreover, improved light conditions are supposed to enhance the regeneration of trees and the development has been monitored over a period of ten years on 255 plots (2 x 2m) within the experimental area.

In general, the results show an increased abundance of tree regeneration after management activities, especially for different species of the genera *Inga* and *Miconia*. Other species like e.g. *Schefflera* sp. or *Dictyocaryum lamarckianum* showed a reduced abundance over time. However, no effects on the diversity of species have been detected and the increment rates (height and basal diameter) of tree regeneration have been positively affected by silvicultural treatments.

