

Hollow logs and logging residues from Deramakot Forest Reserve, Sabah, Malaysia

Abstract

To optimize the use of resources of Deramakot Forest Reserve, a model area for sustainable management of tropical forests in Sabah, Malaysia, a study on the utilization of hollow logs and other logging residues was initiated. In a pilot study, how much high quality timber can be extracted from trees regarded as hollow by the felling team of the logging contractor was evaluated. The amount of extractable timber considered as timber of low-quality (upper stem parts, top portions, big branches) was also determined. At the same time whether the chain saw method is a reliable method for the detection of hollow stems was tested.

Results of the study were as follows:

- Several trees, which the sawyer considered to be hollow on the basis of the chain saw method were not hollow at all. The chain saw method proved to be unreliable for the determination of hollow logs or the extent of the hollow. It is suggested that the chain saw method be substituted by the drilling method, which determines the actual wall thickness of hollow logs. Furthermore, it is suggested that the responsibility for the detection of hollow trees be switched from the sawyers to the tree marking teams.
- The hollow trees analyzed contained large amounts of good timber (68–99% of the log volume up to the first branch).
- In view of modern wood processing techniques (e.g. finger jointing) the quality standards for logs suitable for log sales have to be changed.
- The concept of logging residue utilization has to be promoted. Education of contract forestry workers, field staff of the Forestry Department and of the license holders is required in order to change attitudes regarding log quality. A different remuneration

system for sawyers has to be developed and implemented. The sawyer has to be encouraged to extract as much timber as possible within the cutting limits and not be discouraged from doing so as is currently the case.

- Recovery studies are required to determine the amount of sawn timber and other products produced from hollow log parts and from logging residues like upper stem parts, top portions and big branches.
- The technical and economic aspects of hollow log and residue extraction need to be evaluated through case studies.