IMPACT OF RIL SYSTEM ON THE RESIDUAL TREES IN PEAT SWAMP FOREST OF PEEKAN FOREST RESERVE

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Abstract: Since 1999 when harvesting operation started in Pekan Forest Reserve (FR), Rimbaka Timber Harvester or Rimbaka, considered as reduced impact logging (RIL) is the only system used for timber harvesting. The main objective of this study was to determine impacts of the RIL system on the residual trees. Four sets of cutting limits represent low to high cutting limits were tested in four harvesting blocks. Damage assessment was conducted immediately after the harvesting operation completed. Damage on the crown was the major damage that occurred on the residual trees, followed by stem and root damage, respectively. Most of the trees that survived were apparently under light category of damage and they were expected to continue to survive as good residual trees. The total percentage of damaged and dead stands of all species was about 36.5%; heavily damaged and total dead trees contributed 11.4% and 14.3%, respectively. Felling activity contributed to 90.2% of tree damages and 81.5% of tree deaths; however, extraction activity was much less destructive, causing only 9.8% and 18.5% on tree damage and tree death, respectively. As a whole, results of the study showed that the RIL system had successfully produced relatively less damage and low mortality on the residual trees of the peat swamp forests.

Key words: South-East Pahang, harvesting, reduced impact logging (RIL), cutting Limit, peat swamps