Monitoring deforestation in Sarawak, Malaysia using multitemporal Landsat data

ABSTRACT

Deforestation is the most important problem facing tropical countries. This paper discusses the use of medium resolution Landsat data for monitoring deforestation in Sarawak, the largest state of Malaysia. Missing line correction and filtering of the SLC-OFF Landsat data was necessary prior to supervised classification. The overall accuracies of the classifications of 1990 and 2009 exceeded 80%. Of the total loss of 1.2 million ha of forests in the past two decades, more than 90% was peat swamp forests and intact forest. The overall deforestation rate of Sarawak was 0.64%. Deforestation at coastal divisions (eg Mukah) was due to forest to oil palm conversion in recent years. In inland divisions (eg Kapit), intact and secondary forests decreased due to logging followed by clearing for oil palm plantation.