

Effect of land use change on GHG fluxes of tropical peat forests in Borneo island

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Borneo island, which is located in southeast Asia, has a rich forest and it store a huge carbon in biomass and soil. It is well known that peat, which is large carbon reservoir, widely spreads in the island. While tropical peat forest occupies only 0.25% of surface area on globe, it accounts 3% of soil organic carbon on earth. Tropical peat forest, in which forest grows on peat which depth from 1 to 10 m. Recently, the area of tropical peat forest is rapidly decreasing because of fire or plantation and has resulted in large carbon lost. Therefore, carbon management and control for tropical peat forest is very important with the objective of development, conservation and disaster prevention. In this study, we will introduce the studies to evaluate the effects of land use change on greenhouse gas fluxes of tropical peat lands from site scale to regional scale various methods i.e. flux observation of eddy covariance and chamber methods, remote sensing and numerical simulation under several projects.

Keywords: flux observation, remote sensing, model