

Influence of human disturbances on long-term CO₂ exchange over a larch forest

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Larch forest is an important research object for evaluating ecosystem response against future global warming because it is a representative vegetation type for high latitudinal northeast Eurasia where greater temperature rise due to climate change is anticipated. In Japan, Larch is a common tree type of plantation that has been planted widespread over northeastern Japan especially after World War II. Quantifying the influence of the forest management on carbon budget in larch forests have significance on the securement of forests as a source of CO₂ absorption. Thus, National Institute for Environmental Studies (NIES) has implemented long-term monitoring program of CO₂ exchange over larch forests. We established the Fuji Hokuroku Flux Observation Site in the foothills of Mt. Fuji as an alternative base for monitoring, and began observations in January 2006. The site is dominated by larch trees of more than 50 year-old. 30% thinning was conducted at the site in spring of year 2014 and 2015. The characteristics of CO₂ exchange were affected from the human disturbance. We will introduce the results of carbon fluxes and related parameters for the sites.

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