A Study of Natural Forest Type Classification for Japanese National Forest Inventory Data
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The National Forest Inventory (NFI) started in Japan in 1999 with the aim of understanding the state and dynamics of various aspects in forests such as wood production and biodiversity throughout the country. Forest type is one of the important component from which many indicators of forest biodiversity can be estimated. In Japan, the forest register (shinrinbo) records information on the stand status of all private and national forest land including species, age, DBH and stand height. However, natural forests (not planted forest) are recorded as “mixed” in the forest register. Currently data from NFI is expected to classify the natural forest and to estimate the total area of natural forest with the model or satellite image. There are several definition, classification and identification methods for forest type. Moreover, most researchers define or classify the species assembles and identify indicator subjectively. The objectives of this study were to classify forest types of the natural NFI stands for carbon stock model and to develop the classification method with reproducible way.

Additional keywords: forest type classification, NFI

Forest Management and Native People's Use of Forest Resources in Nature Reserve of Hainan Island, China
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In Hainan Island, China, natural tropical forest remains in mountain region and it is managed in order to leave its plentiful nature for the future in nature reserve. However, there are native people such as the Li and the Miao have lived in this area for several hundred years. It is a big problem how to adjust their use of forest resources and forest management in the nature reserve. On previous measures, emigration of the native people or restriction of the use of the natural resources has done. But they are not effective for this problem. Today, some new methods have been tried, for example the employment to native peoples to manage the nature reserve and eco-tourism, but the effect of these attempts is unknown. On this research, we try to examine the native people’s use of forest resources and thought about nature reserve, and discuss how to manage forests of the nature reserve for adjustment of native people's use and conservation of the nature reserve. We interviewed to the Li living in Daoyin village, Yinggeling Nature Reserve, Hainan. As a result, we could say traditional use of forest resources is definite. On the other hand people are eager to cultivate market crops such as rubber trees to get more income. Some methods like eco-tourism are tried to conserve the nature reserve. However, it is considered that some systems are the key to compensate them with getting income by cultivating market crops and to prevent them from overusing of forest resources.

Additional keywords: eco-tourism, tropical forest, immigration, rubber tree

Growth Prediction of Acacia Mangium in Western Java, Indonesia
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According to FRA2010, around 13 million hectares of world forest were converted to other uses or lost through natural causes each year in the last decade. Emissions from deforestation are very serious, they are estimated to represent more than ca. 20% of global emissions. Especially, tropical forest is sharply decreasing, it is necessary to reduce emissions from deforestation and forest degradation in tropical area to prevent global warming. The life of the local people is deeply connected with tropical forest, and the forest management obtained understanding of local people is needed. In this study, yield table of Acacia Mangium planted by local people in western Java area, Indonesia. This yield table was divided into three categories of Site Index. Furthermore, total volume and absorbed amount of Green house gas were calculated, and disparity of income founded on Site Index was estimated to consider possibility given incentive to local people.

Additional keywords: community-based forestry, agroforestry, yield table, B/C ratio

Determinants of Spatial Stratification Decisions in Natural Forest Management in Central Hokkaido, Japan
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Spatial stratification is an essential planning technique in Hokkaido, northernmost Japan, to manage natural forest that exhibits a structural heterogeneity. Operationally, a forest planner makes a stratification decision on-site, based on his empirical skills and knowledge gained through the long-term work experiences. Although general guidelines for stratification practices exist, little is explicitly known on how stratification decisions are actually made by experienced forest planners. The purpose of this study was to determine factors affecting spatial stratification decisions for managing a natural forest in central Hokkaido. A case analysis was conducted at the University of Tokyo (UT) Hokkaido Forest. We used a total of 930 sample plots that had established within 4 major stratification options (softwood selection harvest, hardwood selection harvest, pre-harvest, and regeneration activity required) during 2005-2009. Tree species and diameter at breast height (DBH) for all living trees with DBH ≥ 5 cm were recorded in each plot. The number of juveniles (≥ 1.3 m in height and < 5 cm in DBH) by tree species was also recorded. We examined differences in stand structure between the stratification options and performed a classification tree model to derive the decision rules of spatial stratification administered by forest planners. Results indicated that the dominance (represented by the sum of basal areas) of marketable coniferous and broad-leaved trees (25 cm ≤ DBH < 59 cm) and the density of young growth broad-leaved trees (≥ 1.3 m in height and < 25 cm in DBH) had significant effect on stratification decisions.

Additional keywords: classification tree model, forest management planning, natural forest management, spatial stratification technique, stand structure