

Three Dimensional Vegetation Map using LIDAR Data on Mt. Rausu, Shiretoko Peninsula, Hokkiado

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By the budget of the Ministry of Environment, the authors have been developing landscape-ecological maps of Shiretoko Peninsula, where is Natural Heritage Area of Hokkaido Island, using airborne laser survey (LIDER Survey) data. Basic legend of landscape-ecological maps consists of the combination of vegetation classification and landform classification. LIDER Survey data in spring or autumn is useful for detection of micro landform under forest area to use last pulse data, and LIDER Survey data in summer is useful for detection of three dimensional vegetation structures to use first pulse data. In this research, the authors use 0.5 meter grid DSM and DEM in summer season and 2 meter grid DSM and DEM in spring or autumn season. In this presentation, the authors show three dimensional vegetation map using LIDAR data on south-east foots of Mt. Rausu. This LIDAR vegetation map has 19 categories legend which consists of combination of vegetation height (high, middle, low and grass), thickness of crown (thick or thin), difference of deciduous tree or evergreen tree, and difference of single structure or multiple structures. The results of comparison between LIDAR vegetation map and Actual Vegetation Map with 1/25,000 scale by the Ministry of Environment, shows that LIDAR vegetation map is correspond to Actual Vegetation Map.