Vegetation species maps are useful for forestry managements and environmental ecological study. From the forestry management, broad and conifer leaf forest should be mapped. Recently, the enlargement of bamboo area is one of big problems from the view points of landscape ecology in Japan.

ALOS satellite was launched in 2006. It has AVNIR-2 sensor with 10-m spatial resolution and four spectral bands 460, 560, 650 and 830 nm. Because of the spatial resolution and multi-spectral information, AVNIR-2 sensor data is expected for local area study and environmental managements.

We have developed Universal Pattern Decomposition Method (UPDM) and Modified Vegetation Index based on UPDM (MVIUPD) for satellite sensor data analysis for land cover mapping and vegetation monitoring. In the UPDM method, three coefficients of water, vegetation and soil is calculated using three standard patterns of water, vegetation and soil. One of this method’s characteristics is the UPDM coefficients from different sensors for the same object being same as each other. Using this characteristic vegetation cover change was studied with LANDSAT/MSS, TM, ETM+ and ALOS/AVNIR-2 data from 1975 to 2006.

In this study, the capability of vegetation species mapping was studied with ALOS/AVNIR-2 data and UPDM method. Clear data for study area on Oct. is available. Using the Oct. data, UPDM coefficients and MVIUPD’ values were studied for Japanese cedar, Japanese cypress, broad leaf forest, bamboo forest, orchard and grass land. The relationships between water coefficients and MVIUPD, and between vegetation coefficients and MVIUPD were useful for these species classification. Using these relation ship, classification criteria were determined. The mapping results were compared with forest resource information. Japanese cedar and cypress forest were qualitatively extracted and orchard area was over estimated in forest area. The classification accuracy will be improved if seasonal data is available.