Intercomparison of Surface broadband Albedo products from MODIS, CGLS over Northeast Asia

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Surface broadband albedo is one of the climate variables that understand Earth's radiation budget. Currently, the polar-orbit satellite-derived surface broadband albedo products are retrieved by several organizations. As there are many kinds, it is necessary to identify the characteristics of each product. In this study, we were to compare representative products for long-term that the albedo products based on polar-orbit satellite such as moderate resolution imaging spectroradiometer (MODIS) and the Copernicus Global Land Service (CGLS). We studied the Northeast Asia region where the land type remains unchanged from 2000 to 2018. The overall trend of the two products was similar. However, differences occurred depending on the land types and season. The relatively high value of MODIS albedo was calculated in winter because it was sensitive to the snow. In other seasons, the CGLS albedo was higher than the MODIS albedo. The MODIS albedo was calculated higher than CGLS albedo for all land types except forest. The comparison results showed that caution should be given before operational use of the albedo data sets in these regions.