

Thesis Title	The Determination of Surface Albedo of Thailand Using Satellite Data
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ABSTRACT

The surface albedo of Thailand was determined using satellite data. The digital images of Thailand taken by the GMS5 satellite at 12 :30 local time during July 1995 - April 1999 were used in this work. These images obtained from the visible channel of the satellite with a spatial resolution of $5 \times 5 \text{ km}^2$ were transformed to a cylindrical projection and then navigated using coastlines as references . The composite image technique was used to construct minimum gray level images in which clouds were eliminated. The post-launched calibration tables were employed to convert gray levels of the images into satellite albedo. The atmospheric correction of the albedo was then made using the Tanre'et al. model. Finally, linear interpolation of the spectral reflectance of vegetation was employed to convert the satellite band ($0.55 - 0.90 \mu\text{m}$) to the broad band surface albedo ($0.25 - 4.0 \mu\text{m}$). The results show that the surface albedo varies between 9 – 15 % for the forest area and 12 – 20 % for the agricultural area in course of the year.