

## Monitoring the Forest Disturbance in the Southern Limit of Boreal Forest in Primorsky, Russia

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The vegetation cover monitoring from 1982 to 2006 was done by using GIMMS(Global Inventory Modeling and Mapping Studies) data set centering on the Sikhote-Alin Mountains in Primorsky, Russia, where is the southern limit of boreal forest .

Two parameters, namely, annual integrated NDVI (?NDVI), annual maximum NDVI (MaxNDVI) were extracted from GIMMS dataset. StdNDVI was defined as a standard deviation of ?NDVI. A big value of StdNDVI was obtained in the Sikhote-Alin Mountains region in Russian Primorsky. This means some forest disturbances had been occurring in the Sikhote-Alin region.

The detailed forest monitoring was made out by using the Landsat TM images from 1984 to 2000 to analyze the forest disturbance in the region where StdNDVI was large.

Two main causes of forest disturbance to come up in this region are considered to be forest logging and forest fire. In case of forest logging, the woodland path is constructed, and the changed region should have the outline of the rectangle or the polygonal shape, which can be easily discriminated in the image. On the other hand, the outline of the area which suffered forest fire looks vague. Then, the area of forest disturbance made out on the image was classified into (1)the one with a plain outline and (2)the one with an indistinct outline.

As a result of image interpretation, majority of the forest disturbance during analyzed period had the feature of (2). The forest disturbance to come up in about 20 years in the Sikhote-Alin seems to be the one due to a forest fire.

Keywords: Remote Sensing, GIMMS, NOAA/AVHRR, NDVI, boreal forest, forest fire