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Satellite monitoring of fire disturbed territories in the Transbaikal region

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Over the past decades an increase of the number of forest fires and burned area is observed in the boreal forests of Siberia and North America. Currently in Russia thousands of forest fires are registered each year. Forests of Transbaikal region are characterized by the highest degree of fire disturbance in Russia. In this study MODIS 250-m NDVI (Normalized Difference Vegetation Index) and NBR (Normalized Burn Ratio) time series are used for the monitoring of fire-disturbed areas in Transbaikal region. Using satellite data the maps of fire disturbance degree were created. This study mainly focuses on the repeated fires in this region which can cause the conversion of forests to non-forest lands. A preliminary analysis of the dynamics of vegetation indices (NDVI and NBR) after the fire event showed significant differences for sites characterized by different degree of disturbance. The preliminary results of comparative analysis of disturbance degree and Fire Radiative Power (FRP) measurements will be also presented.
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