

Studying the Change of the Vegetation Cover of the Kologrivsky Forest Nature Reserve on the Material of Remote Sensing of the Earth

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The article is devoted to the study of changes in the vegetation cover of the Kologrivsky Forest Nature Reserve based on materials of remote sensing of the Earth. The materials for the study were data from Landsat satellites for the period from 1973 to 2011. The classification of objects in the pictures was carried out in five classes: 1 – dark coniferous forests, 2 – light coniferous forests, 3 – deciduous forests, 4 – open areas (fires, cuttings, fields, meadows, etc.), 5 – water bodies. The best classification quality was achieved using Random Forest and CatBoost algorithms. Random Forest was chosen as the final model of the classifier. For 1984, on the Kologriv site of the reserve, the areas of forest not covered by clear cutting were preserved mainly along the rivers Sekha, Londushka and Ponga and the area of the Kologrivsky Forest Natural Monument. In spite of the measures taken for the reproduction of forests on the felling sites, the upper canopy of renewal is mainly represented by deciduous species, under which spruce cultures were in a depressed state. The lack of timely care for crops and the natural renewal of spruce led to the formation of birch in most of the territory of the stands. 12 years later, after a major forest fire in 1972, more than 85% of the territory of the Manturovo site of the reserve was covered with forest tree vegetation, and pine was the predominant species for a considerable area. By 2011, the pine was dominant in the forest fund.