

Original article

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Zoning of the Udmurdsкая Republic Territory by Forest Complex Accessibility

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Abstract. Forest accessibility assessment is one of the key indicators of forest management planning, development of forest industry and non-wood forest use. Practically forest product and forest machinery transportation is required in all forest management types. Forest accessibility especially in no frost period affects forest regeneration operations that are a key element of updated forest management intensification system. In case of inaccessible forest regeneration areas for forest treatment operations forest regeneration will be affected by natural factors with productivity losses and tree species shift. The studies showed that the established forest accessibility assessment in forest planning does not allow to take road traffic capacity factors, territory accessibility season, forest product and forest machinery delivery distance and time into consideration. Integrated forest accessibility territory assessment procedures and the Republic territory zoning by various factors affecting forest accessibility have been tested in the Udmurdsкая Republic territory. Based on GIS analysis procedures the republic territory diagram maps were developed by road density, forest integrated accessibility, forest management and use modes, distance and access to forest product and forest machinery center time. Practical findings enable various forest management modes with regard to seasonal forest accessibility, forest product delivery distance and time. As a whole all these indicators enable intensification system introduction opportunities in a certain area.

Key words: forest accessibility, transport infrastructure, space survey data, forestry intensification.

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