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SPATIAL-FUNCTIONAL HETEROGENEITY OF POST-CUTTING COMMUNITIES IN THE CENTRAL FOREST STATE BIOSPHERE RESERVE

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The article contains the results of a case study devoted to spatial and functional heterogeneity of post-cutting vegetation during early succession stages in southern taiga subzone. The study is based on large scale mapping of clear-cutting area and its vegetation communities. Post-cutting communities and their phytomass surveys were carried out within overgrowing cutting in buffer zone of the Central Forest Biosphere State Reserve (Tver region). In order to compose a schematic map of local vegetation, we implemented a classification of communities, grouping them by the regenerating layer of trees and shrubs and taking into account ground cover dominants. For the first time for this territory the analysis of ecotopic differentiation of post-cutting vegetation was conducted on the base of L.G. Ramensky ecological scales. The maps of average humidity and average nutrient status in post-cutting ecotopes had been composed. The correlation connections between projective cover, height, and plants increments and their phytomass were discussed. The phytomass stocks were accounted within studied cutting area as total and for each type of communities. The map of phytomass distribution within cutting area was made, where average phytomass values were showed for different types of communities. Maximal phytomass values were observed in forb and great willow herb communities and in communities with aspen and birch undergrowth near forest edge. Received data on plants increments and phytomass and their distribution would be used for conjugative analysis of pulsar measurements data on carbon balance parameters in cutting area which had obtained by meteorologists. Thus, it can be possible to evaluate the contribution of each communities' type and dominating plants in carbon sequestration.

Keywords: post-cutting communities, spatial structure, functional structure, ecotopic differentiation, vegetation phytomass.

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