ENVIRONMENTAL IMPACT ASSESSMENT OF FIRE EFFECTS IN FOREST ECOSYSTEMS

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Currently in the world practice of changing the conceptual approach to the problem of forest fires. The experience of the leading countries in the world where lesoperevalochnaya the problem is quite acute, proves that completely exclude fires from forest life impossible, and in some cases impractical, since under certain circumstances the fire can bring many benefits to the forest and its inhabitants [1].

Well-organized and properly conducted fire prevention, quick detection of fire and prompt them to eliminate small areas lead to the accumulation in forest ecosystems, large stocks of combustible materials, contributing to the development of high-intensity fires, fire which is difficult and not always effective [2, 3]. These fires can have disastrous consequences for the indigenous natural environment and directly threaten people's lives.

The consequences of such fires are manifested in various ways not only in reforestation period, but in the long term. Up to 30 percent or more of forest lands with productive forests after catastrophic fire effects become irreversible wasteland – marshes, grass-shrub and shrub heathland, Redina, stony-rubbly outcrops. Natural process restore the indigenous habitat requires many centuries. While transformirovalsya historically formed modes as in biotic and abiotic sphere.

In addition to the loss of the preventive effect of weak and medium-strength fires, reducing stocks of flammable materials, the long absence of the pyrogenic factor in forest landscapes leads to the dominance of dark coniferous formations, which completely killed in subsequent fires. In this case, natural regeneration occurs through the change of species and lingers on for hundreds of years.

Continuing the theme of development of ecological views on the role of fire as a periodically acting natural factors and should emphasize its regeneration role. Natural regeneration of forests cryogenic zone is estimated by most researchers as weak, insufficient, unsatisfactory, etc. Without external influences that can improve the quality of the rehabilitative environment of the forest ecosystem, the result of endogenous destruction climacophora community observed change of tree cenoses on shrub, herb, etc. In these circumstances, preventive pyrogenic effect is essential to maintain the position of the tree species.

Fires contribute to the transformation of the age structure of forest stands. Trees, renewed by seeds in the community climacophora type should be individuals of all ontogenetic groups. Chorological isolation of age groups, tree species determines differences mikromotivov the modes of moisture, food and light that affect species

richness and species richness of ground vegetation. In such communities climacophora type, with a complex vertical structure and has a higher intra-population diversity, significantly increasing the species abundance and the number of representatives of forest fauna, as many forest dwellers are restricted in their habitats and are associated with defined vertical tiers of plantings.

Thus, the maximum representation at forest trees of different age leads to an increase in the biodiversity of an area. This indicator characterizes the stability of populations of woody species and can be considered as a diagnostic sign in the evaluation of the degree of closeness of the studied community to community climacophora type. To a greater extent set forth refers to monodominant forests of high latitudes, since the trend towards increasing dominance of individual species leads to a decrease in the level of biodiversity of this area and the uneven-trees becomes the most significant factor in sustaining the stability of forest ecosystems.

Due to the above it can be argued that the importance of the pyrogenic factor in the life of the forest habitats is large, and the consequences cannot be assessed unequivocally. Post-fire dynamics of plant communities and the direction of successional processes are determined by the degree of transformation of the indigenous ecotope, depending on its state and settings of fire exposure. To obtain the desired result by using a firing method in specific habitats is possible under controlled poker, when experts determine the power of empirical fire, in which the goal is reached. Carried out in the last decades, research in Russia and abroad, allow us to conclude that the fire with proper application is an effective tool to address many forestry and environmental problems.

References

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