

**SCALE OF NATURAL FIRE DANGER OF FOREST ECOSYSTEMS
 OF MELEKHOV I. S. OVERVIEW OF MODERN RUSSIAN METHODOLOGICAL
 APPROACHES**

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Received 10.05.2021

Revised 08 June 2021

Accepted 29 June 2021

The article is devoted to the review of various methodological approaches to the estimation of natural fire danger (NFD), as well as to the creation, updation and application of the NFD maps, which are offered by modern Russian scholars. The scale of natural fire danger assessment recommended for use and developed by I. S. Melekhov is presented and analyzed. The methodological drawbacks of this scale as stated by modern researchers are indicated. The paper reviews the development of a new methodological approach to compilation of regional scales for assessing the natural fire danger of forests, by taking into account the links between forest growth conditions as well as seasonal and climatic conditions in the regions of the Russian Federation. The method for mapping of natural fire danger on the basis of maps of plant combustible materials, proposed by the scientific group of the V. N. Sukachev Institute of Forest SB RAS, is studied. We consider studies of the Mytischki Branch of Bauman Moscow State Technical University related to investigation if the possibility for applying mathematical modeling methods for long-term forecasting of changes in NFD under different scenarios of forest management. The method for annual mapping of NFD classes, proposed in the CEPF RAS, is presented. An example of the use of NFD maps in assessing the probability of forest fires in the ICARP FEB RAS is considered. Future research areas are identified, namely, a cartographic representation of the created regional scales of NFD and the results of mathematical modeling of long-term changes in NFD.

Key words: *natural fire danger, vegetation fuel maps, forest fires*

Рецензент: к.г.н. Глаголев В.А.