GEOINFORMATION BIOGEOGRAPHIC MAPPING OF ISLAND ECOSYSTEMS BY REMOTE SENSING DATA

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The article presents a methodological approach to geoinformation biogeographic mapping of the spatial and temporal distribution of the brown bear, based on a set of methods of field, remote observations and mathematical, cartographic modeling. As result of the data formalization, the factors influencing the distribution of individuals in spatial and temporal scales are identified criteria for assessing their habitat are developed. Ranking of criteria on the basis of establishment of relative importance of the studied types of factors and their time dependence is carried out. The technological scheme of construction of thematic maps and modeling of space-time distribution of a brown bear is presented. The validity of the method is confirmed by the reliability of the results based on long-term studies and indicating the repeatability and cyclicality of processes and phenomena in all selected seasonal periods of active existence of the brown bear. The results obtained in the course of the study are an effective tool for planning and carrying out measures to protect the environment and human life safety in the implementation of industrial, recreational and tourist activities.

Key words: biogeographic mapping, modeling, GIS, brown bear, spatial and temporal distribution of animals, ranking, habitat.

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