O80. ANALYSIS OF THE FUNCTIONING OF MARINE ECOSYSTEMS ON CHANGING THE PARAMETERS OF THE BIOLUMINESCENCE FIELD ON THE CRIMEAN BLACK SEA SHELF

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The concept of a new approach to environmental assessment is offered in the system of integrated management of the resource and environmental safety of the coastal area of the Black Sea. The studies of the season and daily changeability in the bioluminescence field in the Sevastopol coastal waters has been conducted. For the first time considerable differences in the bioluminescence field seasonal changes in the surface and deep water layers and the reasons conditioning this phenomenon have been shown using a method of multidimensional statistical analysis. The bioluminescence field vertical profile change at the autumn period at night in the Black sea coastal waters has been studied. It has been shown that according to the character of bioluminescence parameters dynamics water column can be divided to layers: upper (0 – 35 m) and deep water (36 – 60 m). It has been revealed that life rhythms of the plankton community are the main reason of the bioluminescence field intensity variability. It has been revealed that 14-hours periodicity of the bioluminescence field is connected with changes in light and is variations with 2,5...4,5 hours are conditioned by plankton endogenous daily rhythms. And here biotic factors effect mostly periodicity of the bioluminescence field intensity increase and fall down at the dark time of the day. Abiotic factors are of less importance in circadian rhythmic of the bioluminescence field in the neritic zone.