

# REMOTE SENSING RADIOMETRY TECHNOLOGY FOR THE OKHOTSK SEA ECOSYSTEM BIOCOMPLEXITY ASSESSMENT

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Biocomplexity of the Okhotsk Sea ecosystem and synthesis of simulation model of Okhotsk sea ecosystem(OSE), allowing to give prognostic an estimation of a condition ecosystem depending on global and regional changes in an environment, certainly, is an actual problem. By means of this model probably to establish some laws of dynamics of a trophic pyramid of the sea, and also to understand mechanisms of regulation of community of the sea due to external influences.

Biocomplexity refers to phenomena that result from dynamic interactions between the physical, biological and social components of the *Nature/ Society System* (NSS). The investigations of the processes of interaction between the *Society* and *Biosphere* are, as a rule, targeted at understanding and estimating the consequences of such interactions. The reliability and precision of these estimations depend on criteria founded on conclusions, expertise and recommendations. At present, there is no unified methodology for selection between the set of criteria due to the absence of a common science-based approach to the ecological standardization of anthropogenic impacts on the natural environment. After all, the precision of the ecological expertise for the functioning and planning of anthropogenic systems, as well as the representativeness of the global geoinformation monitoring data, depend on these criteria.

The *OSE* keeps a significant position in global natural system. At present time it has low level of pollution but the fishing is main antropogenic influence. A correlation between the *OSE* state and global changes is one of problems which is discussed both in the framework of regional investigations and in global studies of environment. The *OSE* interacts with biosphere processes via the influence on global climate and on the Pacific Ocean. This influence is reciprocal. This paper gives some approach to the estimation of this influence. The common concept of coplex system survivability is interpreted for the ecological system of Okhotsk Sea and criteria of survivability is defined.

This report is oriented on the development of biocomplexity indeces basing on the remotely measured environmental characteristics. Microwave radiometry is used as effective technique to assess the sea water parameters. Other ranges help to form input information for the Okhotsk Sea Biocomplexity Model that will be developed in the framework of this work.