Prediction of Marine Ecosystem Changes Based on the Integrated Analysis of Multivariate Data Sets

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Abstract : The current body of knowledge about the marine environment and the dynamics of marine ecosystems includes a huge amount of heterogeneous data collected over decades. It generally includes a wide range of hydrological, biological and fishery data. Marine researchers collect these data and analyze how and why the ecosystem changes from past to present. Based on these historical records and linkages between the processes it is possible to predict future changes. Multivariate analysis of trends and their interconnection in the marine ecosystem may be used as an instrument for predicting further ecosystem evolution. A wide range of information about the components of the marine ecosystem for more than 50 years needs to be used to investigate how these arrays can help to predict the future.

Keywords : barents sea ecosystem, abiotic, biotic, data sets, trends, prediction
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