

ABSTRACT

Effective and Simple Statistical Approaches for the Interpretation and Identification of Ecosystem Management Targets from Large Volume Data Sets

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Marine ecosystem surveys analyze many items at different times from various places. Therefore, it is very difficult to effectively analyze complex multi-item ecological data, and it is more difficult to identify the status of the ecosystem and diagnose problems through data analysis.

This presentation tries to give an example of a rational interpretation of complex ecological data through analysis of distribution characteristics and abnormalities of ecological survey data. The main research items include establishing background concentration by ecological element on the Korean Peninsula coast, drawing indicators for ecosystem monitoring and establishing an adaptive management system, considering the distribution characteristics of each ecological data. Data screening process such as outlier testing and the use of secondary data like ecological indices and simple ratio between two variables can reduce the variation of raw data. Also summarizing outliers by space and time can be a good example of monitoring targets through in-depth verification process. The data in this presentation was provided by the Nationwide Comprehensive Ecosystem Survey, managed by the Maritime Affairs and Fisheries Ministry (MOF) and the Marine Environment Corporation (KOEM).

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