

Using min/max autocorrelation factors of survey-based indicators to follow the evolution of fish stocks in time



Fisheries research monitoring surveys provide an ensemble of measurements on fish stocks and their environment. Because the interannual variability in such survey-based indicators is high and because diagnostics on fish stocks cannot be based on noise, our concern is to make use of what is continuous in time to obtain a reliable diagnostic. In this paper, we show how min/max autocorrelation factors (MAFs) can be useful for assessing the status of a fish stock. Indeed, MAFs will allow us to (i) summarize the multivariate indicator signals into orthogonal factors that are continuous in time, (ii) select those indicators that carry the major signal in time, and (iii) forecast stock status by modelling the time continuity of the MAFs. These different potential uses of MAFs in an indicator-based approach to assessment were illustrated with North Sea cod, for which a suite of biological and spatial indicators are available over a 21-year survey series.

Auteurs du document : Mathieu Woillez, Jacques Rivoirard, Pierre Petitgas

Obtenir le document : EDP Sciences

Mots clés : Min, max autocorrelation factors, Time correlation, Survey-based indicators, Fish stock diagnostics

Date : 2009-6-17

Format : text/xml

Source : <https://doi.org/10.1051/alr/2009020>

Langue : Anglais

Télécharger les documents : <https://www.alr-journal.org/10.1051/alr/2009020/pdf>

Permalien : <https://www.documentation.eauetbiodiversite.fr/notice/using-min-max-autocorrelation-factors-of-survey-based-indicators-to-follow-the-evolution-of-fish-sto0>

Evaluer cette notice: