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Survey-based stock assessments versus sustainability assessments : interpretation and communication problems.

Stock assessments resulting in fishery advice traditionally rely on time series of catch and biological data originating from both active fisheries and fishery-independent surveys. Time series of spawning stock biomass, fishing mortality and recruitment are typical products of data-rich modelling, and reference points are known for most of these stocks. However, the number of stocks for which policy makers request fishery advice has increased substantially in recent years, and the necessary datasets to allow for a similar approach is usually not available. Therefore, the stock dynamics and response to changes in fishing pressure remain poorly understood, and reference points for these stocks have not been defined. Scientific surveys have nevertheless often collected certain types of information on these species, that allow to fill this knowledge gap. The results of such ‘survey-based assessments’ (a category of data-limited assessments) have been used in recent years to formulate fishing advice for the corresponding fish stocks. In parallel, an increased societal demand for sustainability information has characterized the past years, and scoring stock status forms an important part of this type of assessments. The accepted methodologies however, are focused on data-rich stocks, and don’t accommodate for detailed scoring of the ecological sustainability of data-limited stocks. This could result in negative scores following a precautionary approach. Simultaneously, unambiguous communication of sustainability results for these stocks to a wide audience, is often tricky. Problems and pitfalls of scoring the stock status of data-limited stocks in a sustainability assessment and regarding popular advice (such as traffic light systems) are highlighted in this contribution.

Keywords: survey-based stock assessments, sustainability assessments, data-limited stocks, communication.