

# The effectiveness of using CPUE data derived from Vessel Monitoring Systems and fisheries logbooks to estimate scallop biomass

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## ABSTRACT

Obtaining accurate data on abundance is vital to undertaking viable stock assessments of commercially exploited species. Satellite Vessel Monitoring Systems (VMSs) combined with fisheries logbooks have the potential to provide an abundant source of data with greater spatial and temporal coverage than research surveys. However, to date it has not been demonstrated how well VMS-derived abundance or biomass indices reflect research survey results. In this study we compared biomass indices of scallops derived from (i) fishing vessel surveys, (ii) research vessel surveys, and (iii) fishery-dependent data using VMSs and logbooks. In most cases there were strong relationships between biomass indices of *Pecten maximus* from fishing vessels and the research vessel. There were stronger relationships between *P. maximus* biomass indices from fishery-dependent VMS and logbook data and research vessel data at the beginning of the fishing season, when abundance was higher, but weaker relationships at the end of the fishing season. The time and location of sampling affected biomass estimates over short periods, and without standardizing to location and vessel, biomass depletion was masked. Fishery-dependent data provides a valid means of assessing relative scallop abundance and may prove equally viable in other fisheries with appropriate standardization of Catch Per Unit Effort (CPUE) data, making real-time management of fisheries increasingly feasible.

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