VMStools is a package of open-source software, build using the freeware environment R, specifically developed for the processing, analysis and visualisation of landings (logbooks) and vessel location data (VMS) from commercial fisheries. Analyses start with standardized data formats for logbook (EFLALO) and VMS (TACSAT), enabling users to conduct a variety of analyses using generic algorithms. Embedded functionality handles erroneous data point detection and removal, métier identification through the use of clustering techniques, linking logbook and VMS data together in order to distinguish fishing from other activities, provide high-resolution maps of both fishing effort and -landings, interpolate vessel tracks, calculate indicators of fishing impact as listed under the Data Collection Framework at different spatio-temporal scales. Finally data can be transformed into other existing formats, for example to populate regional databases like FishFrame. This paper describes workflow examples of these features while online material allows a head start to perform these analyses. This software incorporates state-of-the art VMS and logbook analysing methods standardizing the process towards obtaining pan-European, or even worldwide indicators of fishing distribution and impact as required for spatial planning.
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