

Good practices in CPUE standardization

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https://www.dropbox.com/s/up46gnxn6n4i12w/IOTC_WPTT_CPUE_good_practices.pdf?dl=0

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Abstract

Indices of abundance based on catch-per-unit-effort (CPUE) are important components of many fish stock assessments, particularly when fishery-independent surveys are unavailable. Standardizing CPUE to develop indices requires the analyst to make numerous decisions, which are influenced by factors that include the biology of the study species, the structure of the fishery of interest, the nature of the available data, and the objectives of the analysis (including how standardized data will be used in a subsequent assessment model). Alternative choices can change index trends, and hence stock assessment outcomes. To guide decisions, we provide advice on good practices in 16 areas, focusing on decision points: fishery definitions, exploring and preparing data, misreporting, data aggregation, density and catchability covariates, environmental variables, combining survey and CPUE data, analysis tools, spatial methods, setting up and predicting from the model, uncertainty estimation, error distributions, model diagnostics, model selection, multispecies targeting, and using CPUE in stock assessments.

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