Evaluation and optimization of video monitoring transects for reef fish community assessment

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The code used in this repository was used for the evaluation and optimization of video monitoring transects for reef fish community assessment.

* Description of the data:
  + The original data used in the article differs from the data provided here since the original data is confidential. Random data was generated for only 5 of the observed species. Randomization with a range of [0,100] and with a 50/50 percent change on absence/presence was used.

Each biological data frame contains the observations as rows and factors as columns. Per data frame the Island, Location, Transect, Person, Repeat number and Video analyst are given. The observed species are mentioned (count per observation) and the total amount of species observed per observation. A distinction is made between the different transect lengths of 10, 20, 30, 40 and 50 meter. Empty values in the species columns indicate absences (=0).

* + - N10.xlsx
    - N20.xlsx
    - N30.xlsx
    - N40.xlsx
    - N50.xlsx
  + In the data frame “autocorrelation\_check.xlsx” the order of the repeats was indicated in order to assess the significance of temporal autocorrelation between the observations.
  + The file “specieslist.xlsx” gives the observed species
* Description of the code:
  + Optimization\_of\_video\_monitoring\_transects.Rmd: Rmarkdown script used to do most of the analyses. More information is given as comments in the code.
  + glmmtmb\_models.R: R script to perform univariate zero-inflated generalized linear mixed models. More information is given as comments in the code.