survey_caco3_production.rds

This file contains the survey-level prediction of total reef fish carbonate production rate based on a Bayesian multilevel regression.

Variables:

- *SiteCode*: RLS site ID
- *SurveyID*: RLS survey ID
- *biomass*: biomass of fishes belonging to families for which predictions are possible
- *prop_biomass*: proportion of retained biomass
- *abundance*: number of fishes belonging to families for which predictions are possible
- *prop_abund*: proportion of retained abundance
- *caco3_umol_day*: carbonate production rate for the whole transect area (500 m^2) in µmol day^{-1}
- *caco3_umol_day_m2*: carbonate production rate in µmol day^{-1} m^{-2} (i.e., *caco3_umol_day/500)*
- *caco3_umol_day_kg*: carbonate production rate in µmol day^{-1} kg^{-1} (i.e., *caco3_umol_day/retained_biomass)*

All predictions refer to the retained biomass and abundance.

survey_caco3_composition.rds

This file contains the survey-level prediction of production rate for five carbonate polymorphs produced by reef fishes (LMC = low magnesium calcite; HMC = high magnesium calcite; ARA = aragonite; MHC = monohydrocalcite; ACMC = amorphous calcium magnesium carbonate). Predictions are based on a Bayesian multivariate hurdle-lognormal model.

Variables:

- *SiteCode*: RLS site ID
- *SurveyID*: RLS survey ID
- *biomass*: biomass of fishes belonging to families for which predictions are possible
- *prop_biomass*: proportion of retained biomass
- *abundance*: number of fishes belonging to families for which predictions are possible
- *prop_abund*: proportion of retained abundance
- *X_umol_day*: production rate for the whole transect area (500 m^2) in µmol day^{-1}
- *X_umol_day_m2*: production rate in µmol day^{-1} m^{-2} (i.e., *X_umol_day/500)*
- *X_umol_day_kg*: production rate in µmol day^{-1} kg^{-1} (i.e., *X_umol_day/retained_biomass)*

X = carbonate polymorph (L = Low-Mg Calcite; H = High-Mg Calcite; AR = Aragonite; M = Monohydrocalcite; AC = Amorphous Ca-Mg Carbonate)