## Task 2

## Survey Data

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13 enero, 2018

```
dirMy ="/home/laurence/Desktop/sea++/mydas/tasks"
dirInp=file.path(dirMy,"inputs")
dirDat=file.path(dirMy,"data")
```

```
[1] "species_fao"
                          "scientific_name"
                                              "english_name"
                                              "haulid"
[4] "speccode"
                          "speciesgp"
[7] "survey_acronym"
                          "speciessciname"
                                              "fishlength_cm"
[10] "number"
                          "densabund_n_sqkm"
                                              "densbiom_kg_sqkm"
[13] "ices_rectangle"
                         "ices_division"
                                              "ship"
                         "gear"
                                              "year"
[16] "geartype"
[19] "monthshot"
                         "dayshot"
                                              "timeshot"
[22] "hauldur min"
                          "latitude"
                                              "longitude"
[25] "icesstsq"
                         "survstratum"
                                              "depth_m"
[28] "distance_km"
                                              "doorspread m"
                         "wingspread m"
                          "wingswparea_sqkm"
[31] "netopen_m"
                                              "wingswpvol_corf"
[34] "doorswptarea_corf" "doorswptvol_corf"
                                              "flag"
[1] "Thornback ray
                        "Small-eyed ray
                                          " "Shagreen ray "
                                            "Longnosed skate "
[4] "Sandy ray "
                        "Spotted ray "
                                            "Grey gurnard"
[7] "Undulate ray
                        "European sprat"
[10] "Ling"
                        "Blue ling"
                                            "Spanish ling"
                        "Saithe"
                                            "Pollack"
[13] "John dory"
[16] "Turbot"
                        "Brill"
[1] "7G" "7A" "7H" "7J" "7B" "6A" "7C" "4C" "4B" "6B" "7E" " 8" "4A" "7D"
[15] "3A"
```

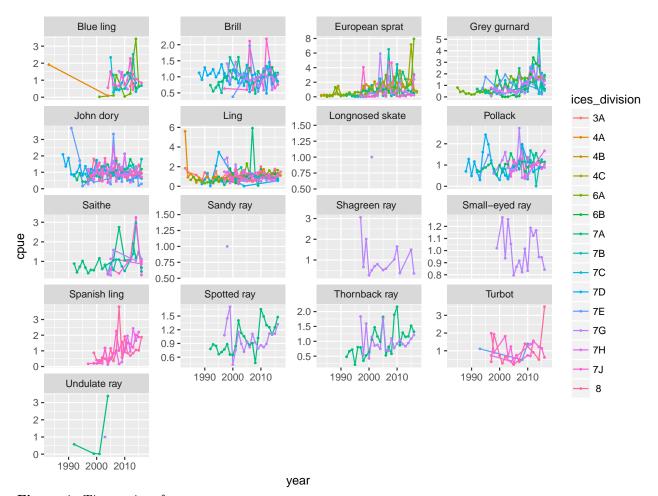


Figure 1. Time series of surveys.