

Test Version

2020-04-17

Load packages

Load and transform shapefile

```
###1.Load seabed habitats shapefile
```

```
sb2019 <-readOGR(paste0(Data_location,"Template_Ecosystem/data/MSFD"),"MSFD_BBHT_Ireland2019")
```

```
## OGR data source with driver: ESRI Shapefile
## Source: "C:\Template_Ecosystem\data\MSFD", layer: "MSFD_BBHT_Ireland2019"
## with 100401 features
## It has 7 fields
```

```
#####
####"Mercator" Coordinate Reference Systems used in the habitat shapefile####
#####
```

```
###2. Transform to "WGS84" Coordinate Reference Systems
```

```
#####
#### spTransform() function from sp package used to transform from "Mercator" to "WGS84" CRS##
#####
```

```
sb2019 <-
spTransform(sb2019,
"+proj=longlat +datum=WGS84 +no_defs +ellps=WGS84 +towgs84=0,0,0")
```

Seabed Habitats Mapping around Ireland

Summary

Biozone	area_km2	perc
Atlantic upper bathyal	0	0%
Atlanto-Mediterranean mid bathyal	0	0%
Deep circalittoral	23256	97.9%
Infralittoral	0	0%
Shallow circalittoral	167	0.7%
Unclassified	343	1.4%

Substrate	area_km2	perc
Coarse sediment	474	2%
Coarse substrate	1227	5.2%
Fine mud	56	0.2%
Muddy sand	4650	19.6%
Rock	75	0.3%
Rock or other hard substrata	881	3.7%
Sand	15929	67%
Sandy mud	48	0.2%
sandy Mud/muddy Sand	83	0.3%
Seabed	0	0%
Unclassified substrate	0	0%
Unclassified substrate	343	1.4%

Folk_5	area_km2	perc
Coarse sediment	1701	7.2%
Mud to muddy Sand	4837	20.4%
Rock	956	4%
Sand	15929	67%
Unclassified	343	1.4%

EUNIS	area_km2	perc
A3: Infralittoral rock and other hard substrata	0	0%
A4: Circalittoral rock and other hard substrata	956	4%
A5.13: Infralittoral coarse sediment	0	0%
A5.14: Circalittoral coarse sediment	1	0%
A5.15: Deep circalittoral coarse sediment	1700	7.2%
A5.25 or A5.26: Circalittoral fine sand or Circalittoral muddy sand	4	0%
A5.27: Deep circalittoral sand	15925	67%
A5.35: Circalittoral sandy mud	25	0.1%
A5.37: Deep circalittoral mud	4812	20.2%
A6.5: Deep-sea mud	0	0%
A6: Deep-sea bed	0	0%
Unclassified	343	1.4%

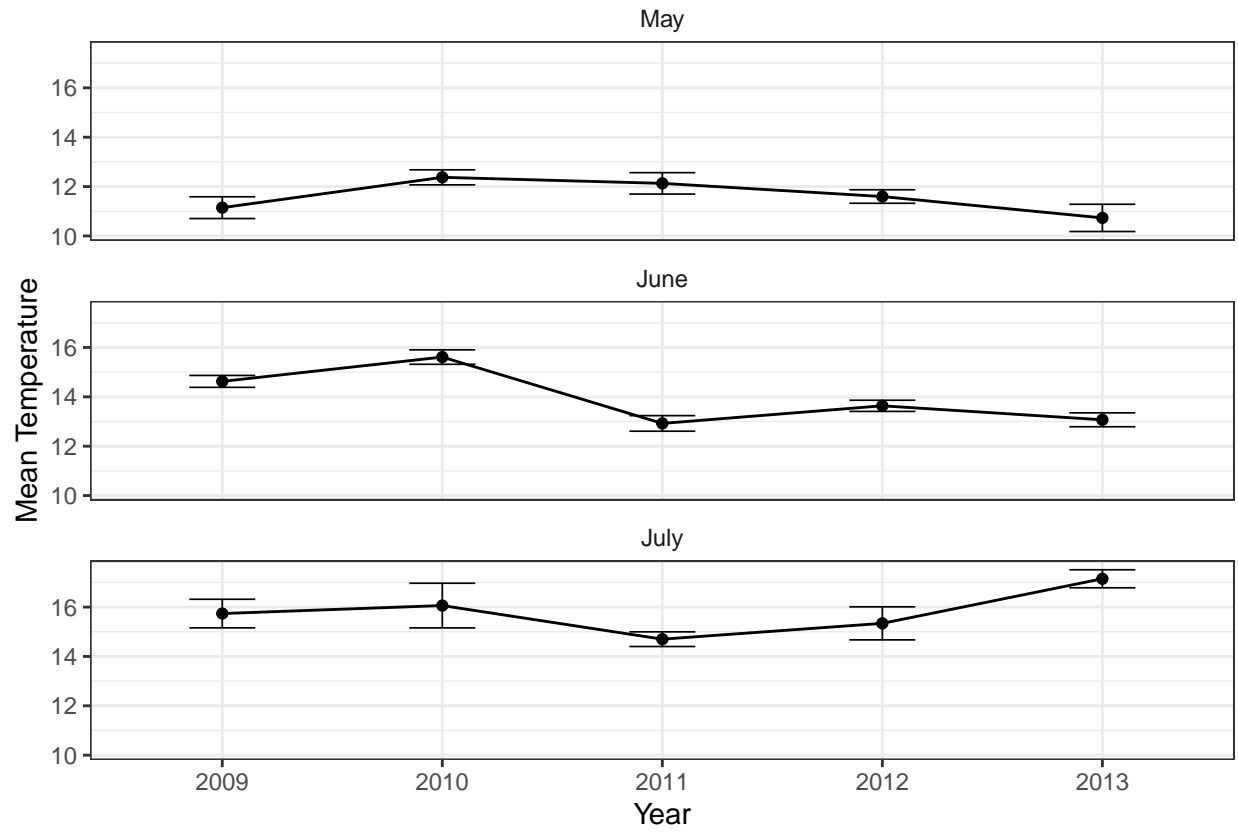
MSFD_BBHT	area_km2	perc
Circalittoral coarse sediment	1	0%
Circalittoral mud	25	0.1%
Circalittoral rock and biogenic reef	137	0.6%
Circalittoral sand	4	0%
Infralittoral coarse sediment	0	0%
Infralittoral rock and biogenic reef	0	0%
Offshore circalittoral coarse sediment	1700	7.2%
Offshore circalittoral mud	4812	20.2%
Offshore circalittoral rock and biogenic reef	819	3.4%
Offshore circalittoral sand	15925	67%
Unclassified	343	1.4%
Upper bathyal sediment	0	0%

MSFD_BBHT	area_km2	perc
Upper bathyal sediment or Upper bathyal rock and biogenic reef	0	0%

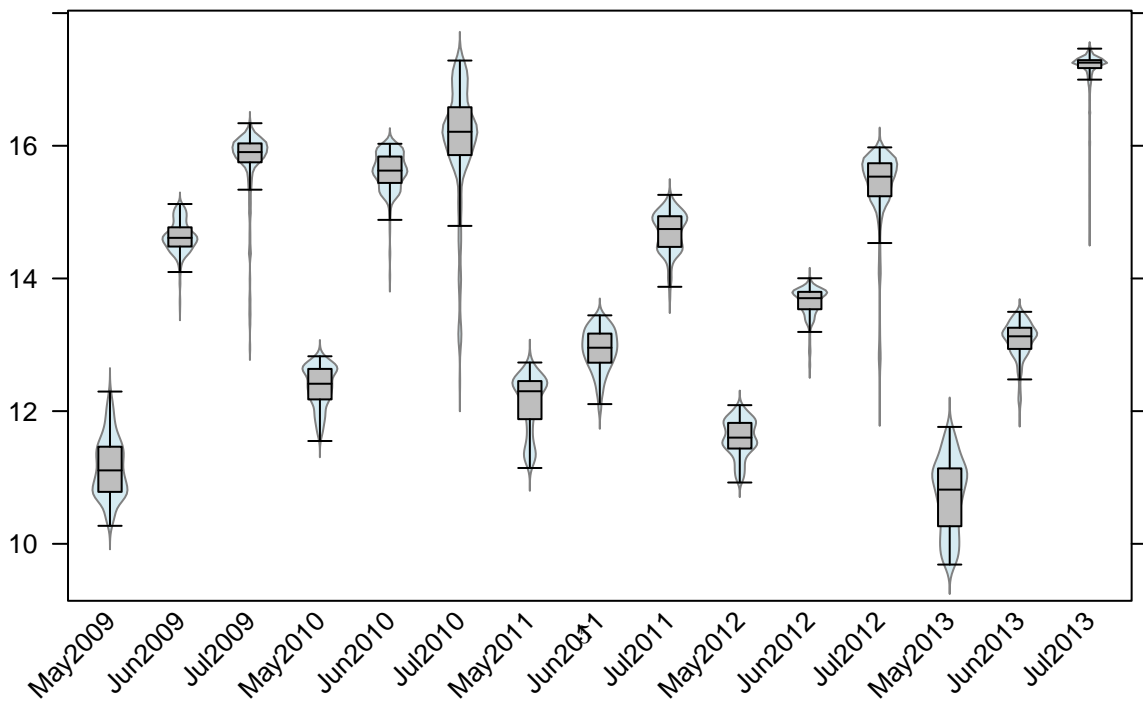
Copernicus Marine Service Data

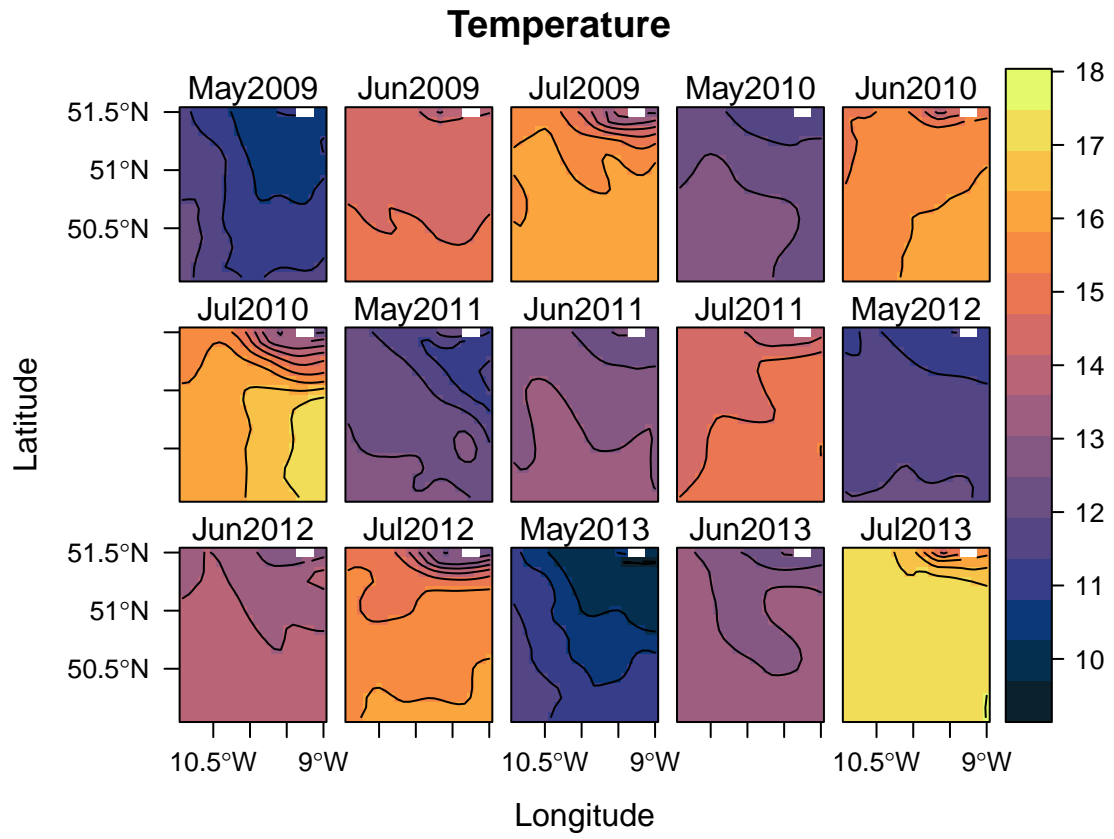
Ocean Physics Realanalysis

Temperature

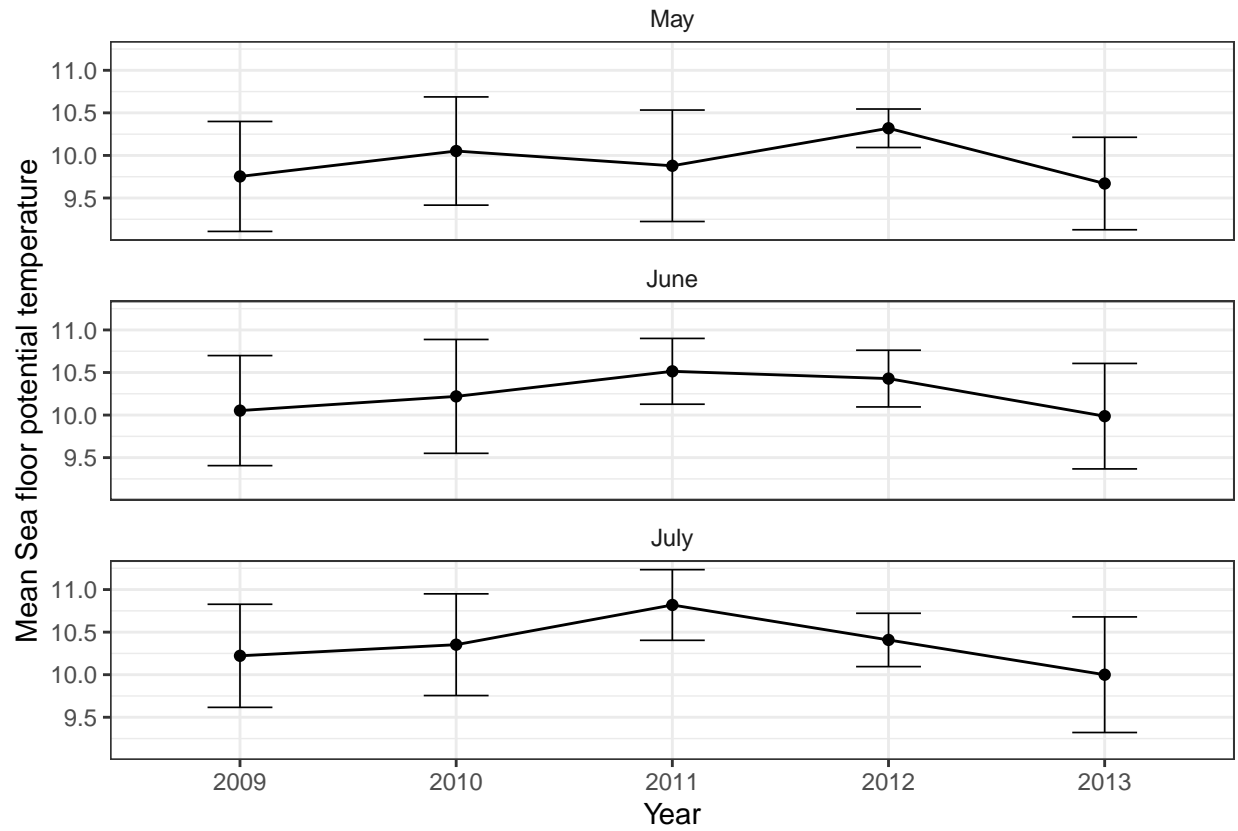


Temperature

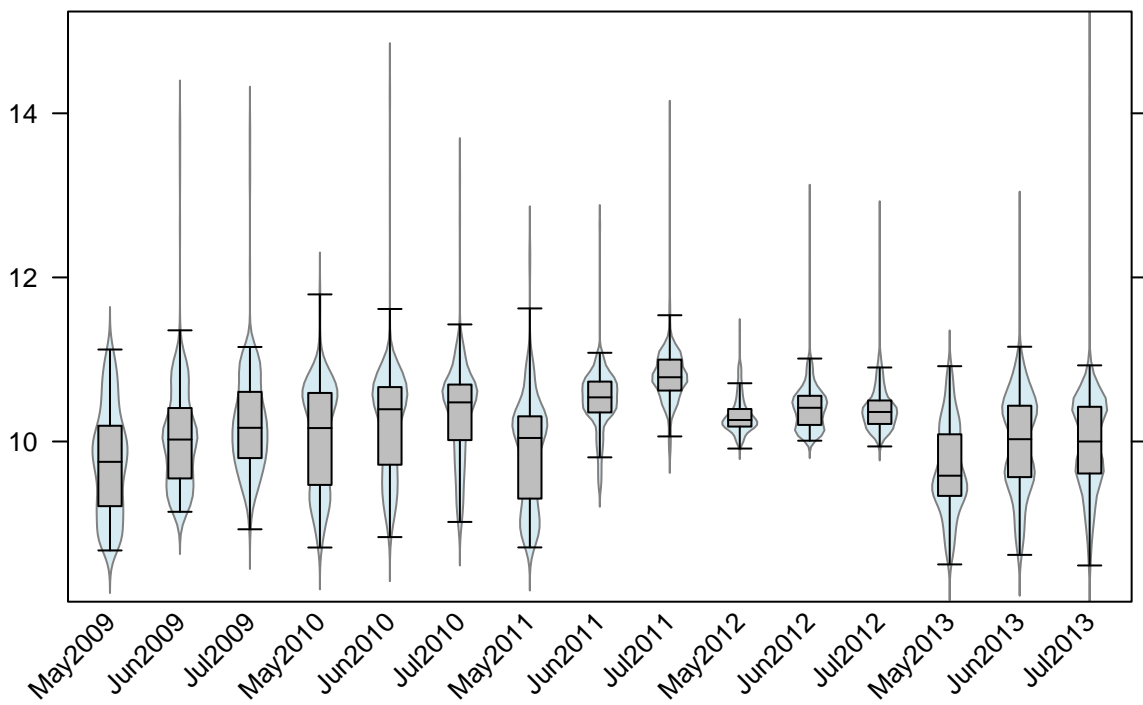




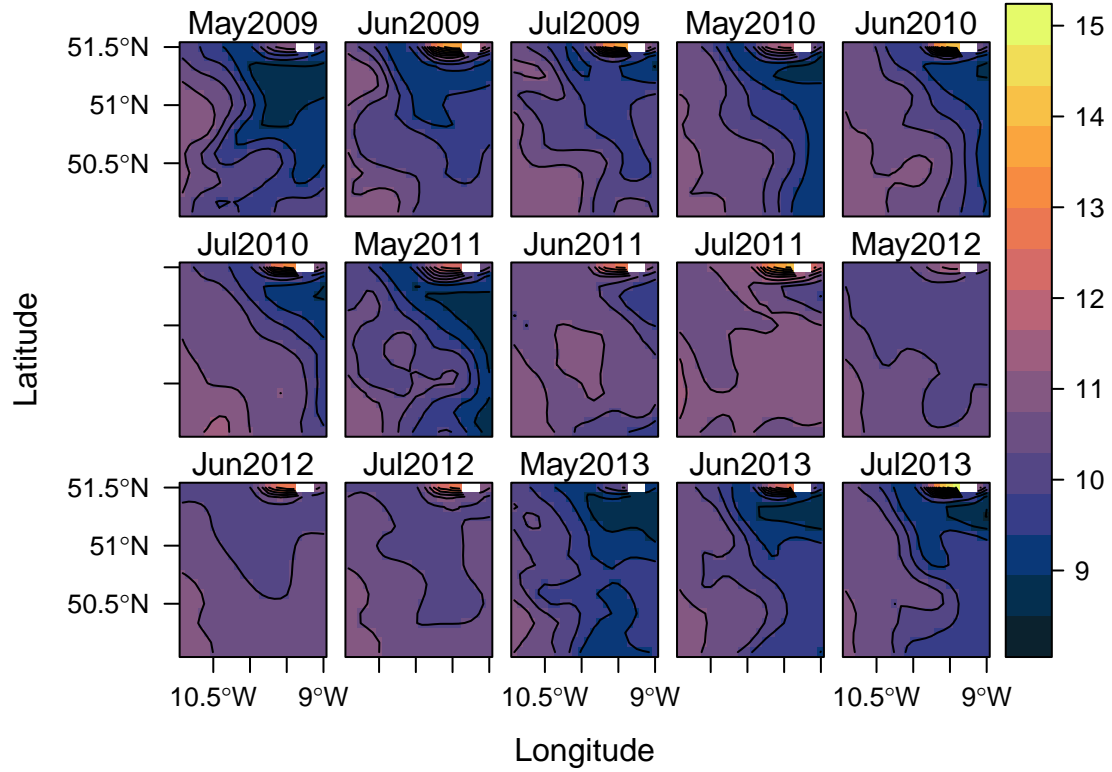
Sea floor potential temperature



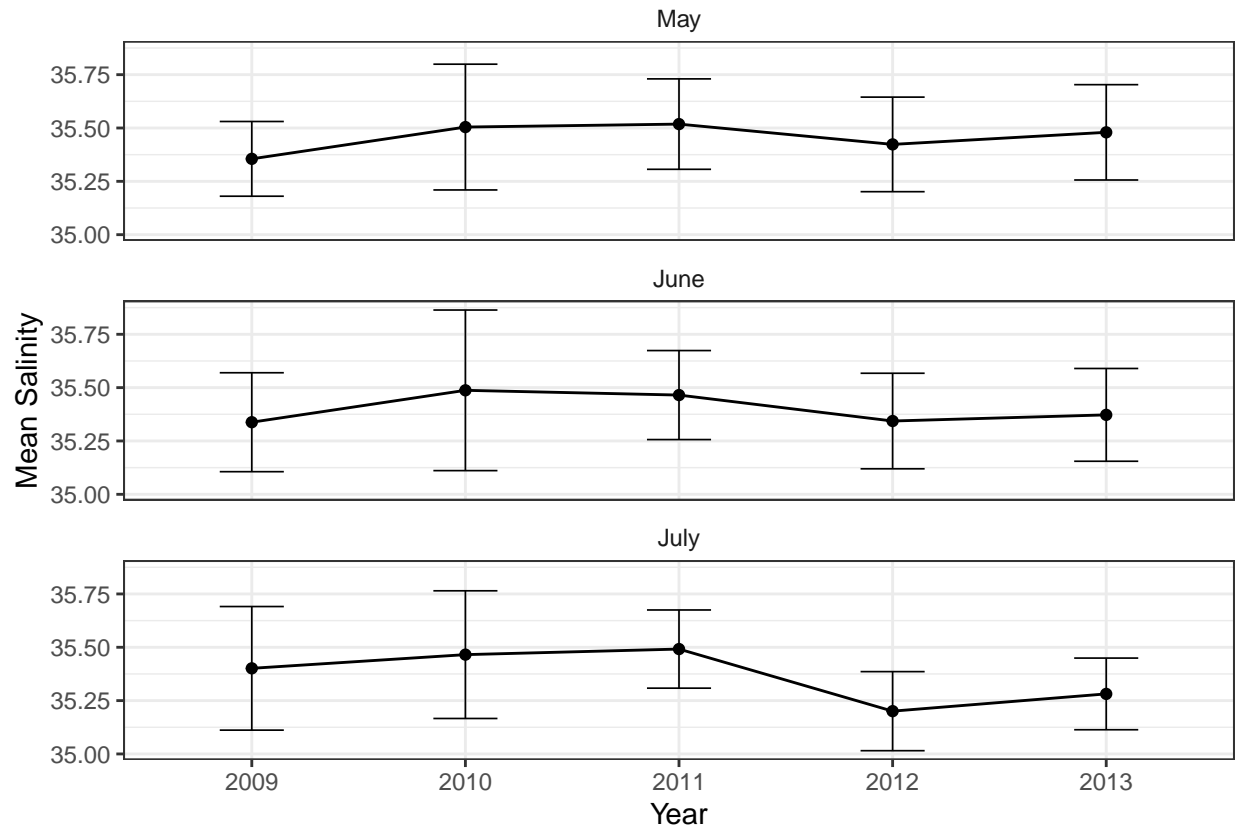
Sea floor potential temperature



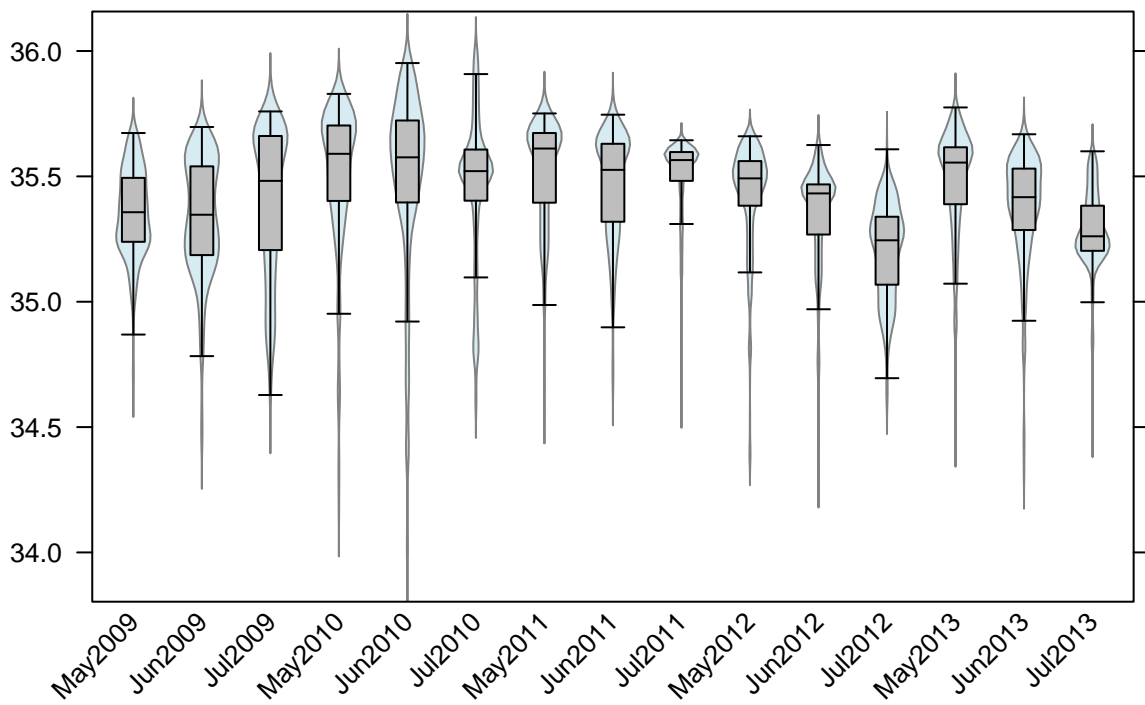
Sea floor potential temperature

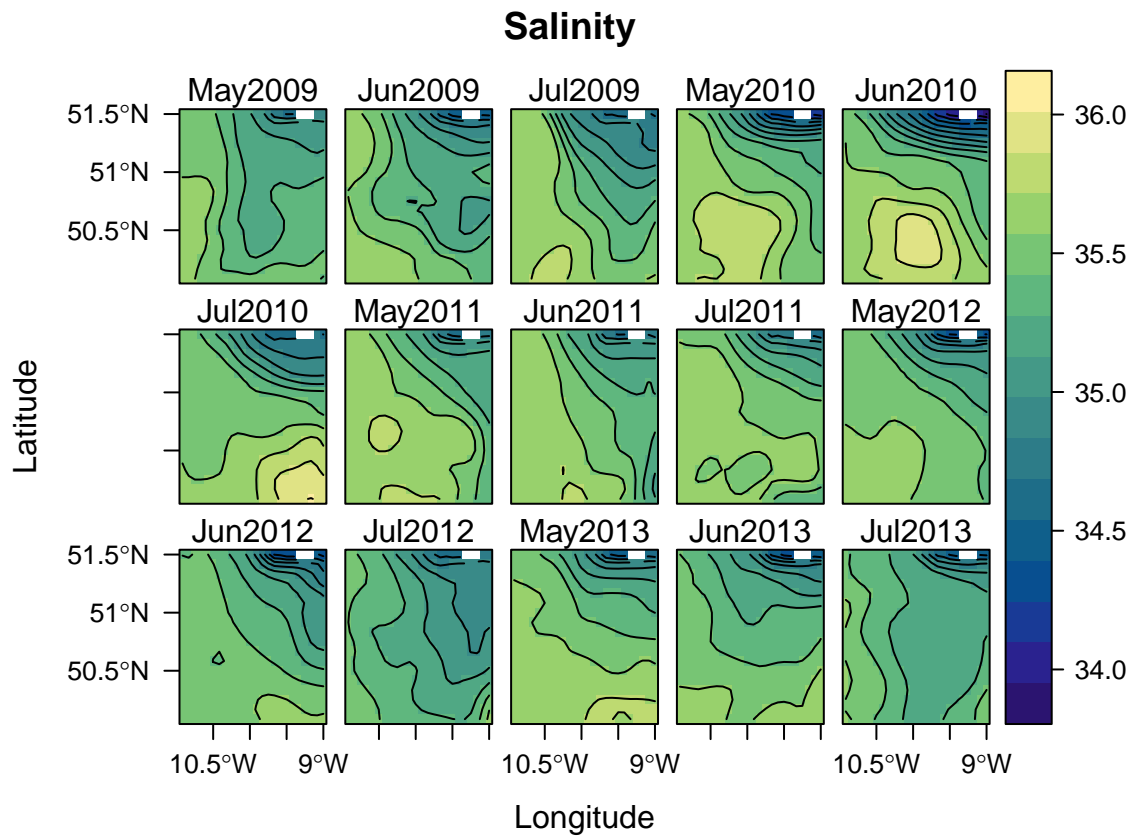


Salinity



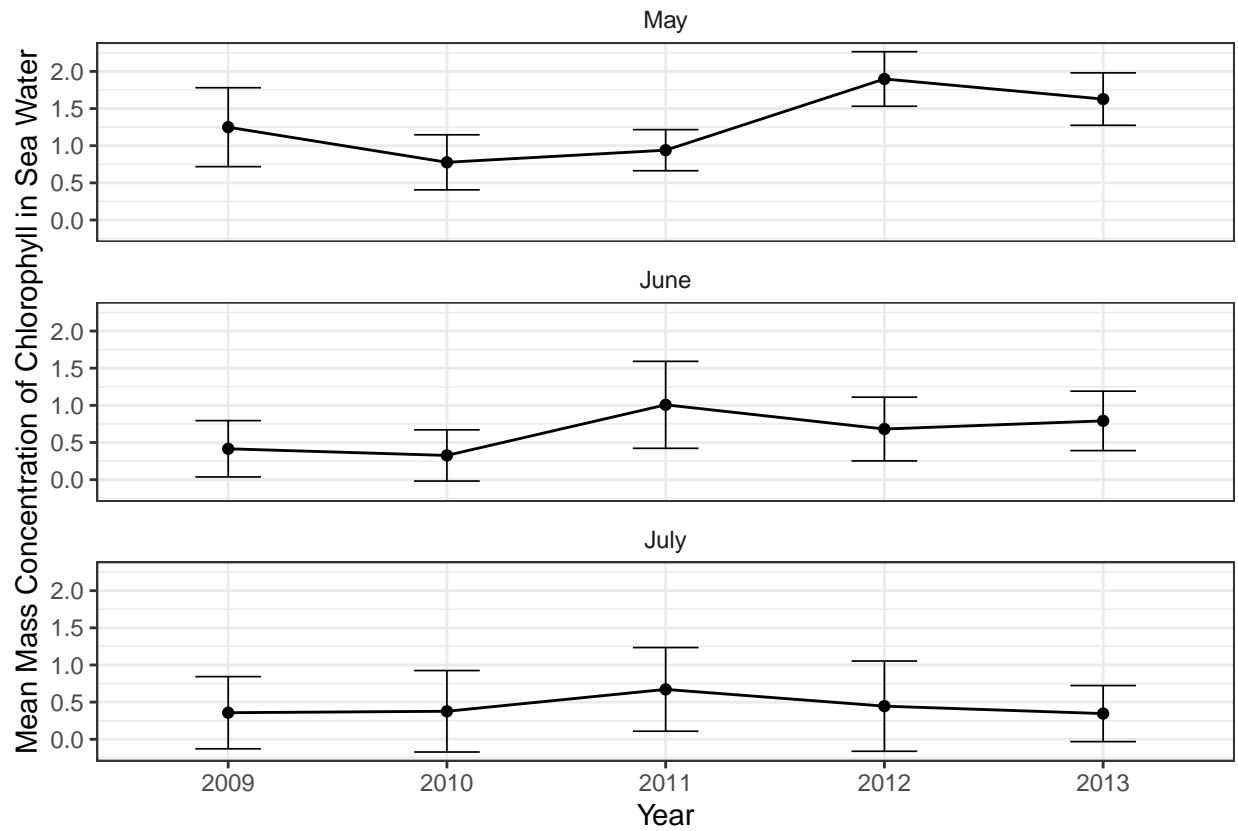
Salinity



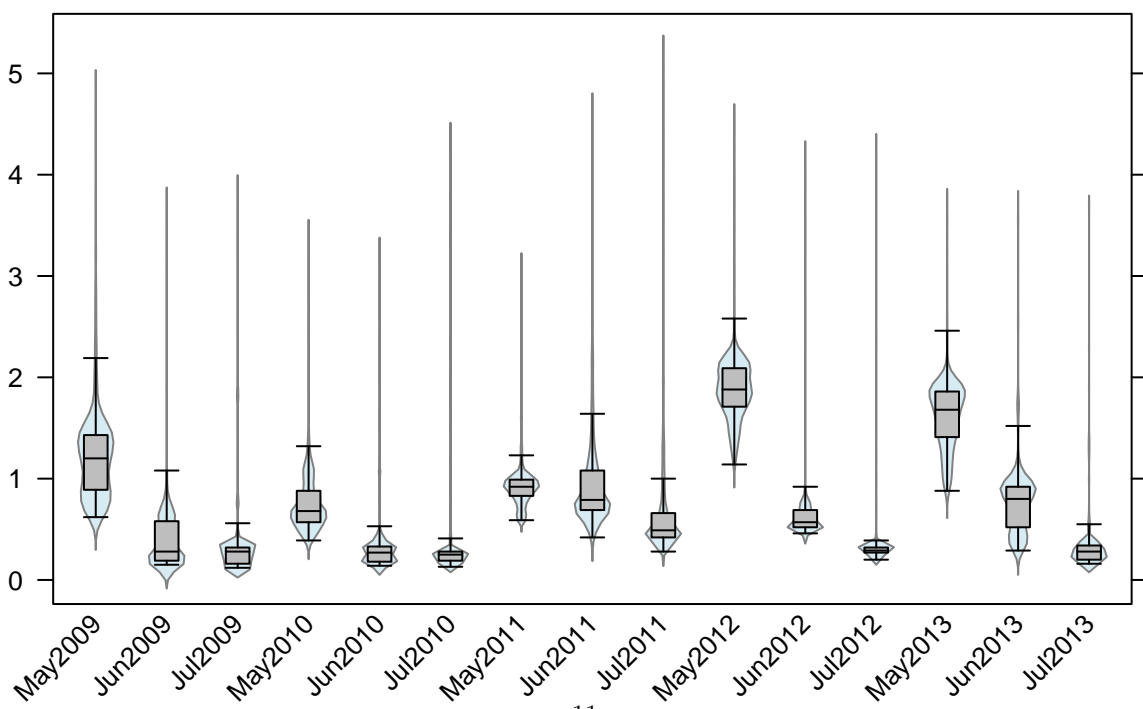


Ocean BioGeoChemistry NON ASSIMILATIVE Hindcast

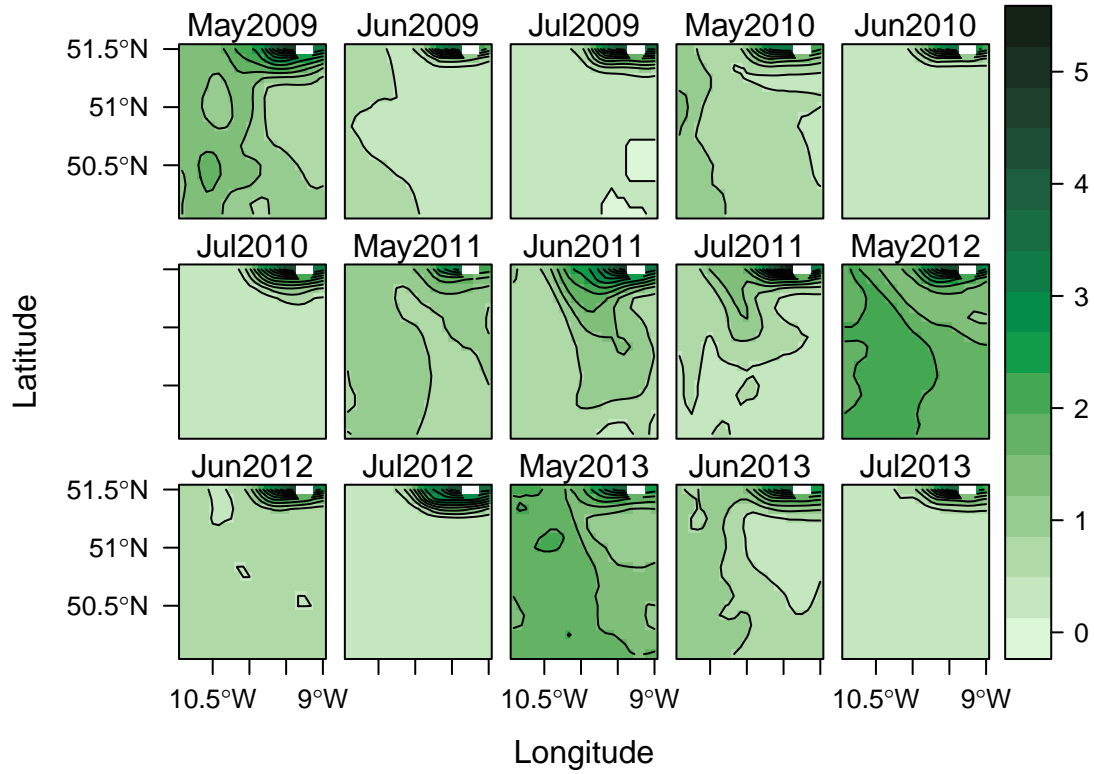
Mass Concentration of Chlorophyll in Sea Water



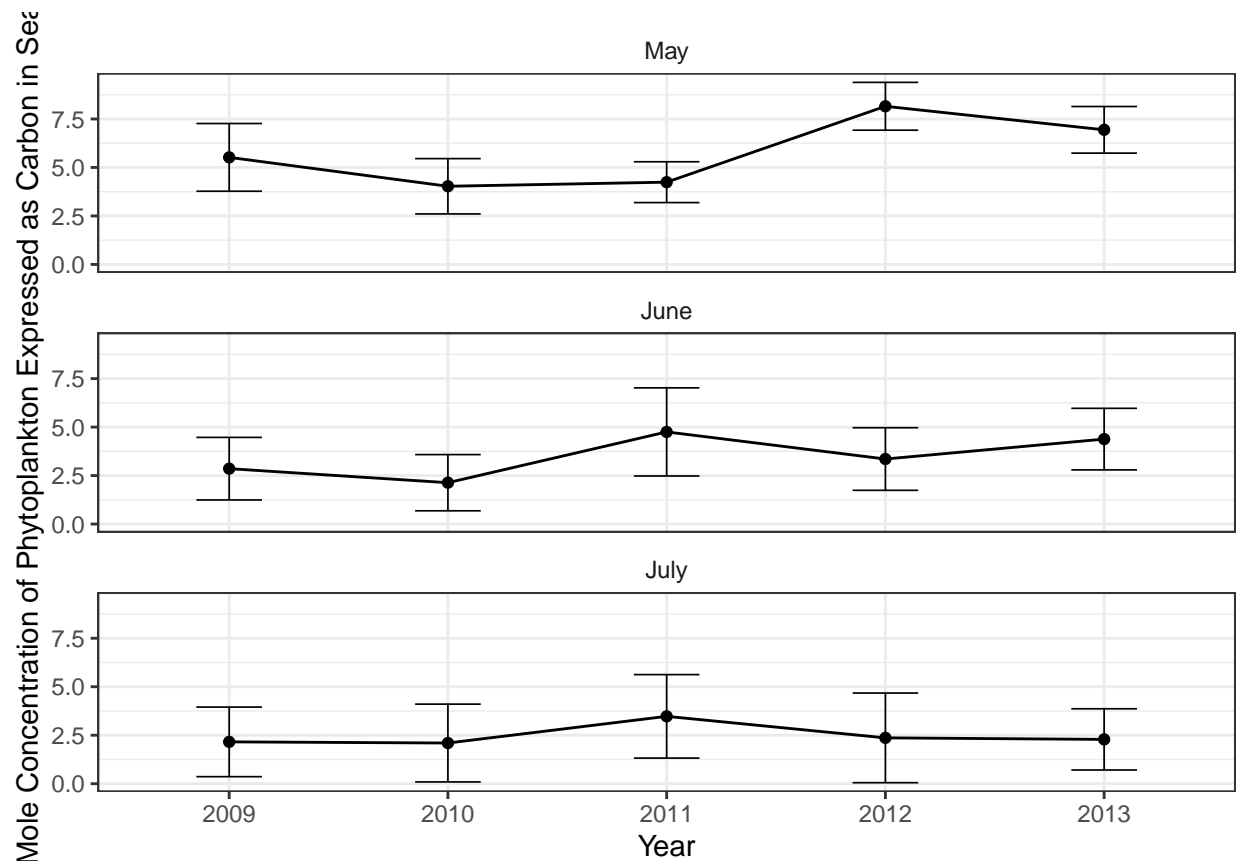
Mass Concentration of Chlorophyll in Sea Water



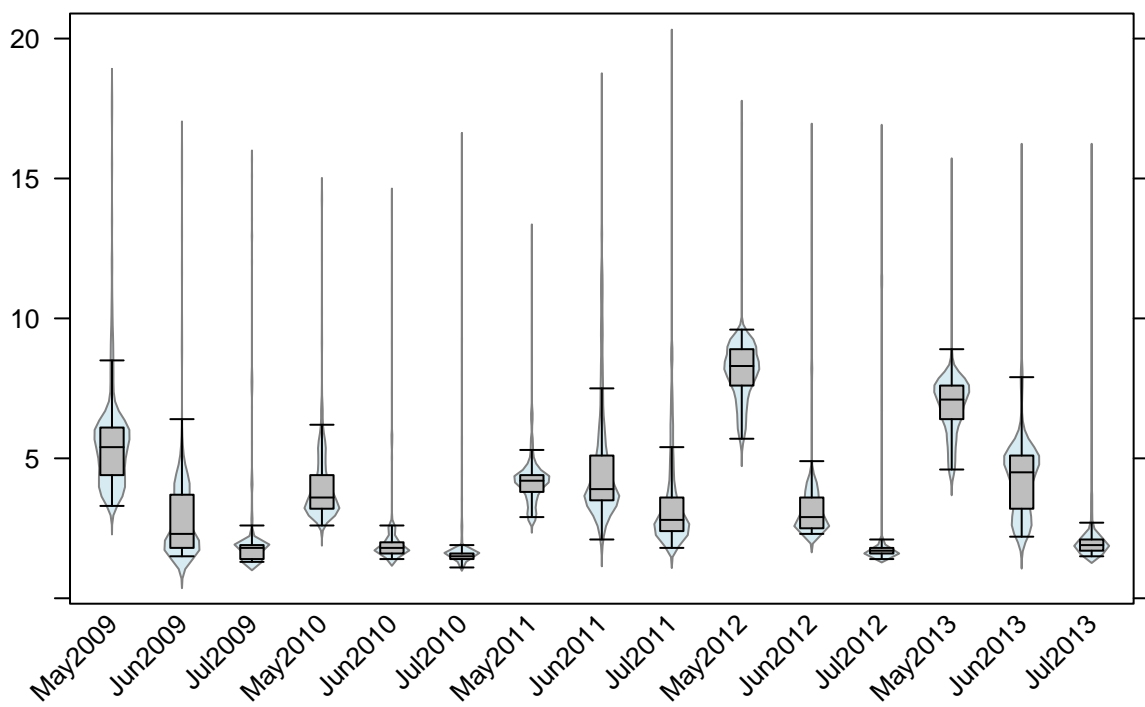
Mass Concentration of Chlorophyll in Sea Water



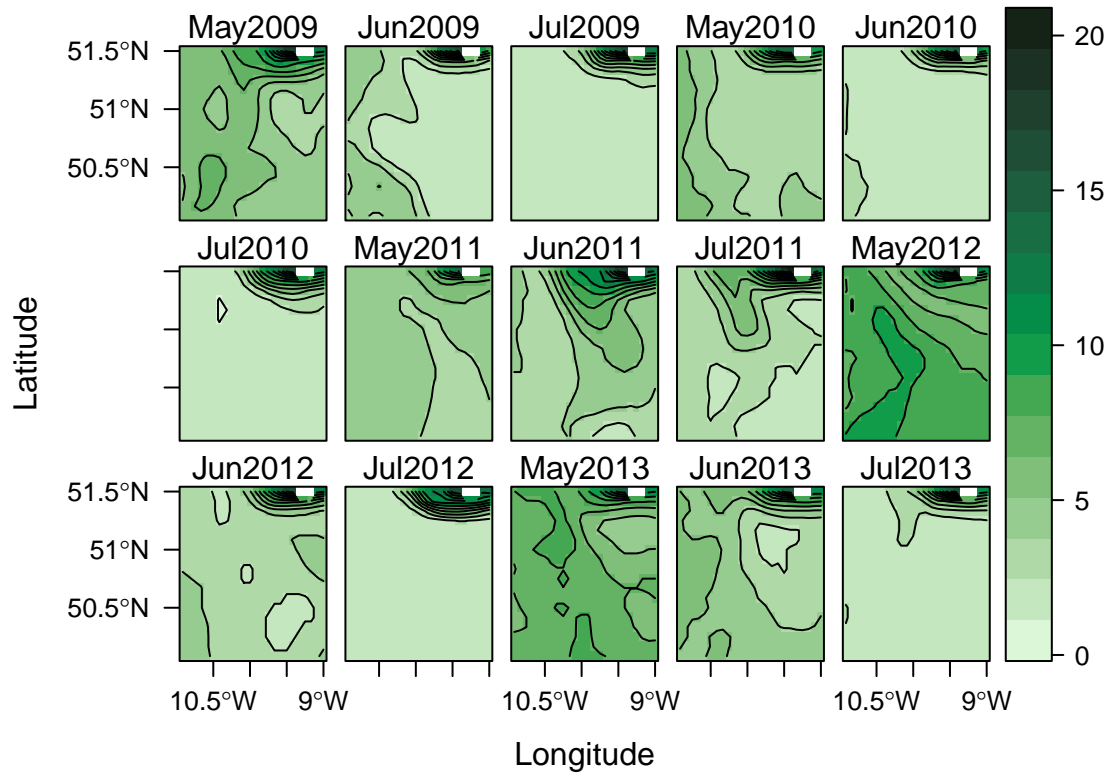
Mole Concentration of Phytoplankton Expressed as Carbon in Sea Water



Mole Concentration of Phytoplankton Expressed as Carbon in Sea Water

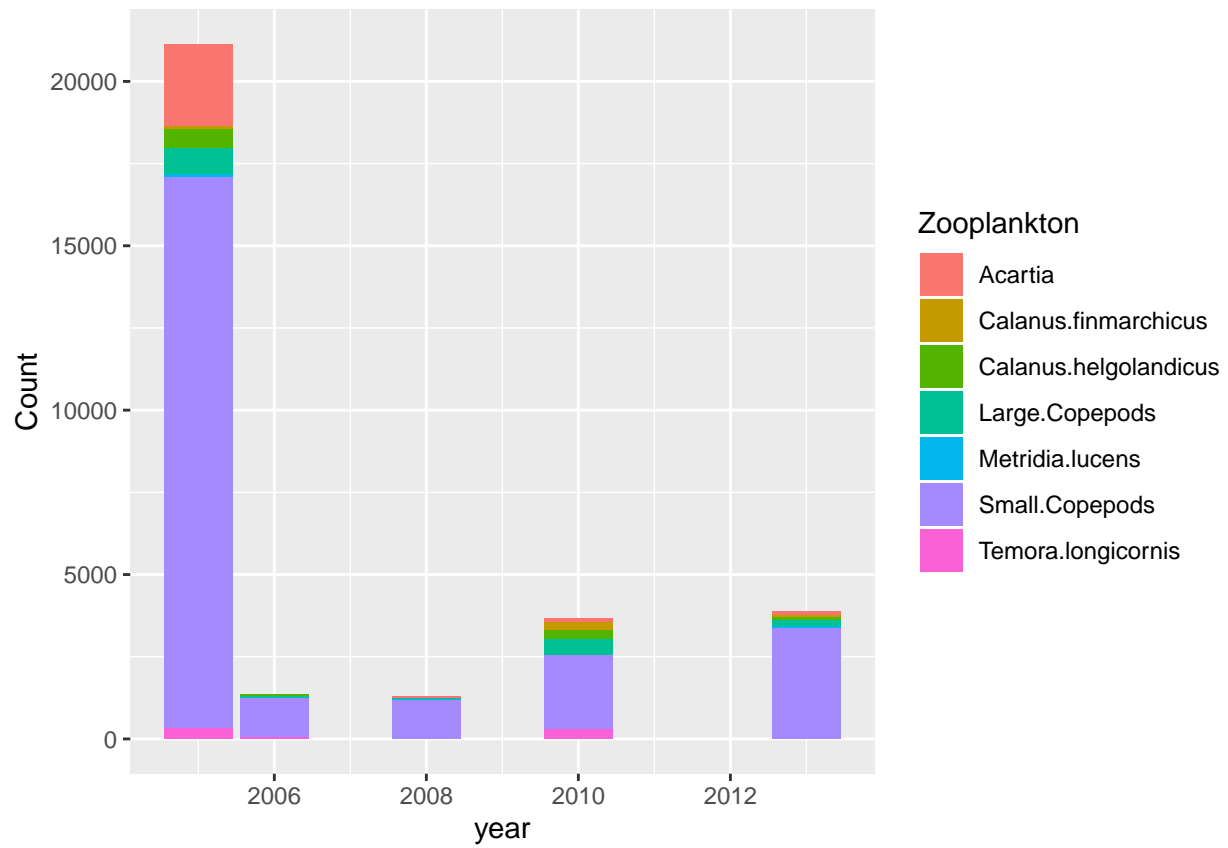


In situ Concentration of Phytoplankton Expressed as Carbon in Sea Water



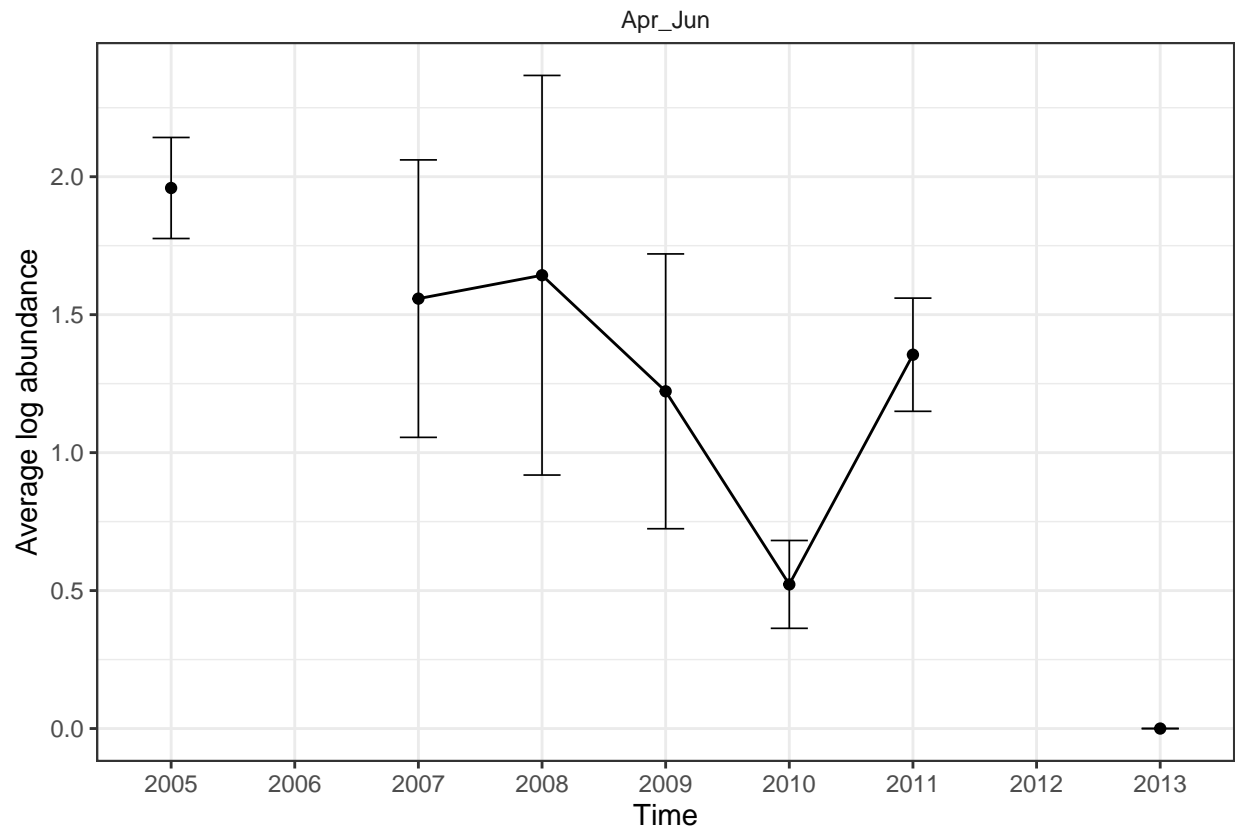
An operational zooplankton data service

Observed Counts

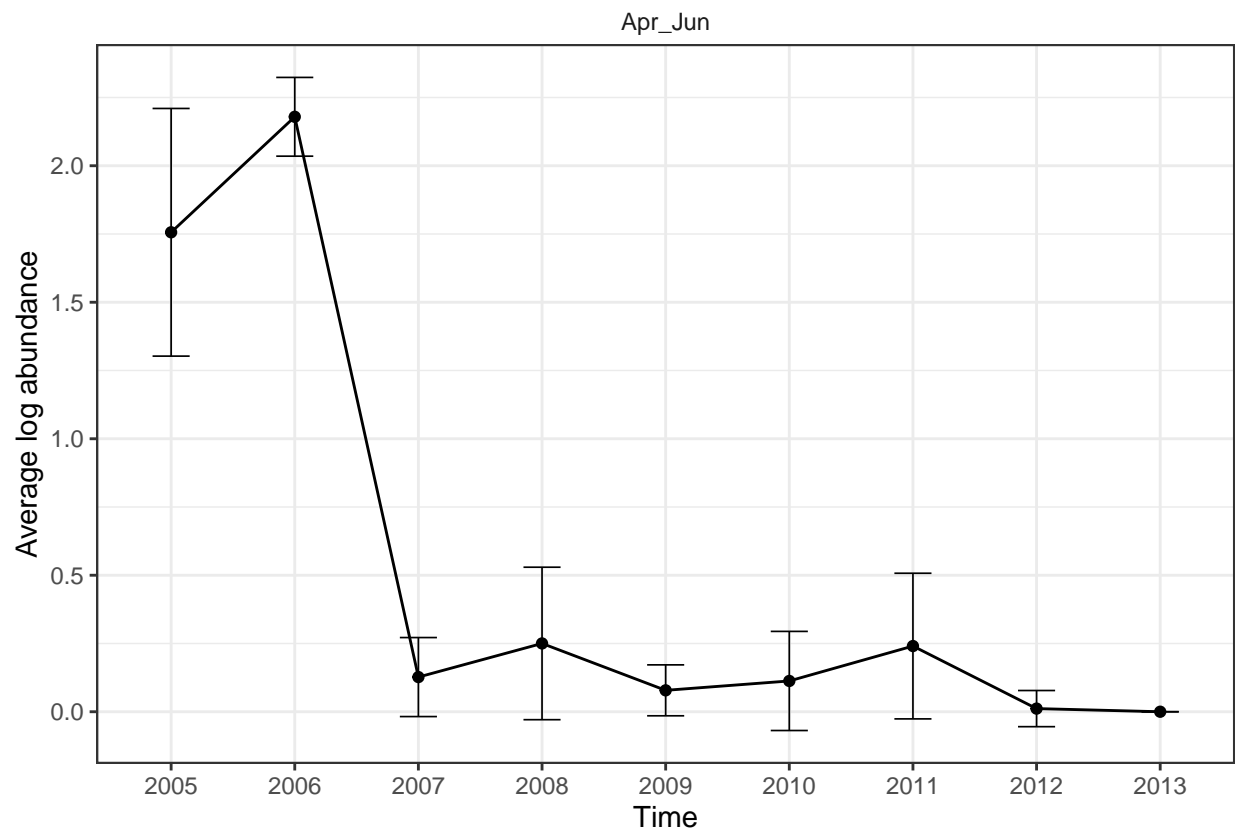


Data Interpolation and Variational Analysis

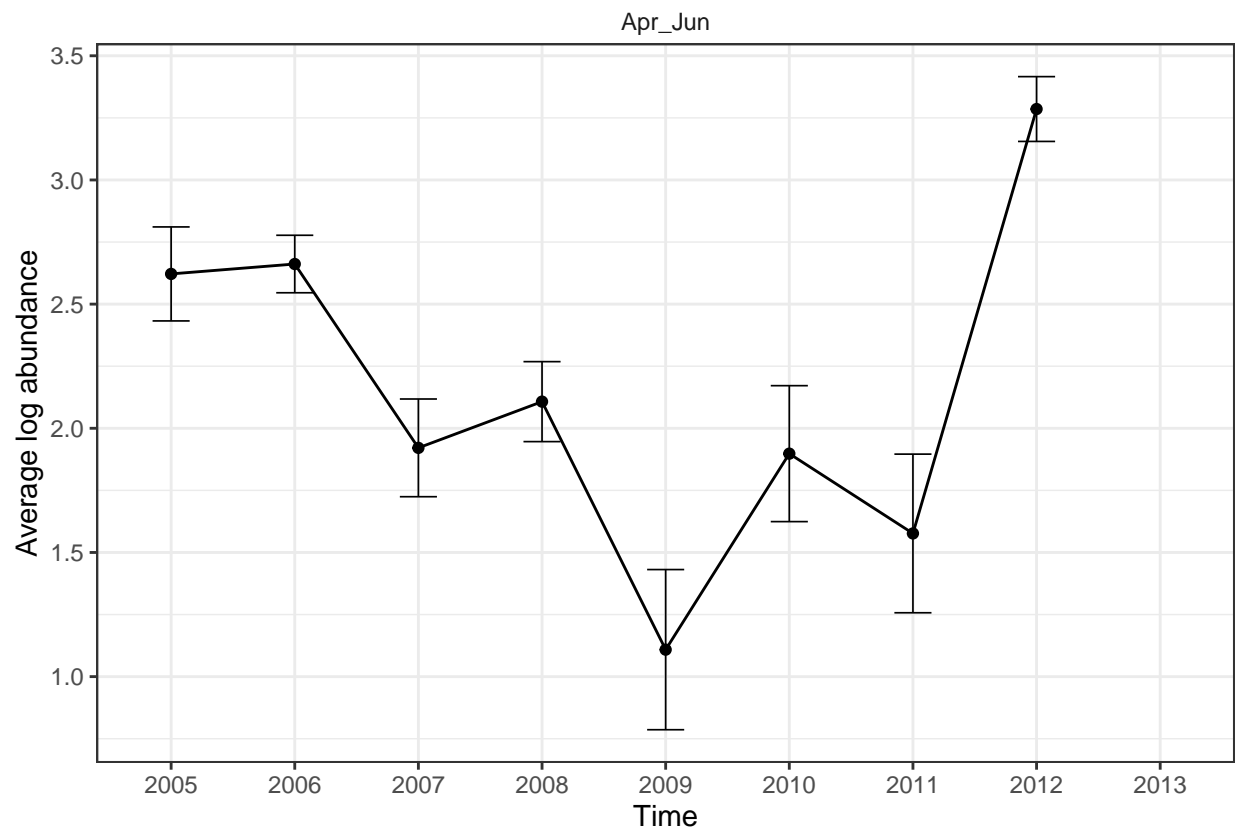
Acartia



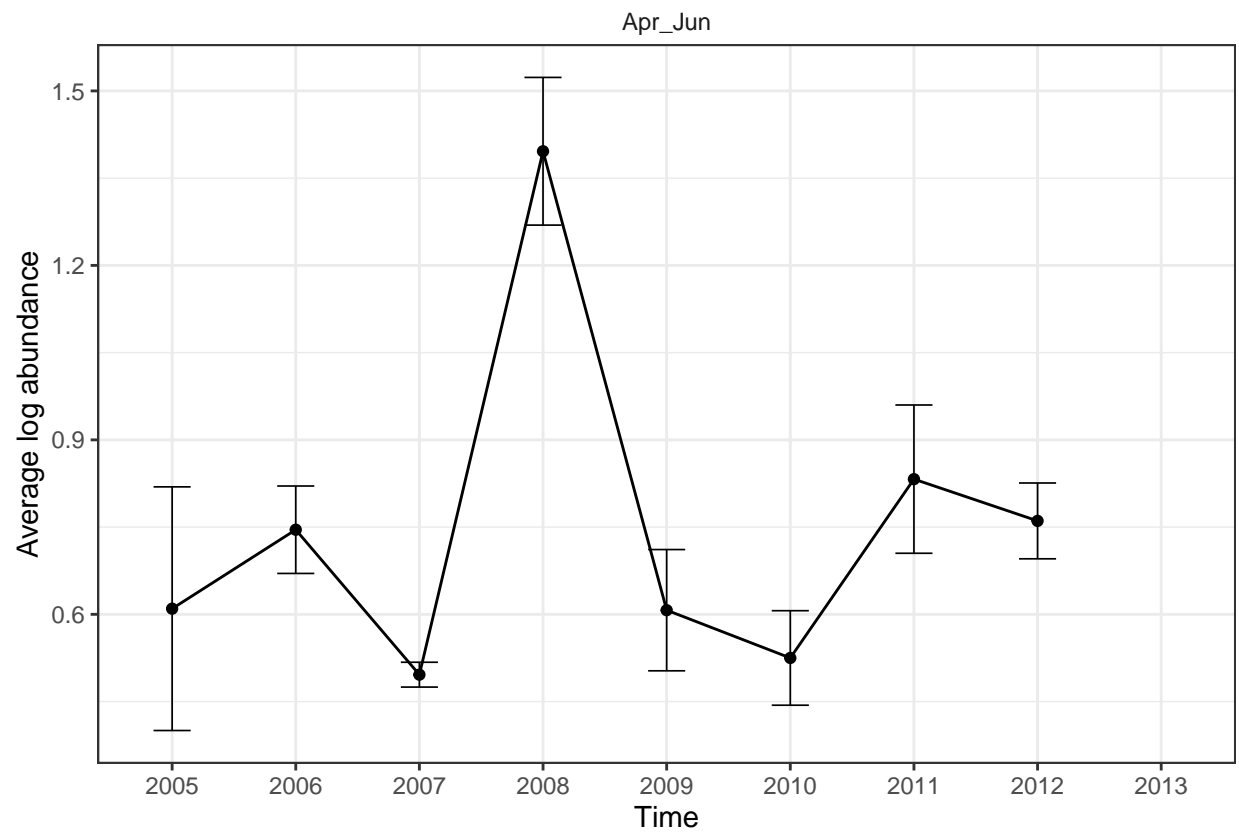
Calanus finmarchicus



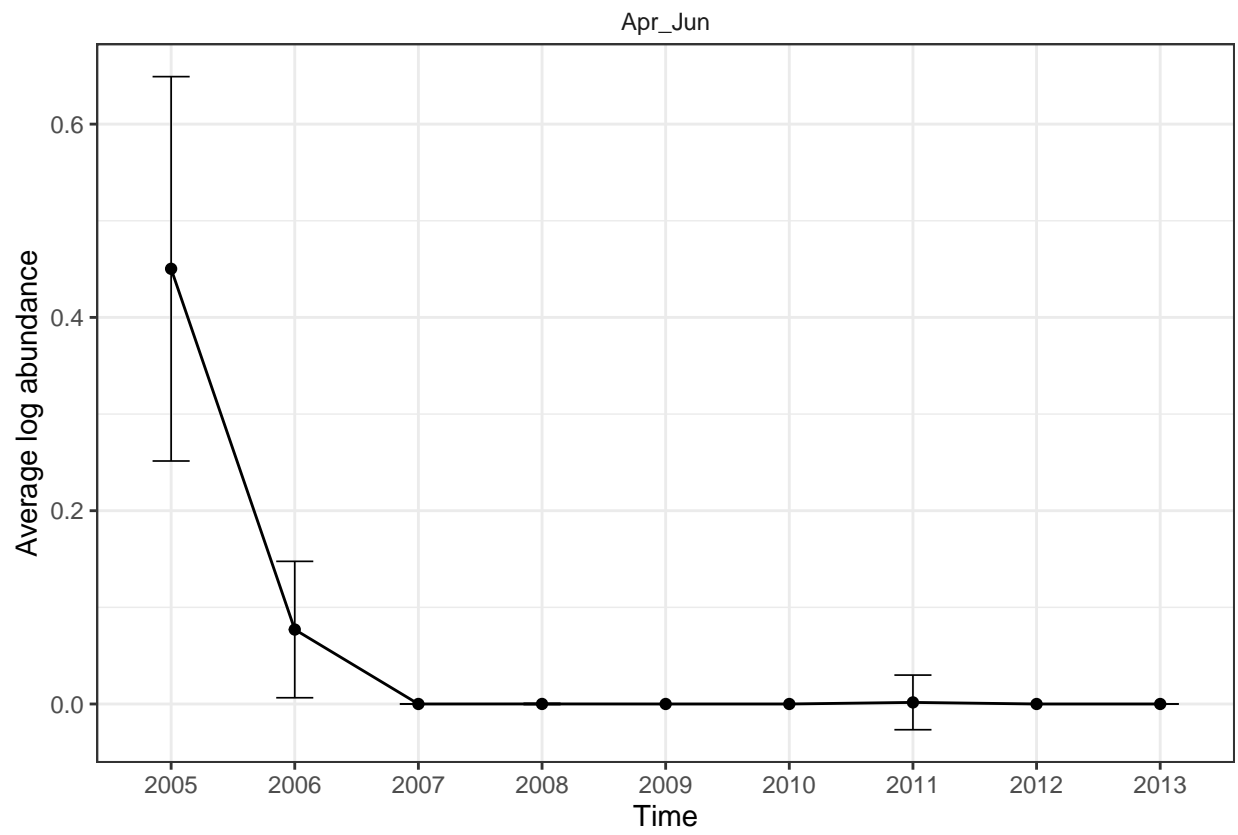
Calanus_helgolandicus



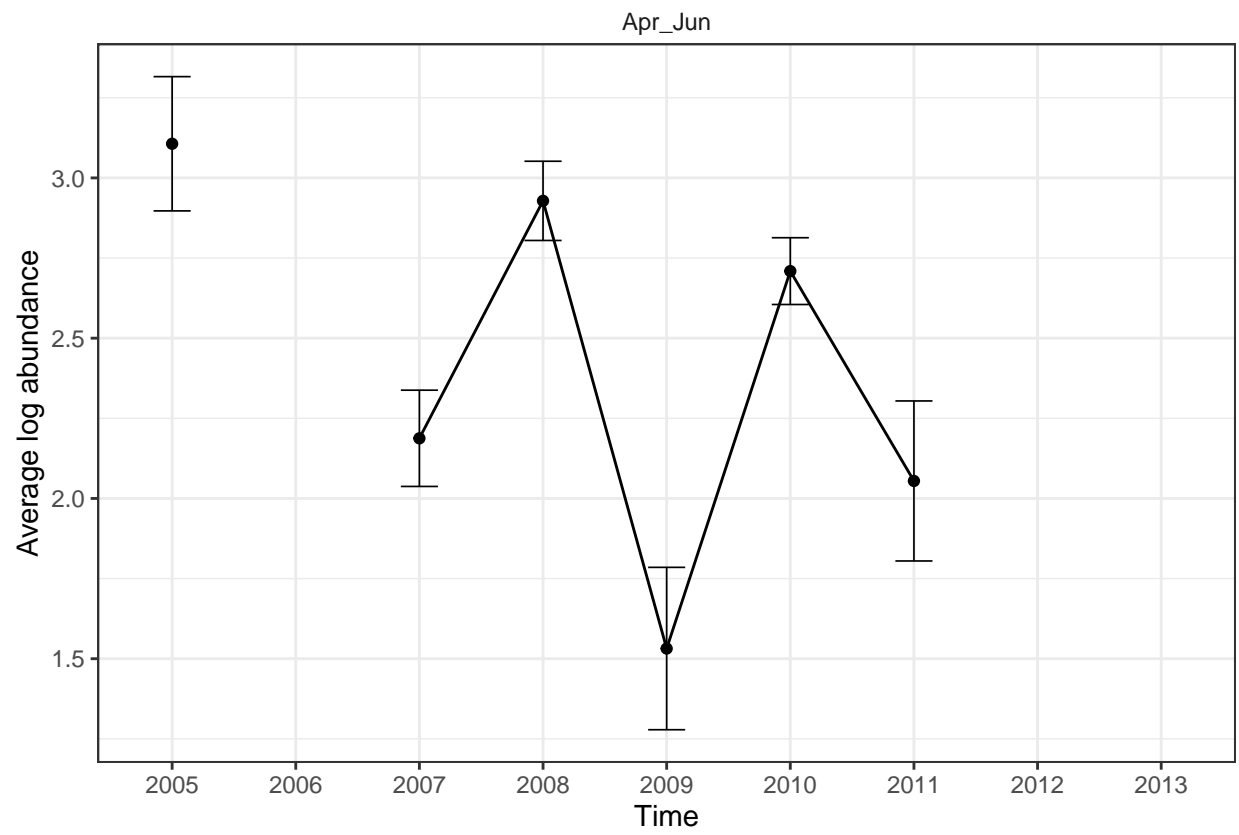
Metridia_lucens



Temora_longicornis



Large_copepods



Small_copepods

