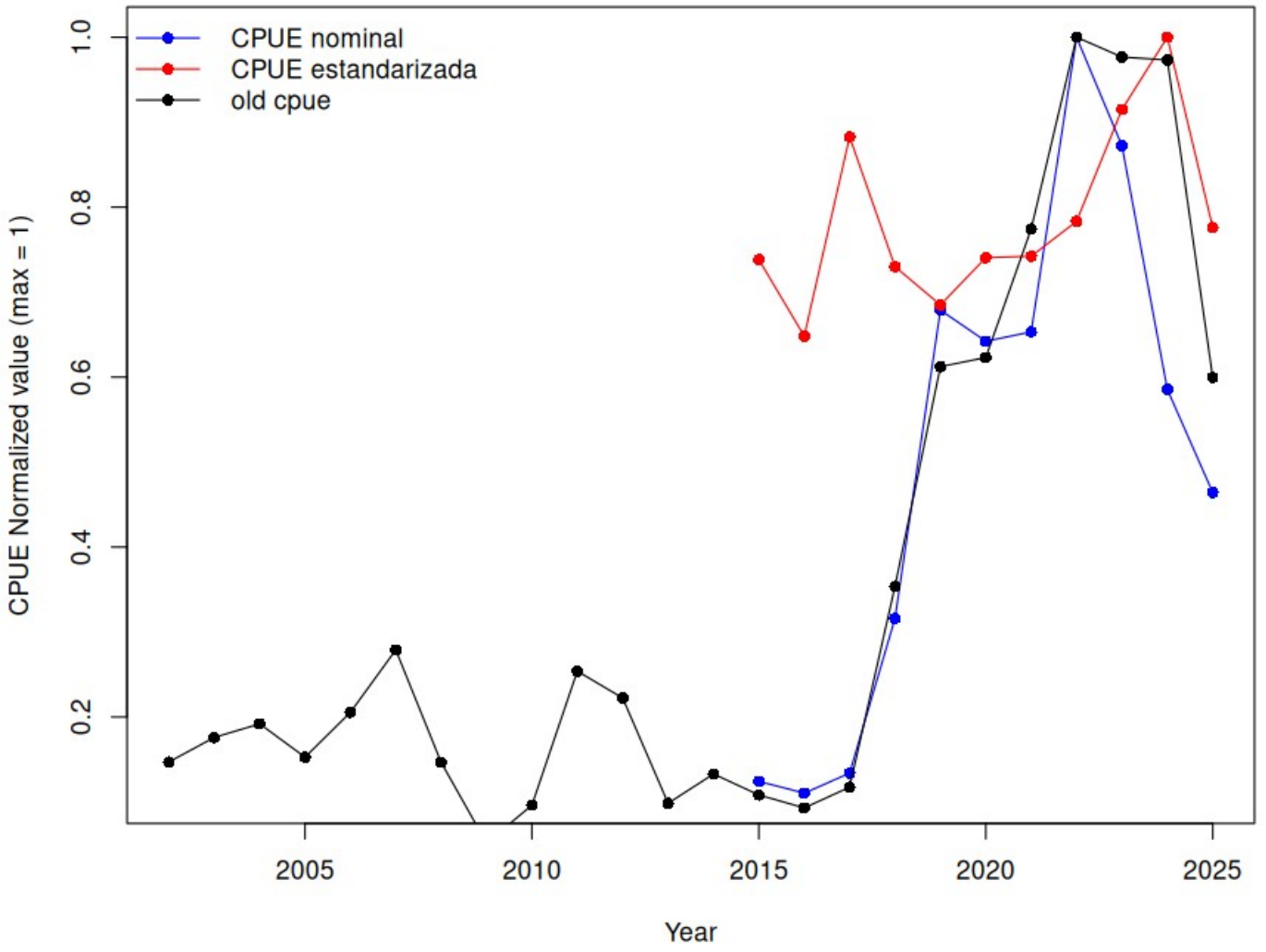
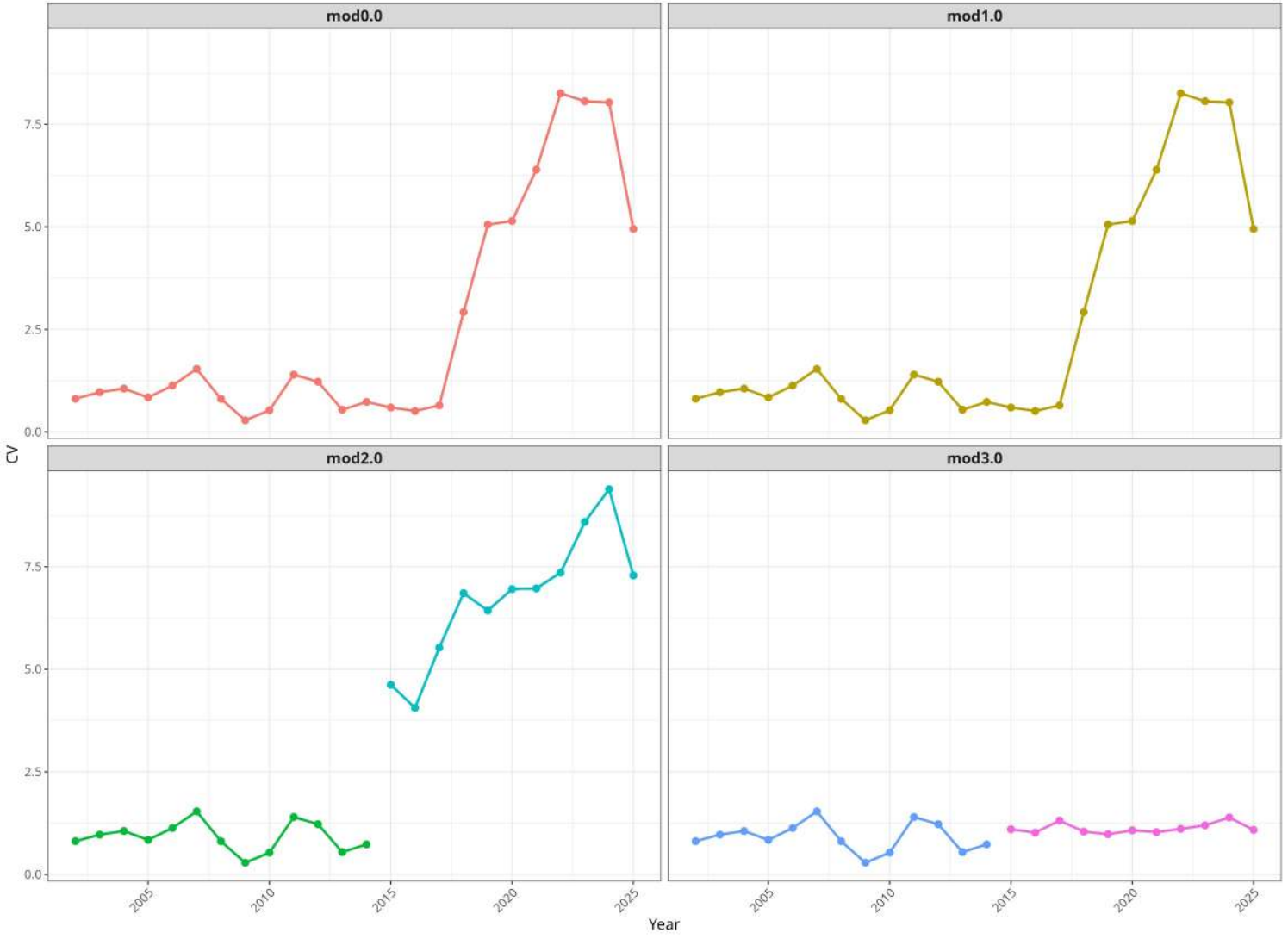

CPUE nominal
CPUE estandarizada
old cpue
CPUE Normalized value (max = 1)
0.2
0.4
0.6
0.8
1.0
2005
2010
2015
2020
2025
Year

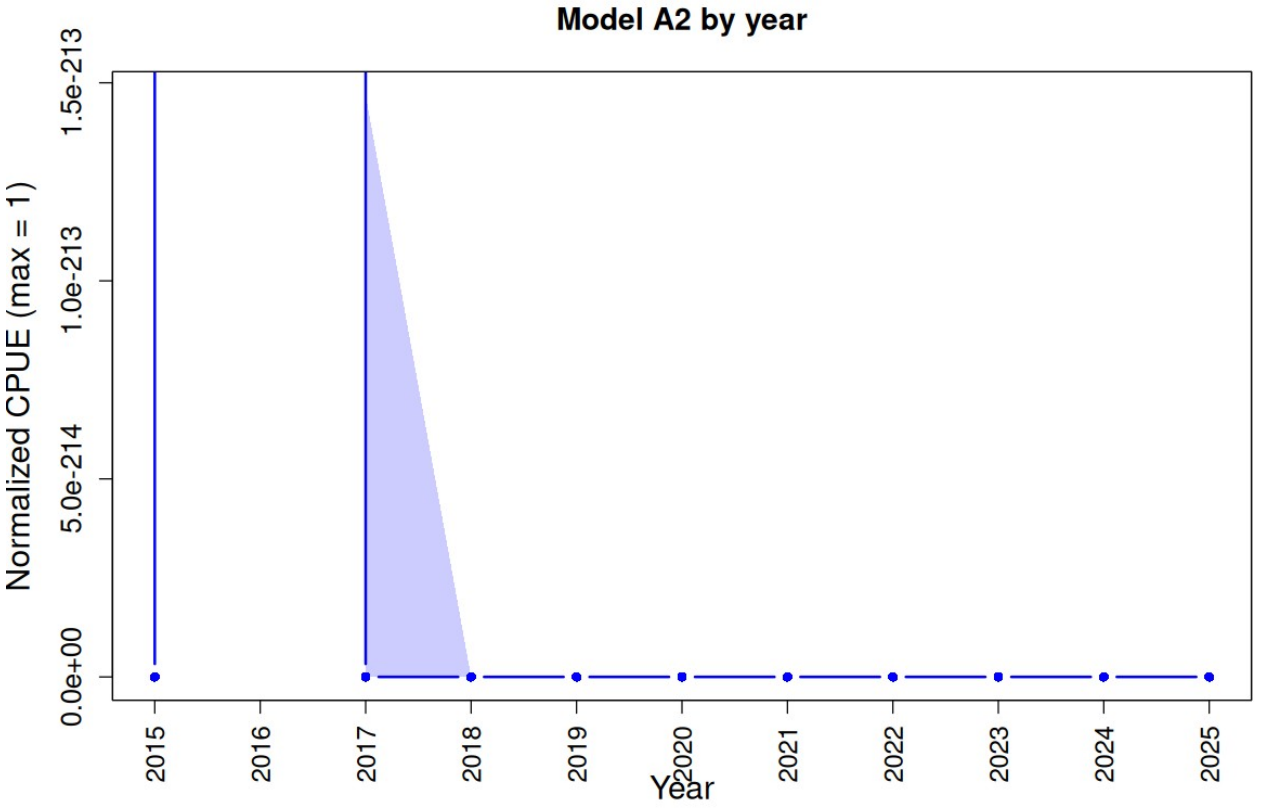
A tibble: 11 × 4

	year	catch	Landing	pctj_catch
	<fct>	<dbl>	<dbl>	<dbl>
1	2015	5231.	23036	22.7
2	2016	3528.	15121	23.3
3	2017	5601.	10094	55.5
4	2018	41751.	58356	71.5
5	2019	90302.	139811	64.6
6	2020	106248.	158880	66.9
7	2021	79406.	118096	67.2
8	2022	83626.	167297	50.0
9	2023	157823.	240571	65.6
10	2024	144421.	235117	61.4
11	2025	125456.	176240	71.2



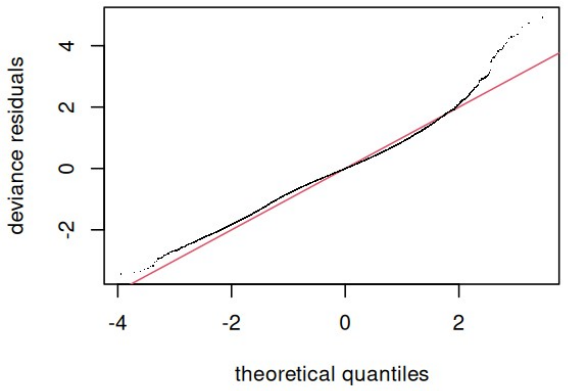
Mod0.0: As quota 2026 (2025 assessment) information up to november 2025 (block 1: CV=0.2 for 2002-2017, block 2: CV = 0.3 for 2018-2025).
Mod1.0: As mod0.0 but with updated catches and length frequencies up to december 2025.
Mod2.0: As mod1.0 but with 3 abundance indices: acoustic (1985 - 2008, 2010 - 2013), old cpue 2002-2014 and new cpue 2015-2025.
Mod3.0: As mod2.0 with standard error estimated.

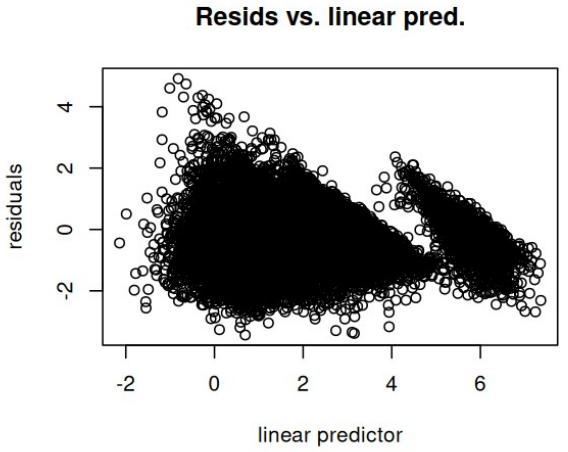
s(lon, lat, by = year)

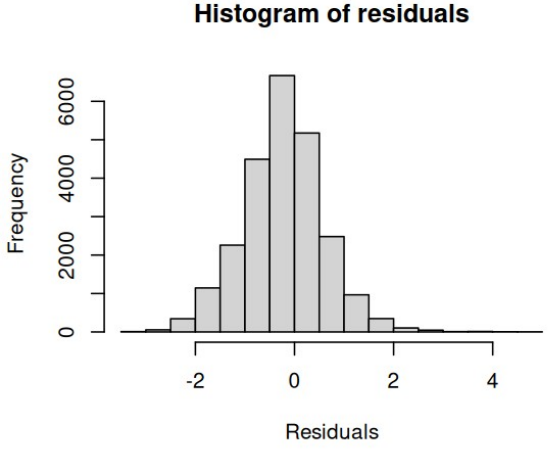


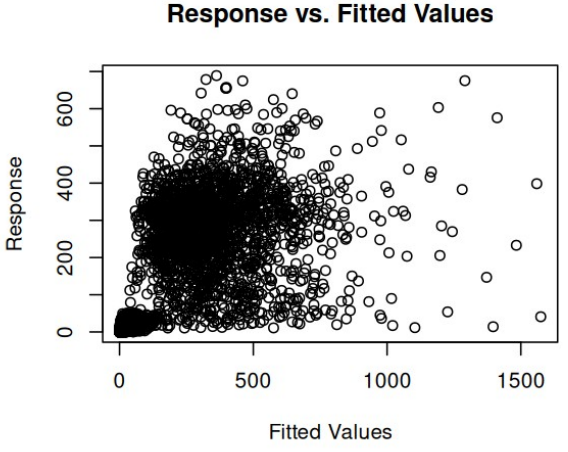

```
Catch ~ year + month + s(LON, LAT, by =
year) + s(HC) +
    s(sst) + s(so) + offset(log(N_DIAS))
```

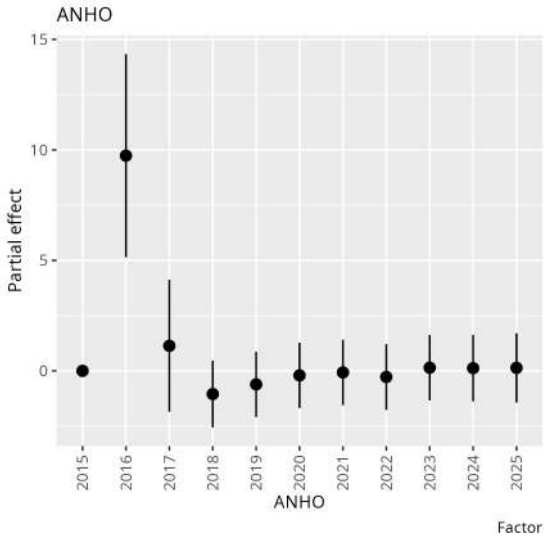
Year as a factor variable

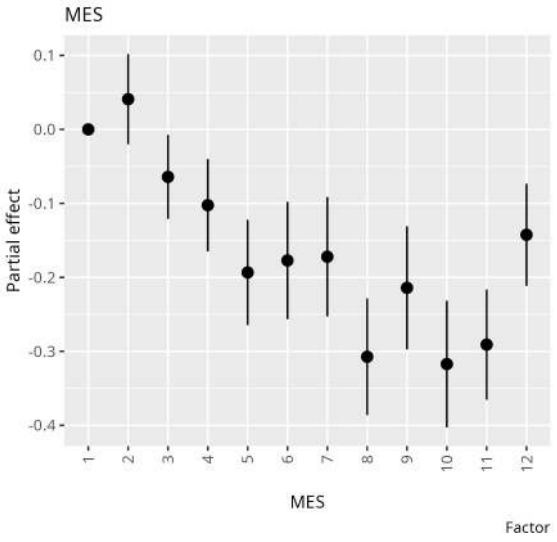

deviance residuals
theoretical quantiles
-4
-2
0
2
-2
0
2
4

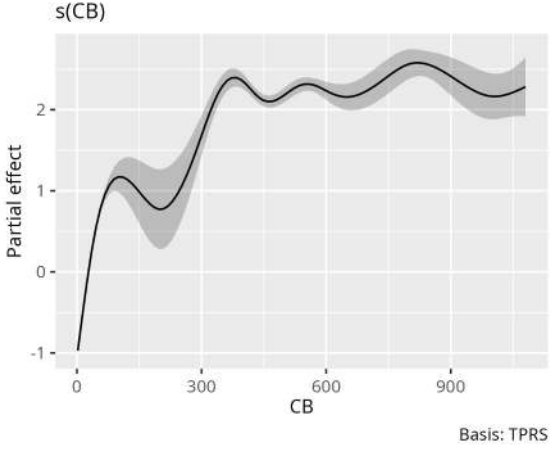

Resids vs. linear pred.
residuals
linear predictor
-2
0
2
4
6
-2
0
2
4

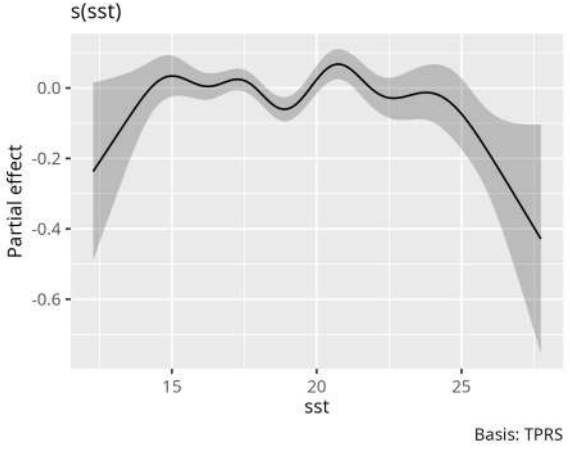

Histogram of residuals
Frequency
Residuals
0
2000
4000
6000
-2
0
2
4

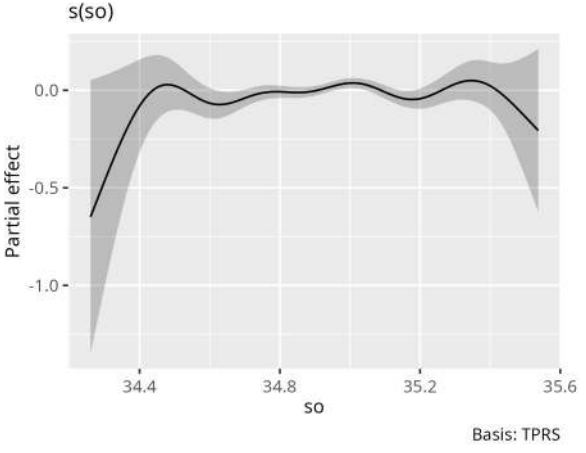

Response vs. Fitted Values
Response
Fitted Values
0
200
400
600
0
500
1000
1500

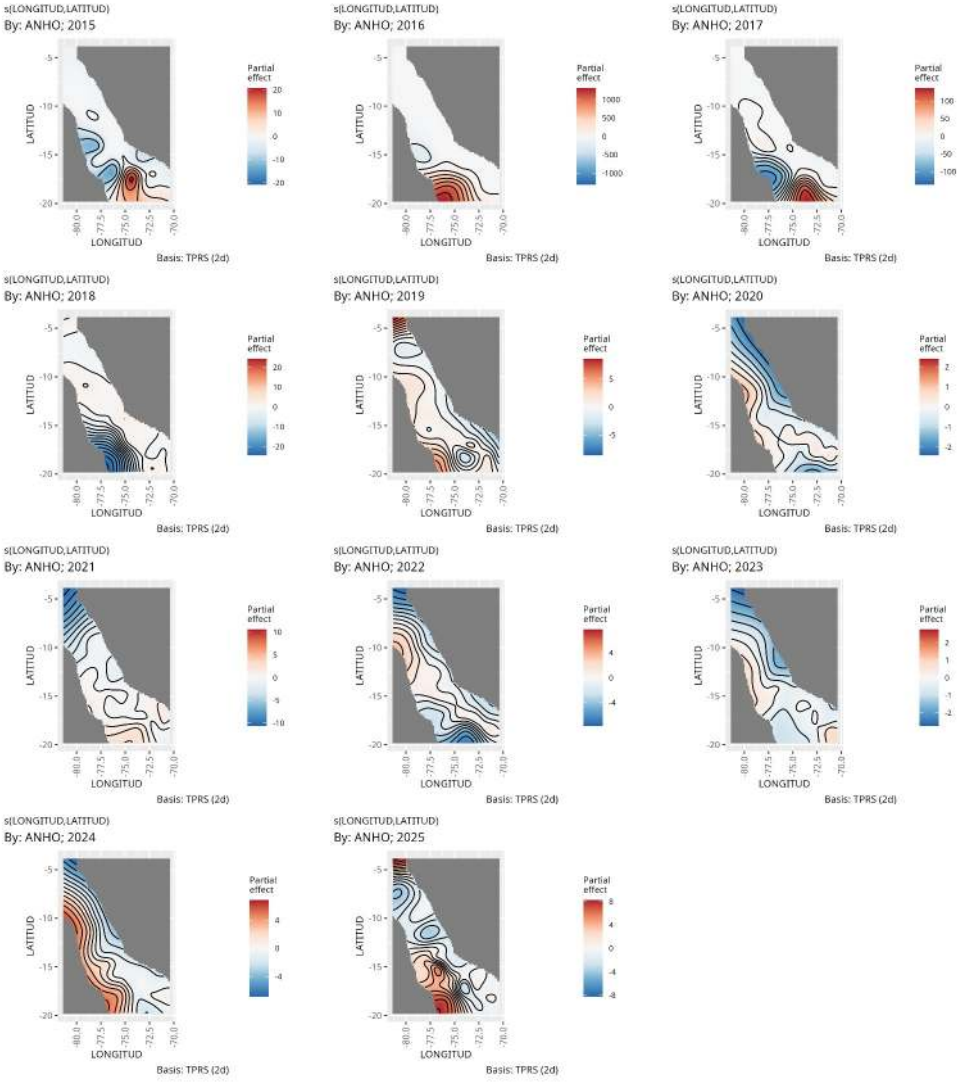

ANHO
Partial effect
15
10
5
0
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
ANHO
Factor

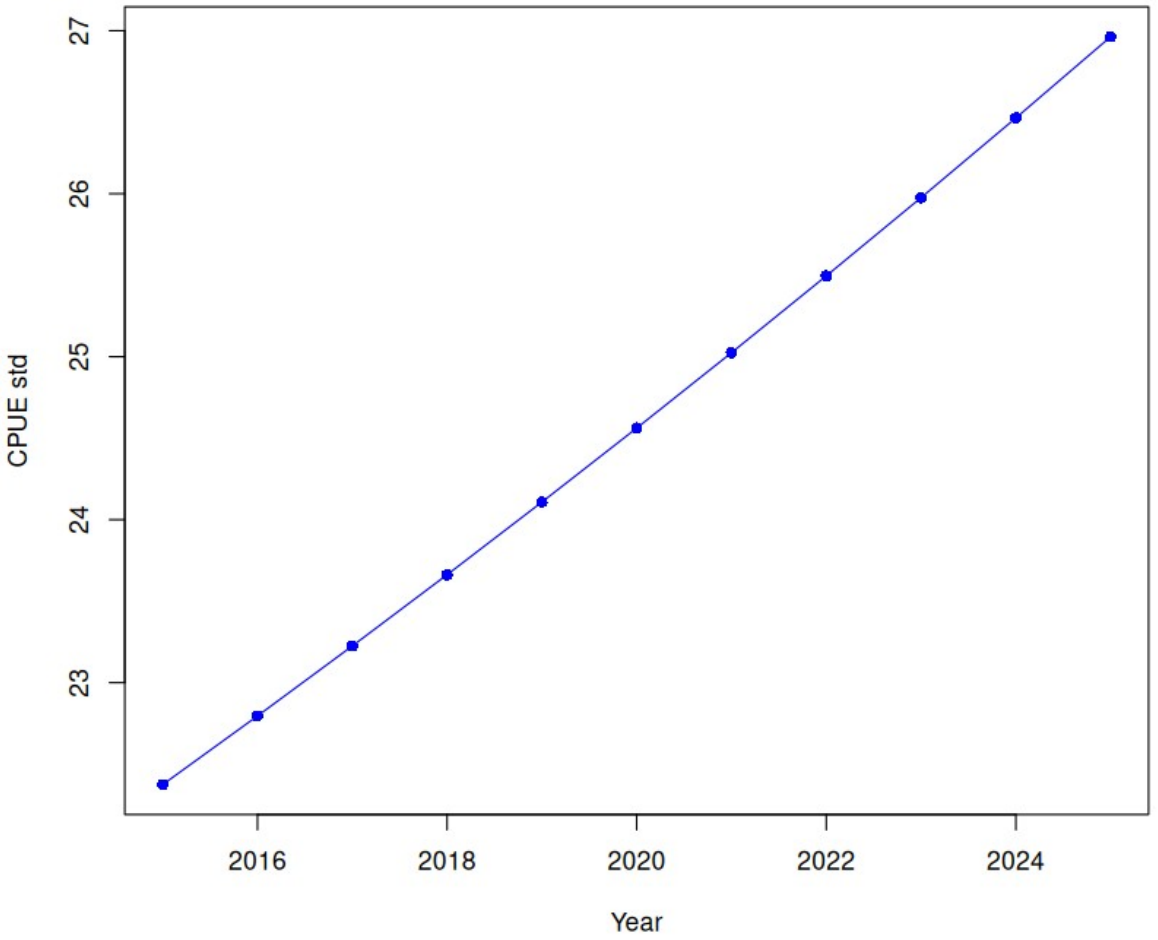

MES
Partial effect
0.1
0.0
-0.1
-0.2
-0.3
-0.4
1
2
3
4
5
6
7
8
9
10
11
12
MES
Factor


s(CB)
Partial effect
2
1
0
-1
0
300
600
900
CB
Basis: TPRS


s(sst)
Partial effect
0.0
-0.2
-0.4
-0.6
15
20
25
sst
Basis: TPRS

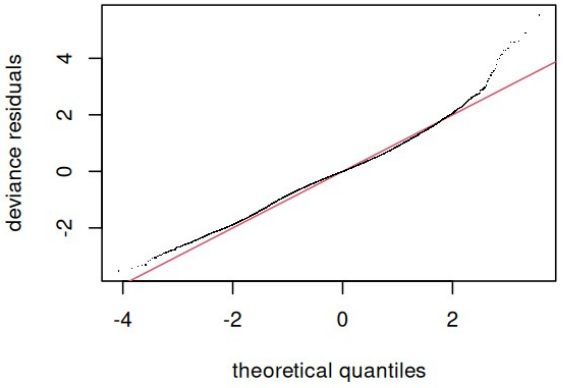

s(so)
Partial effect
0.0
-0.5
-1.0
34.4
34.8
35.2
35.6
so
Basis: TPRS

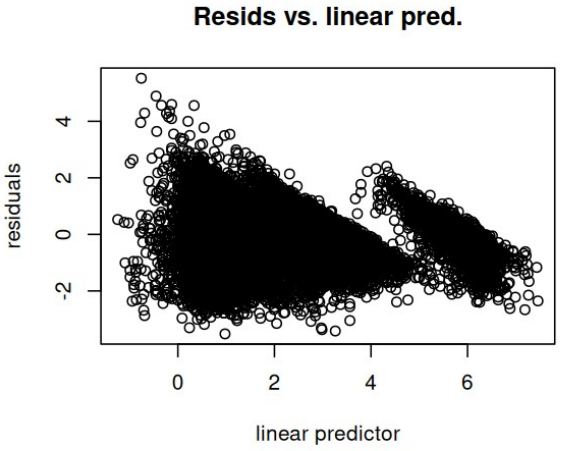

s(LONGITUD,LATITUD)
By: ANHO; 2015
s(LONGITUD,LATITUD)
By: ANHO; 2016
s(LONGITUD,LATITUD)
By: ANHO; 2017
s(LONGITUD,LATITUD)
By: ANHO; 2018
s(LONGITUD,LATITUD)
By: ANHO; 2019
s(LONGITUD,LATITUD)
By: ANHO; 2020
s(LONGITUD,LATITUD)
By: ANHO; 2021
s(LONGITUD,LATITUD)
By: ANHO; 2022
s(LONGITUD,LATITUD)
By: ANHO; 2023
s(LONGITUD,LATITUD)
By: ANHO; 2024
s(LONGITUD,LATITUD)
By: ANHO; 2025
LATITUD
LONGITUD
Partial effect
Basis: TPRS (2d)

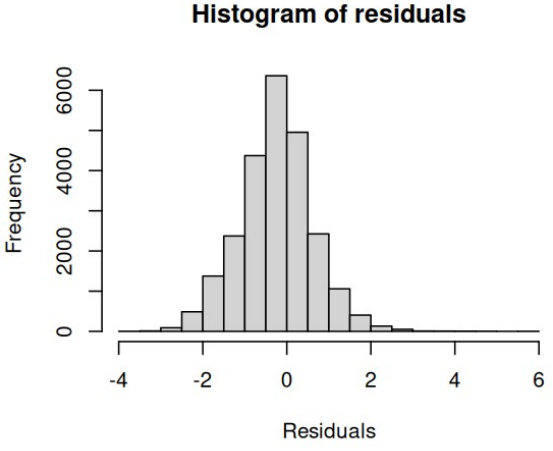


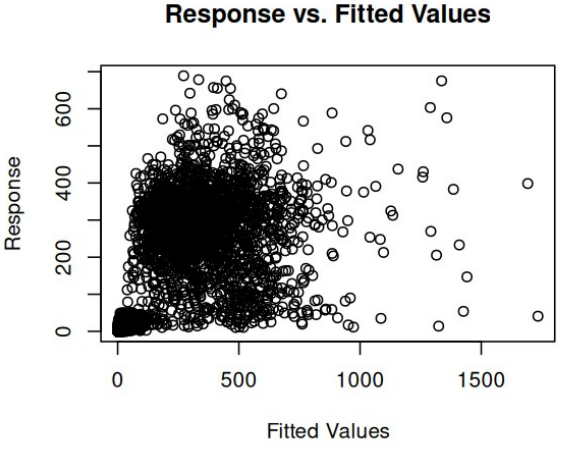

```
catch ~ year + month
+ s(LON, LAT, by =
year) + s(HC) +
    s(sst) + s(so) +
offset(log(N_DIAS))
```

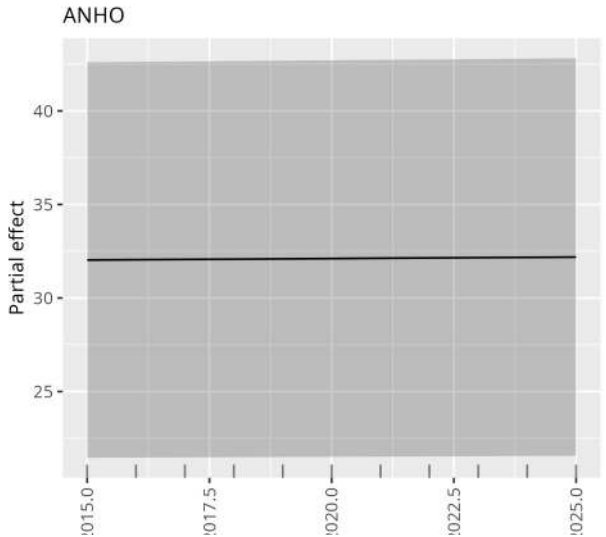
Year as a numeric variable

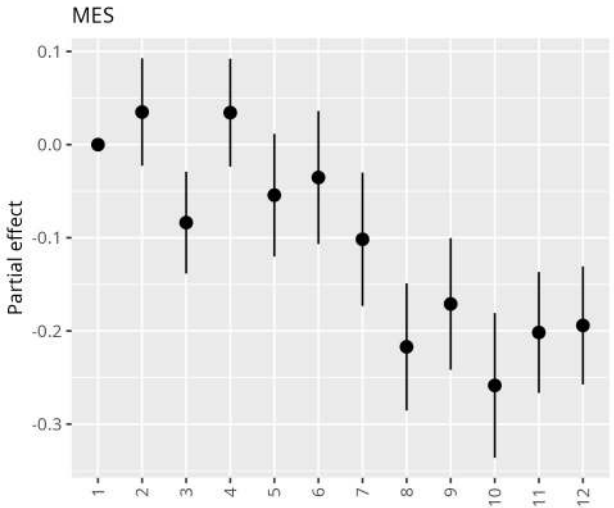

deviance residuals
-2
0
2
4
-4
-2
0
2
theoretical quantiles

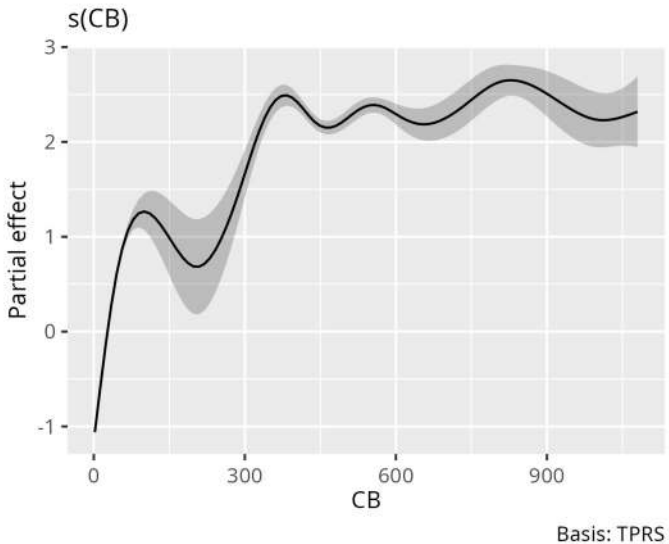

Resids vs. linear pred.
residuals
-2
0
2
4
0
2
4
6
linear predictor

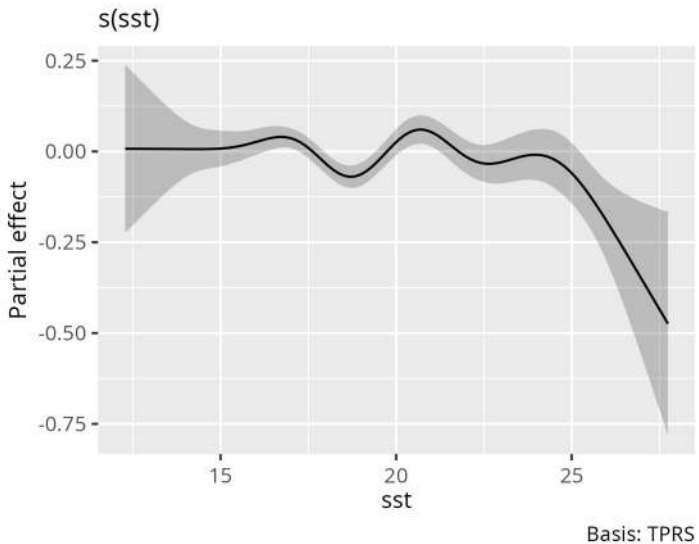

Histogram of residuals
Frequency
0
2000
4000
6000
-4
-2
0
2
4
6
Residuals

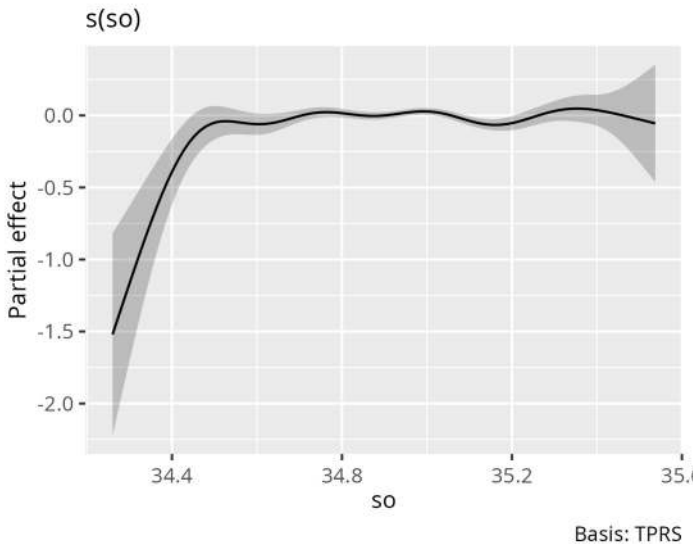

Response vs. Fitted Values
Response
0
200
400
600
0
500
1000
1500
Fitted Values

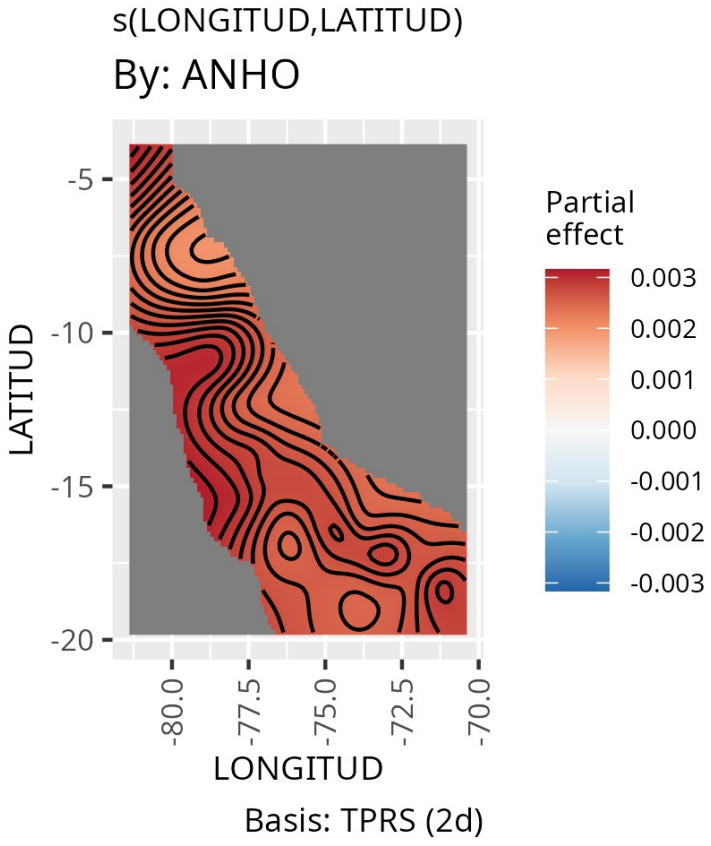

ANHO
Partial effect
40
35
30
25
2015.0
2017.5
2020.0
2022.5
2025.0


MES
Partial effect
0.1
0.0
-0.1
-0.2
-0.3
1
2
3
4
5
6
7
8
9
10
11
12


s(CB)
Partial effect
3
2
1
0
-1
0
300
600
900
CB
Basis: TPRS


s(sst)
Partial effect
0.25
0.00
-0.25
-0.50
-0.75
15
20
25
sst
Basis: TPRS


s(so)
Partial effect
0.0
-0.5
-1.0
-1.5
-2.0
34.4
34.8
35.2
35.6
so
Basis: TPRS


s(LONGITUD,LATITUD)
By: ANHO
-5
-10
-15
-20
LATITUD
-80.0
-77.5
-75.0
-72.5
-70.0
LONGITUD
Partial effect
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
Basis: TPRS (2d)