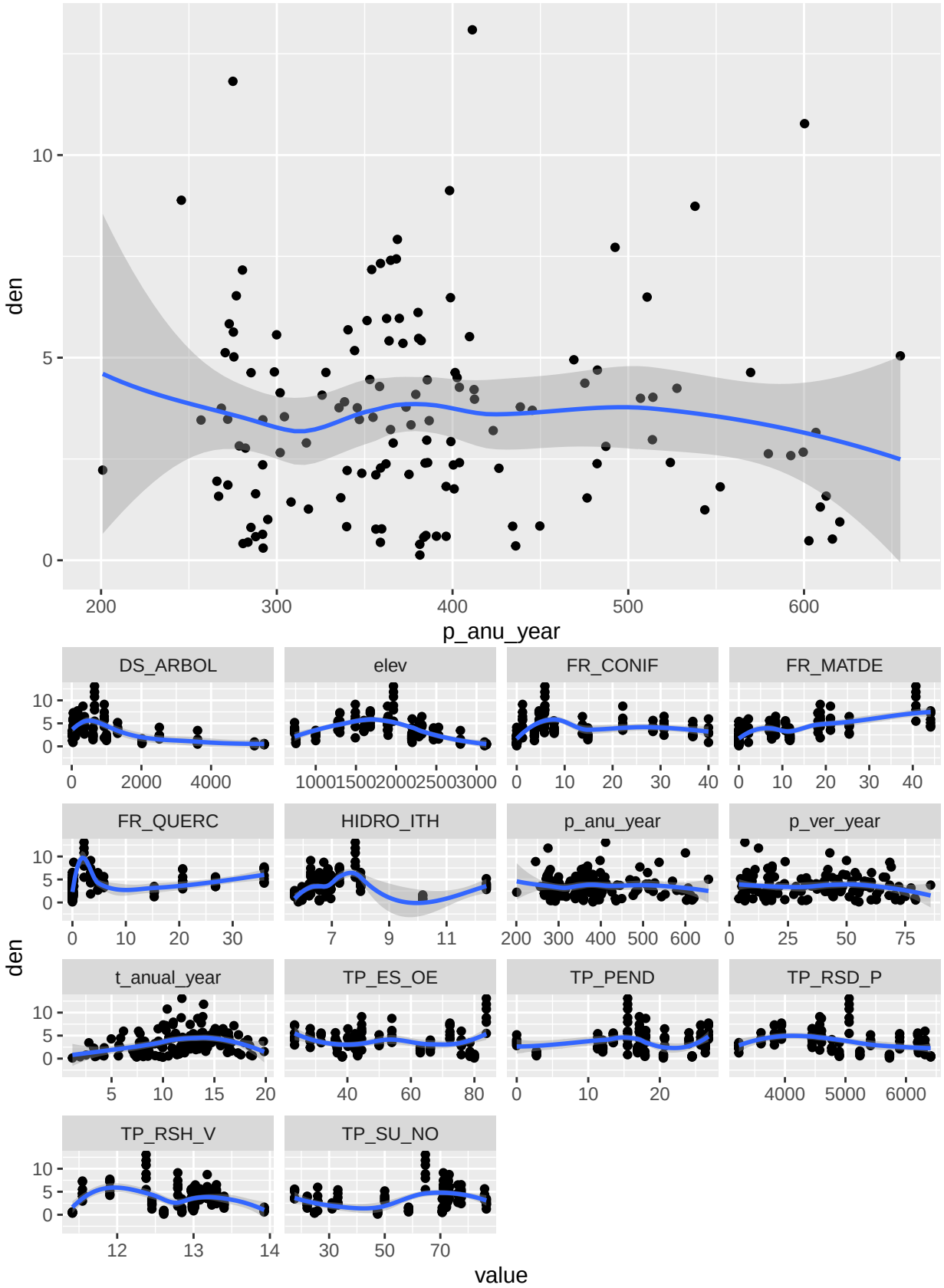
modela Densidad pdf

Explora variables



Selección via VIF

```
Variance inflation factors

                 GVIF
TP_PEND      18.733129
FR_MATDE      5.332493
TP_SU_NO     77.011617
FR_QUERC      6.744059
FR_CONIF      4.709830
TP_RSH_V      6.306512
HIDRO_ITH     9.930089
elev         12.872846
TP_ES_OE      1.723477
DS_ARBOL     13.111944
TP_RSD_P     99.027235
p_anu_year    1.218943
p_ver_year    1.218924
t_anual_year  2.927638
```

```
Variance inflation factors

                 GVIF
TP_PEND      18.202050
FR_MATDE      3.658258
TP_SU_NO      3.896966
FR_QUERC      4.185879
FR_CONIF      4.708816
TP_RSH_V      5.533327
HIDRO_ITH     9.712253
elev         11.912386
TP_ES_OE      1.721772
DS_ARBOL     11.220764
p_anu_year    1.215929
p_ver_year    1.211315
t_anual_year  2.915966
```

```
Variance inflation factors

                GVIF
FR_MATDE     2.254276
TP_SU_NO     1.459813
TP_RSH_V     1.711456
HIDRO_ITH    2.614135
elev         6.312014
TP_ES_OE     1.614165
DS_ARBOL     3.414437
p_anu_year   1.177967
p_ver_year   1.201177
t_anual_year 2.873489
```

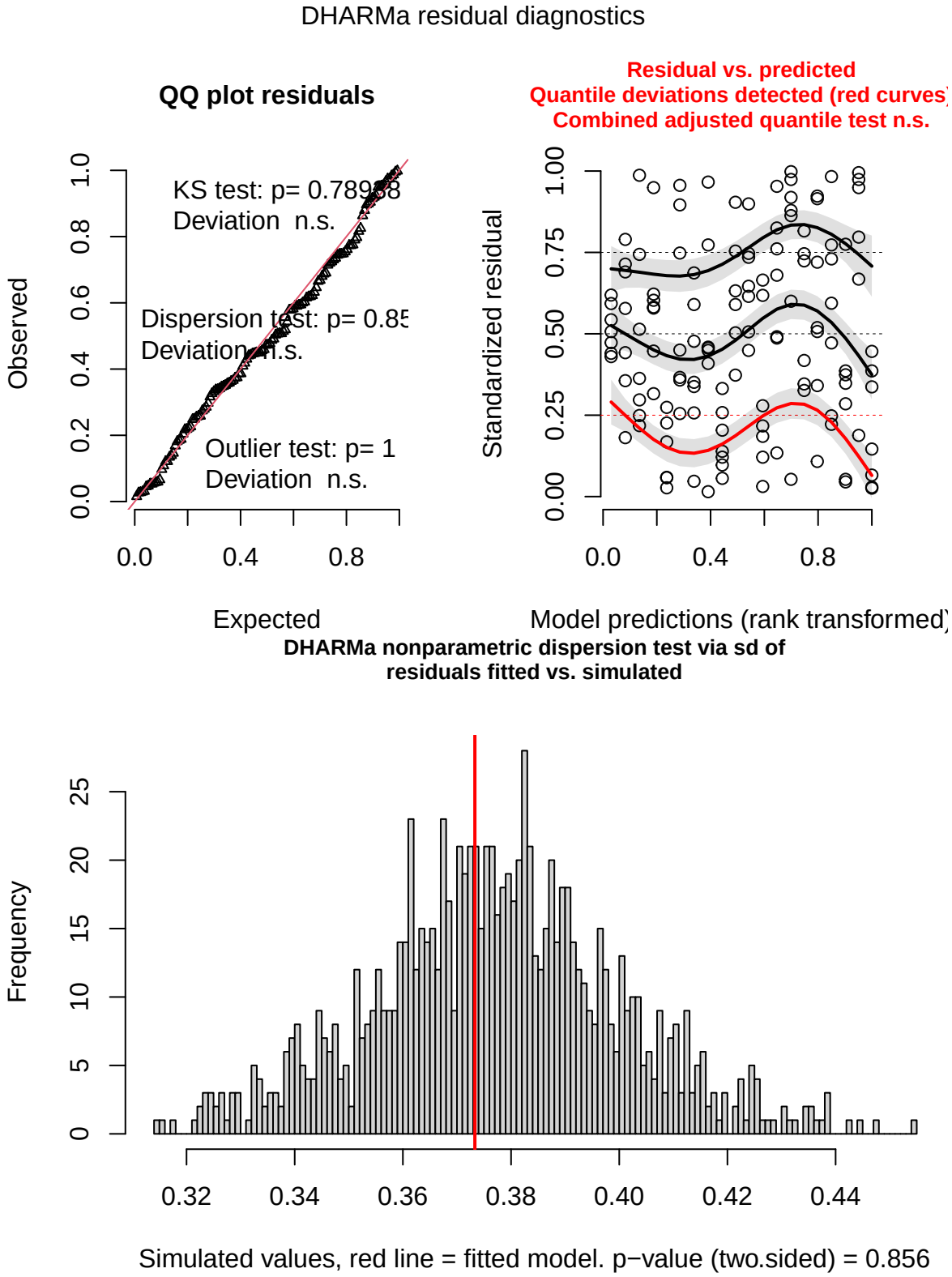
Modelos

- Transformo algunas variables
- Hago selección de modelos usando BIC:

potential variables: den_sr ~ FR_MATDE+TP_SU_NO+TP_RSH_V+HIDRO_ITH+elev+TP_ES_OE+DS_ARBOL+p_

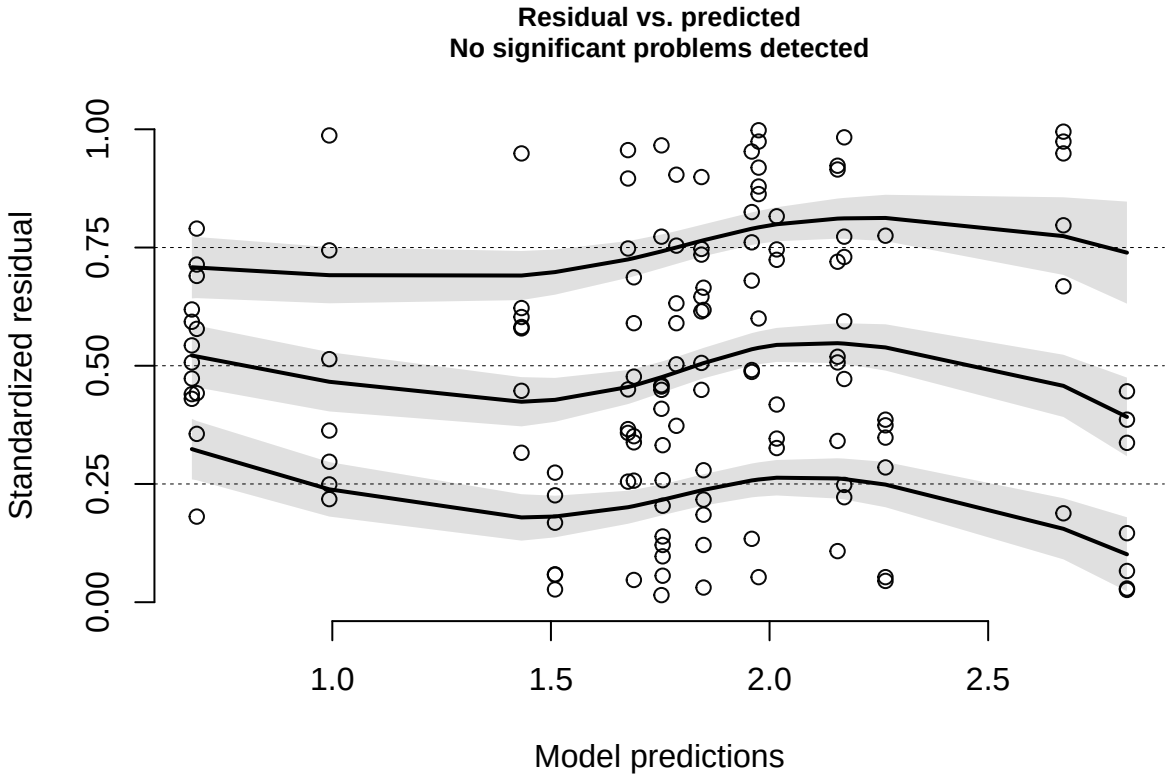
```
TASK: Genetic algorithm in the candidate set.
Initialization...
Algorithm started...
Improvements in best and average IC have bebingo en below the specified goals.
Algorithm is declared to have converged.
Completed.
```

Validación modelo

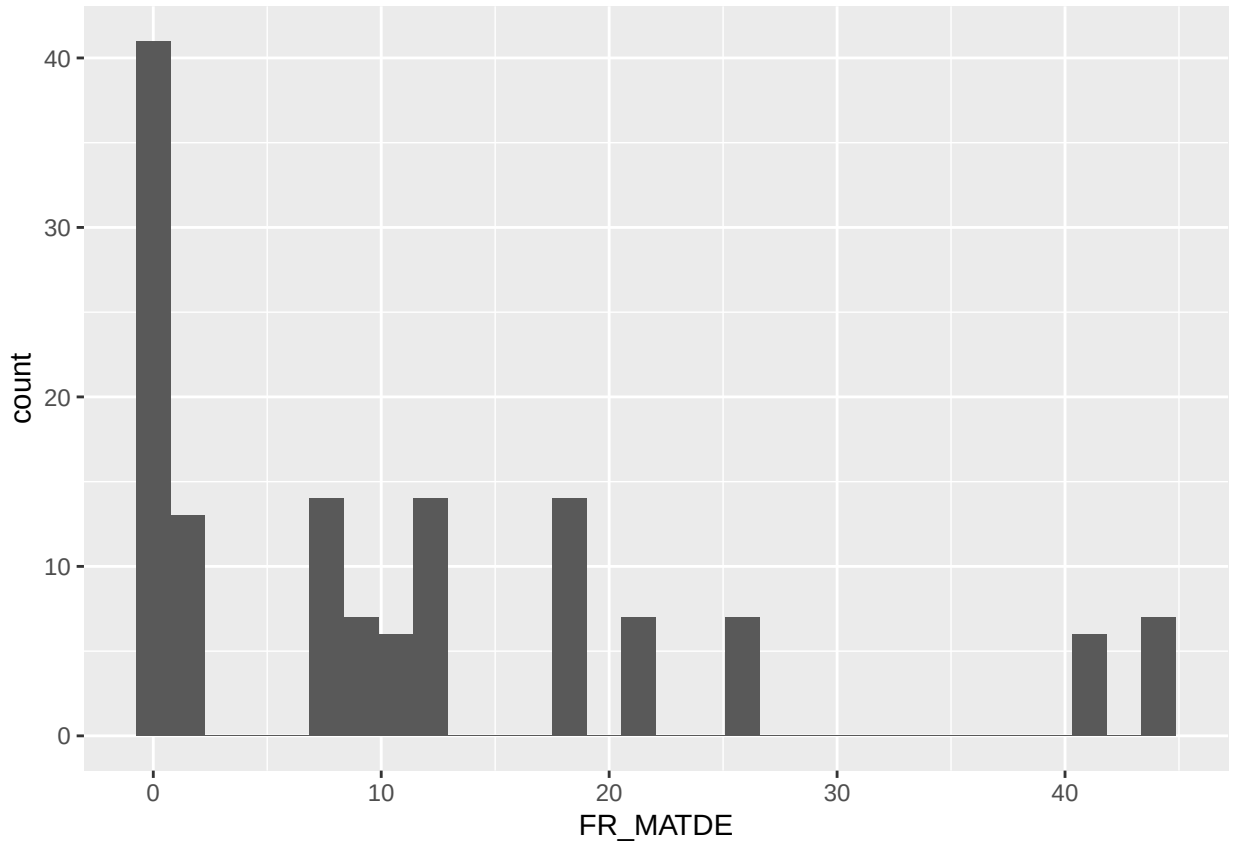


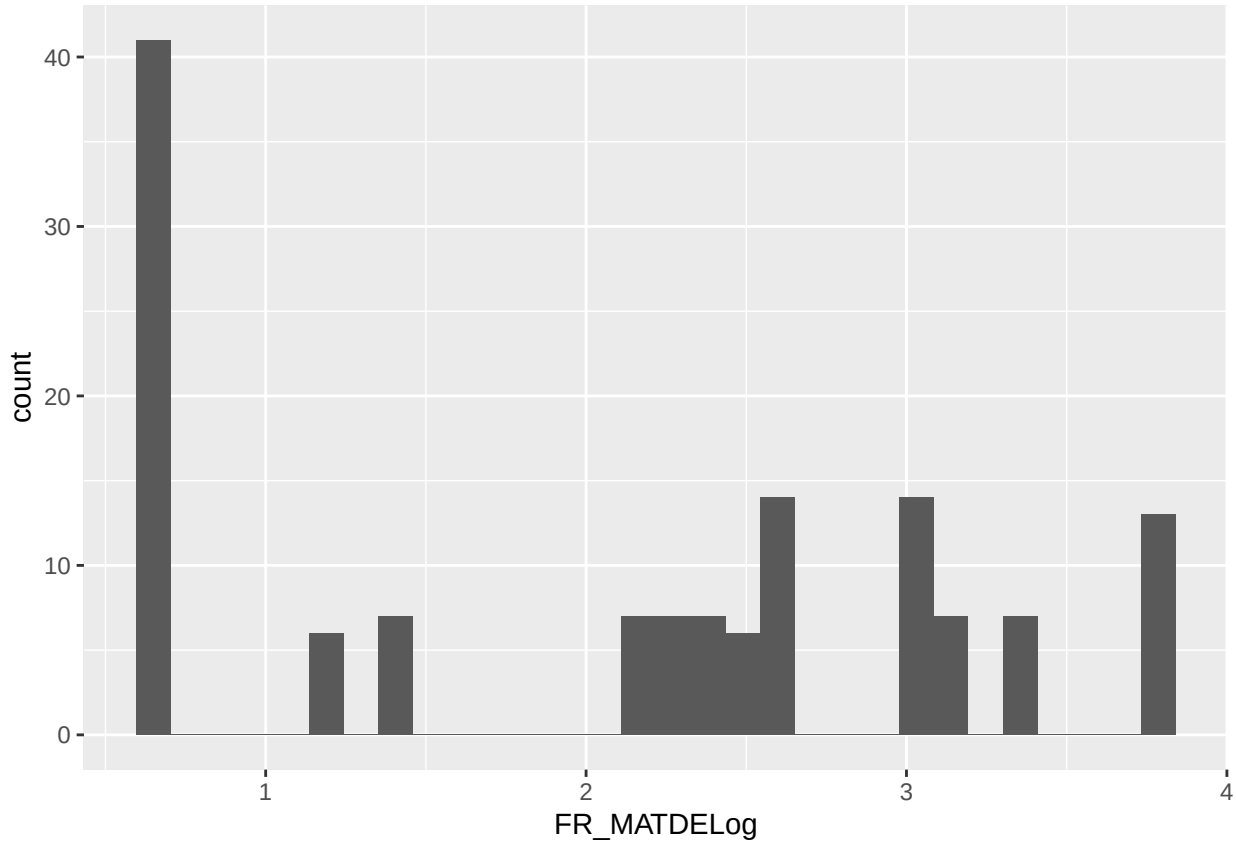

```
DHARMa nonparametric dispersion test via sd of residuals fitted vs.
simulated
```

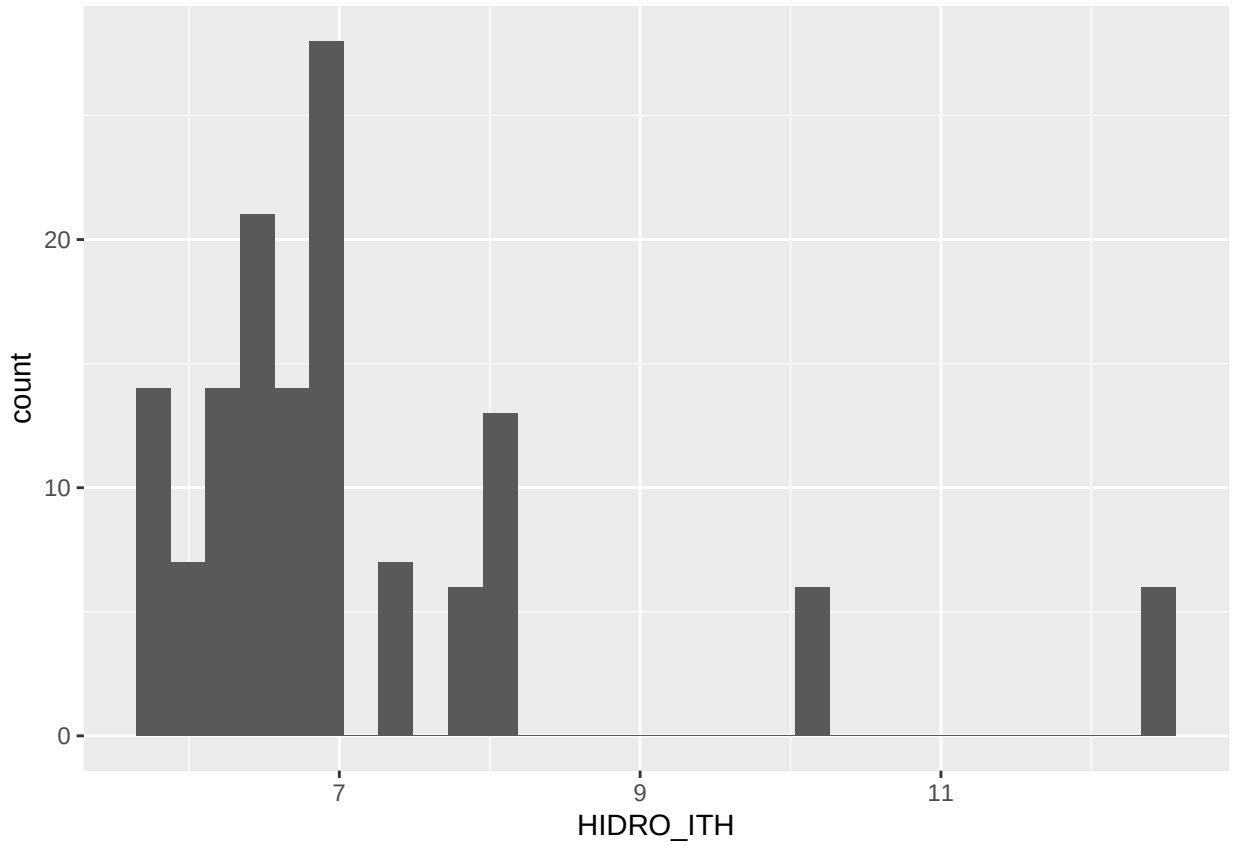
```
data:  simulationOutput
ratioObsSim = 0.98975, p-value = 0.856
alternative hypothesis: two.sided
```

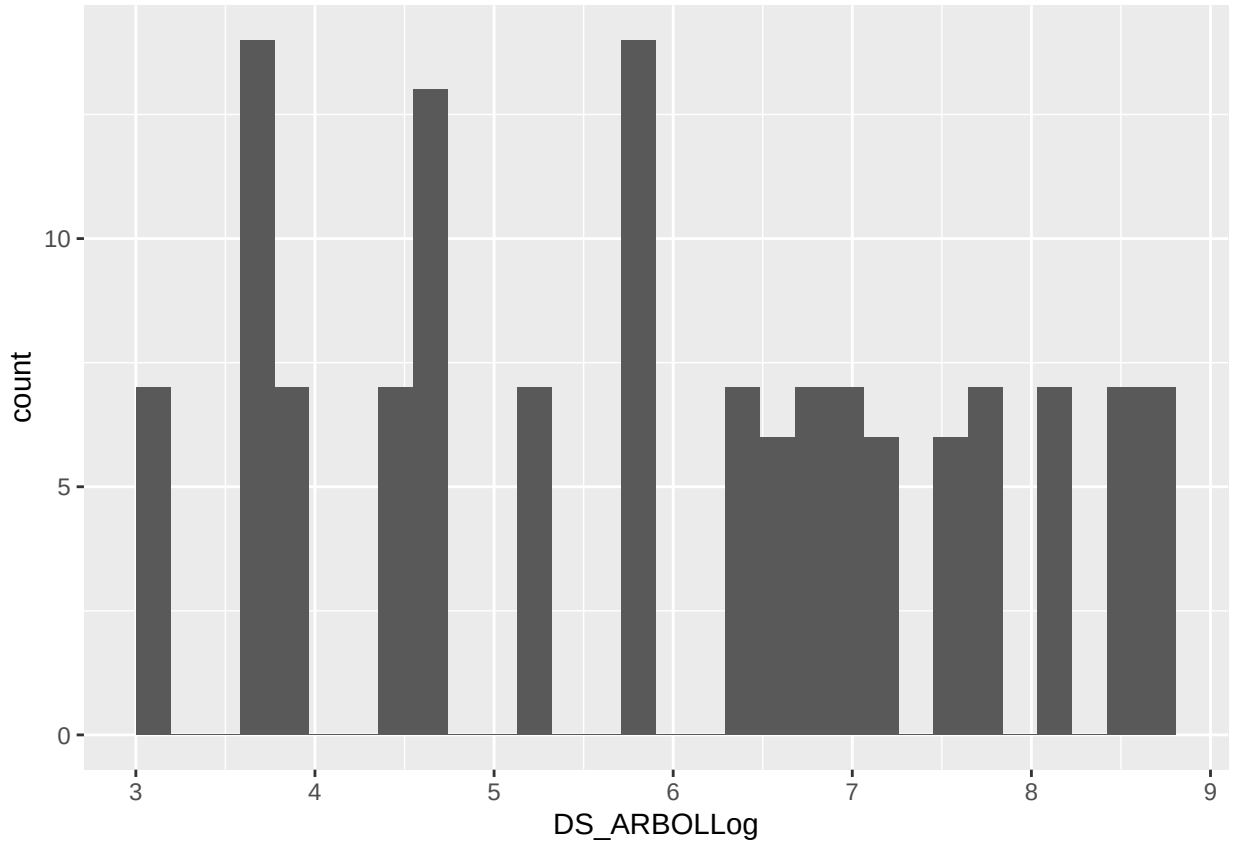



```
    Test for location of quantiles via qgam

data:  simulationOutput
p-value = 0.6578
alternative hypothesis: both
```

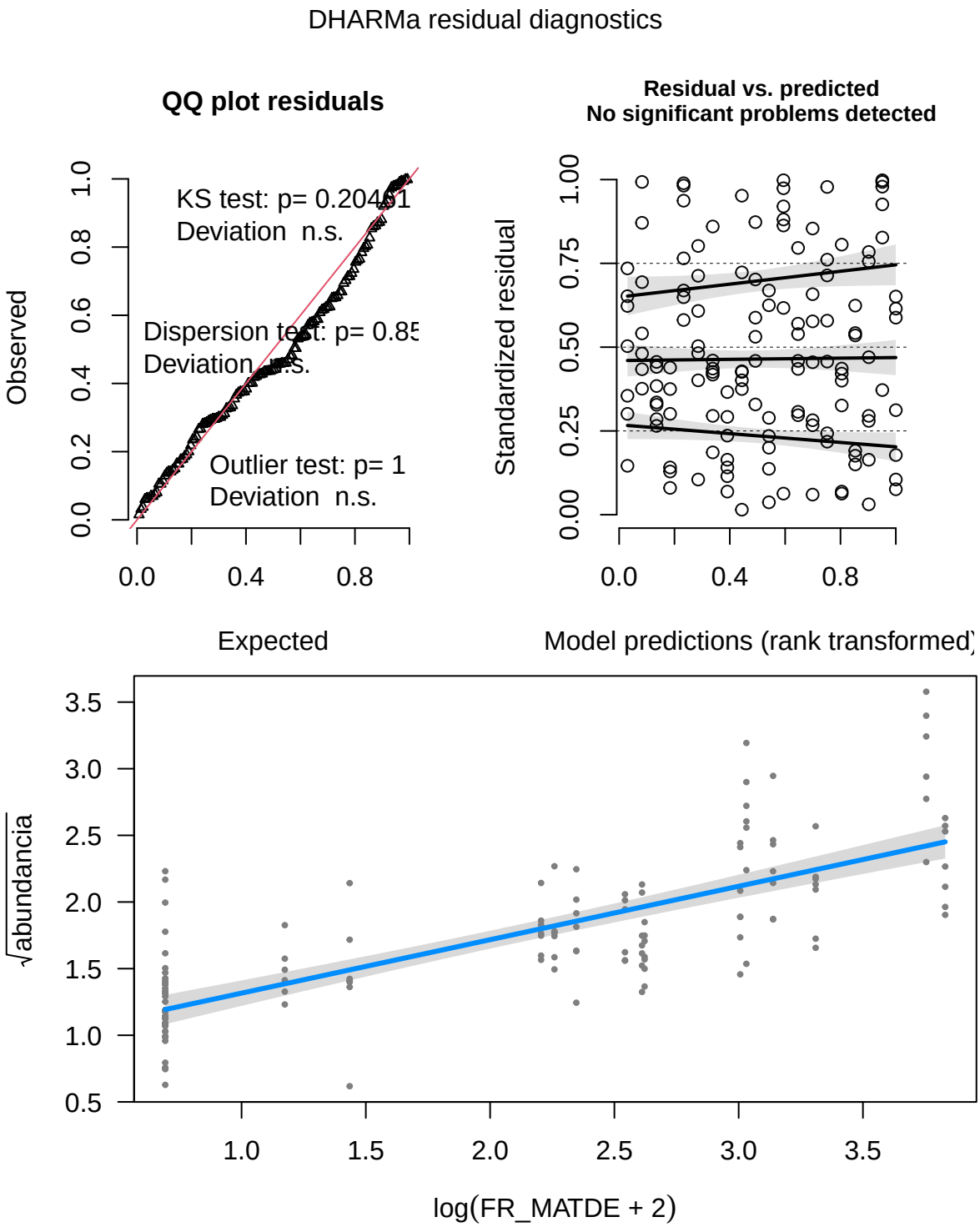

40
30
20
10
0
count
0
10
20
30
40
FR_MATDE

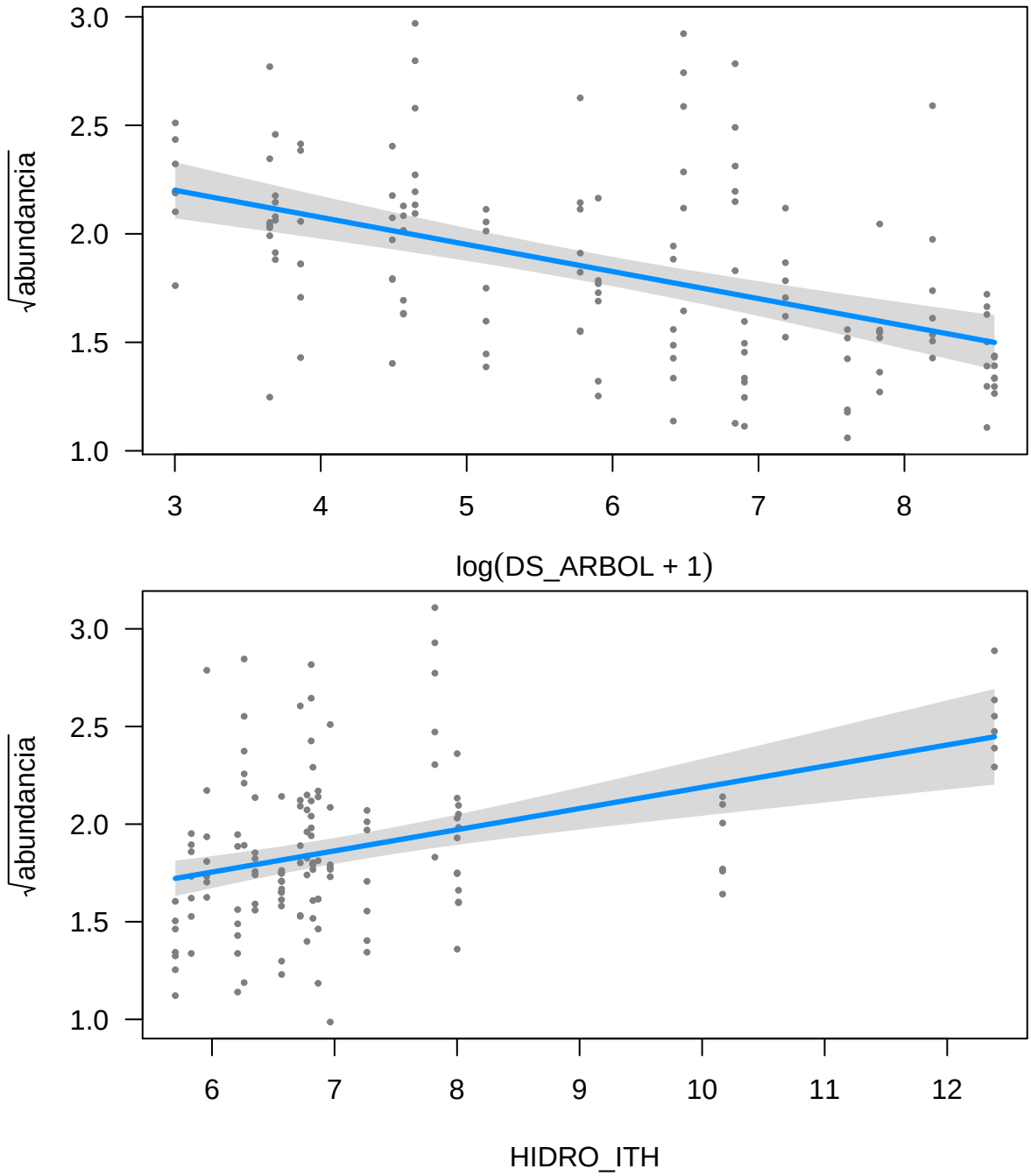

40
30
20
10
0
count
1
2
3
4
FR_MATDELog


count
20
10
0
7
9
11
HIDRO_ITH


count
10
5
0
3
4
5
6
7
8
9
DS_ARBOLLog

Trasnformar datos

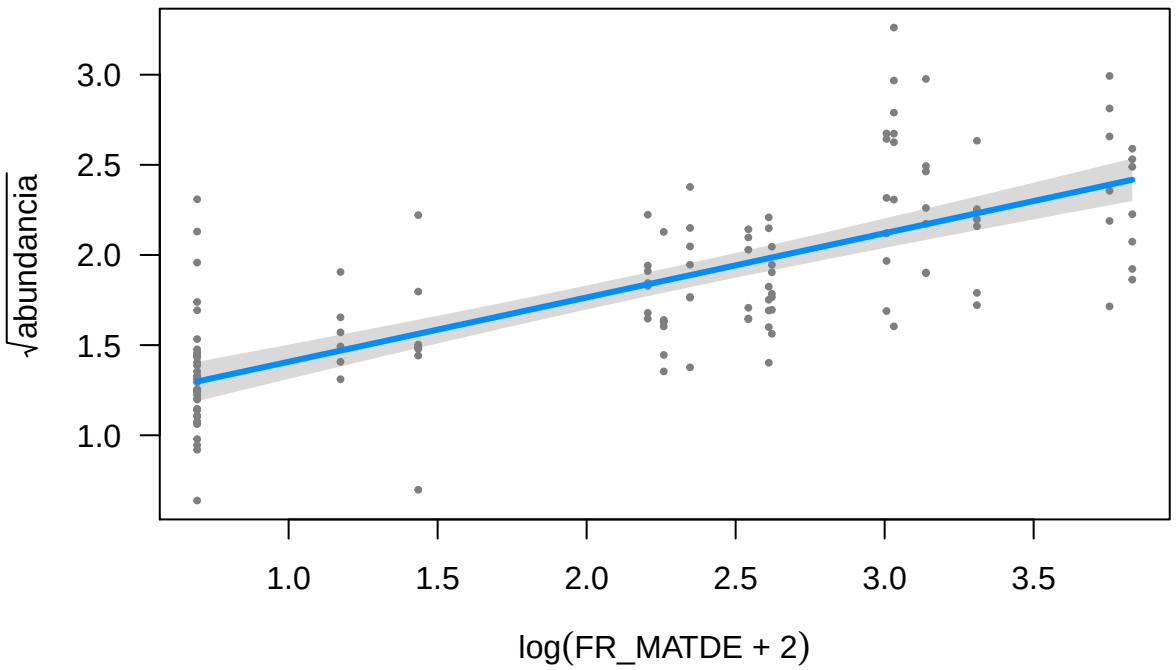




Interacción??

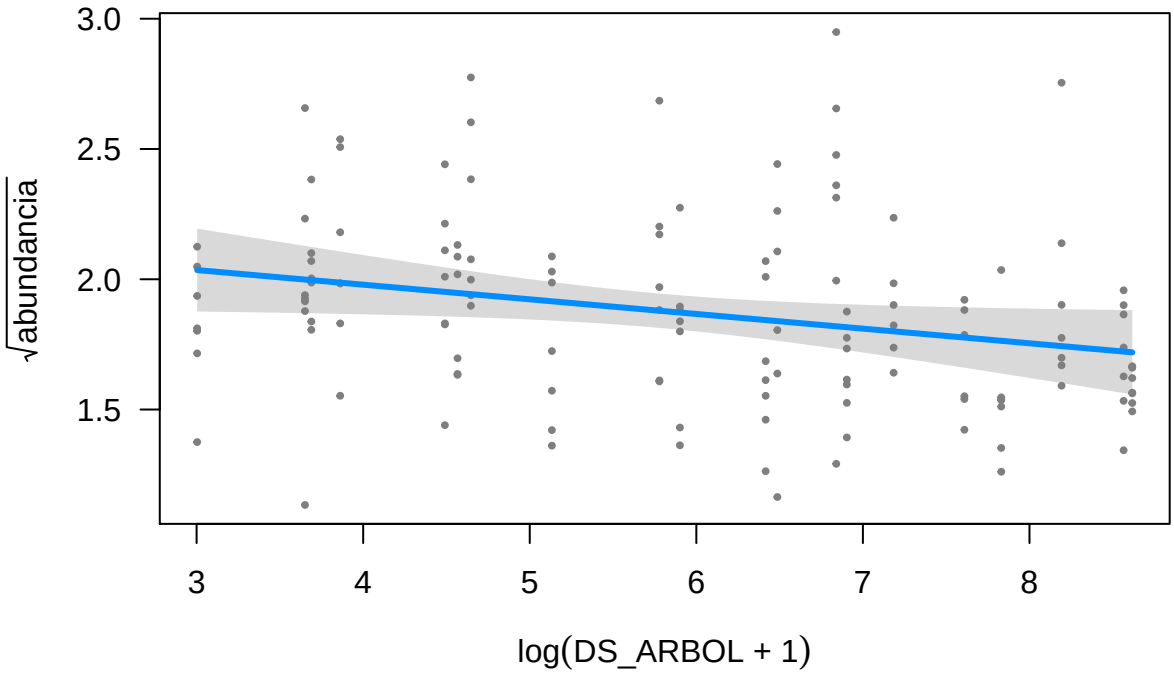
```
TASK: Genetic algorithm in the candidate set.
Initialization...
Algorithm started...
Improvements in best and average IC have bebingo en below the specified goals.
Algorithm is declared to have converged.
Completed.

Call:
```

```
glm(formula = s@formulas[[1]], family = fam, data = m)

Deviance Residuals:
     Min        1Q    Median        3Q       Max
-0.86513  -0.22400  -0.03751   0.16747   1.12929

Coefficients:
                       Estimate Std. Error t value Pr(>|t|)
(Intercept)             8.06335    2.24831   3.586 0.000474 ***
FR_MATDELog            -1.47842    0.35897  -4.119 6.77e-05 ***
HIDRO_ITH              -0.85067    0.33024  -2.576 0.011125 *
DS_ARBOLLog            -0.86956    0.26626  -3.266 0.001398 **
FR_MATDELog:HIDRO_ITH   0.21208    0.04738   4.476 1.65e-05 ***
FR_MATDELog:DS_ARBOLLog 0.06745    0.02120   3.181 0.001838 **
HIDRO_ITH:DS_ARBOLLog   0.09711    0.03962   2.451 0.015593 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for gaussian family taken to be 0.1241278)

    Null deviance: 58.283  on 135  degrees of freedom
Residual deviance: 16.012  on 129  degrees of freedom
AIC: 111.01

Number of Fisher Scoring iterations: 2

Conditions used in construction of plot
HIDRO_ITH: 6.775455
DS_ARBOLLog: 5.901787
```

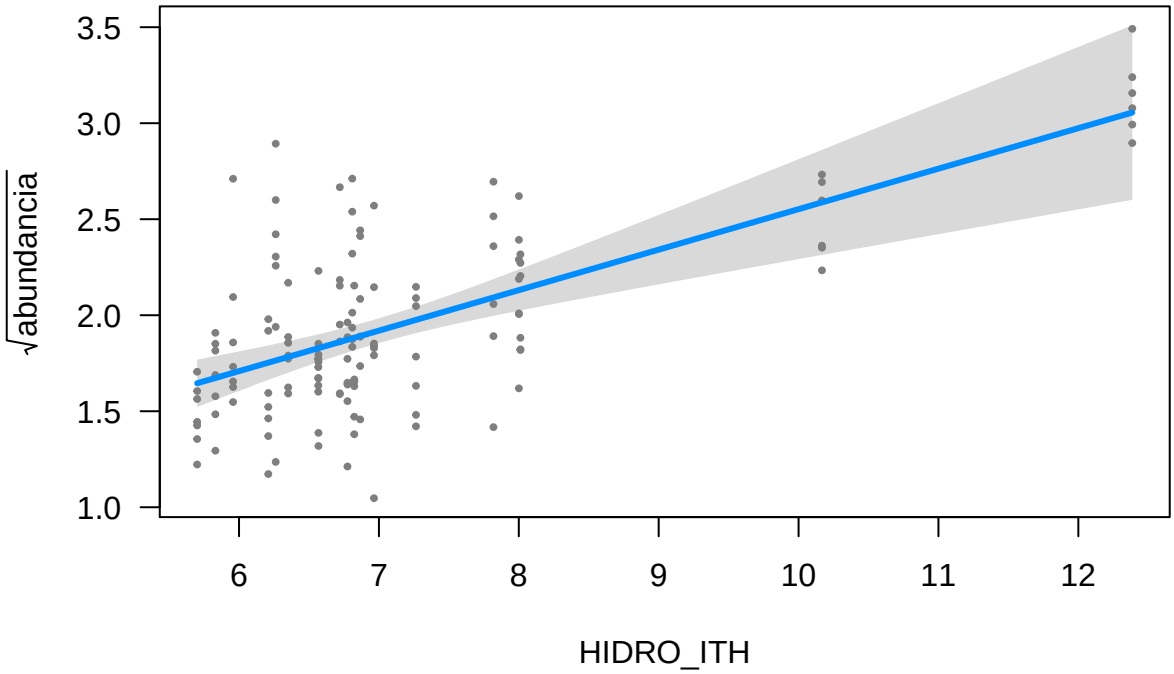


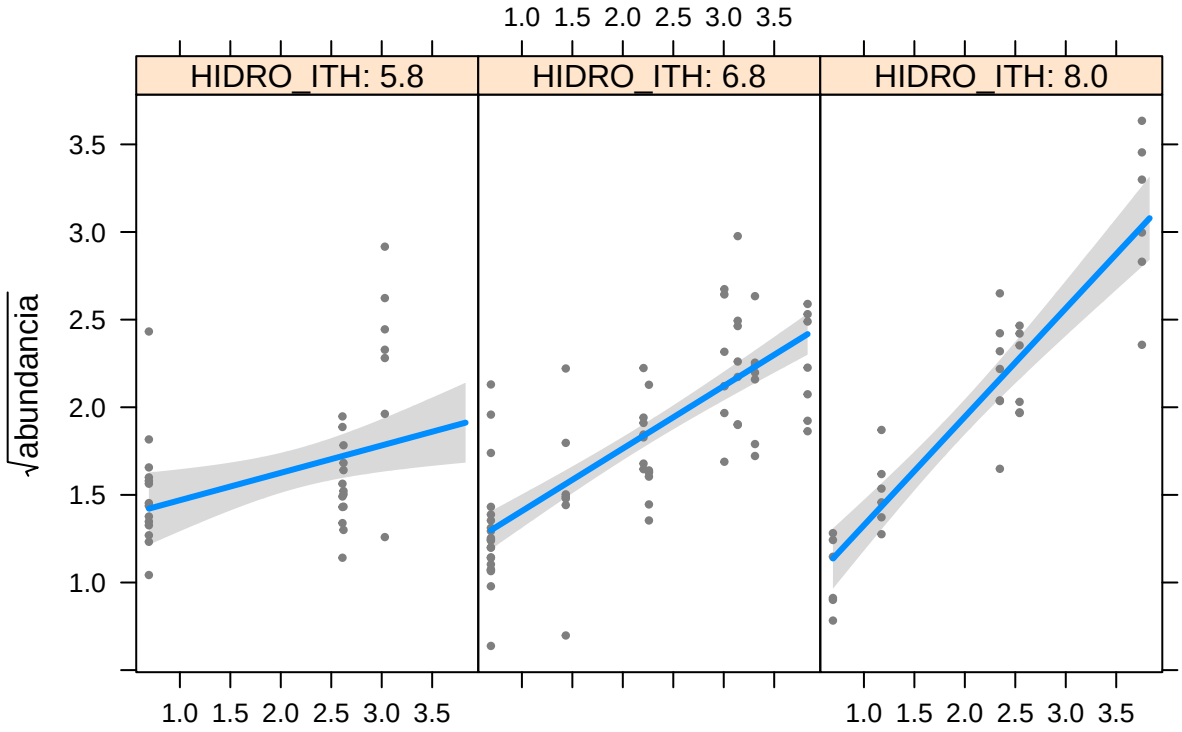

```
Conditions used in construction of plot
```

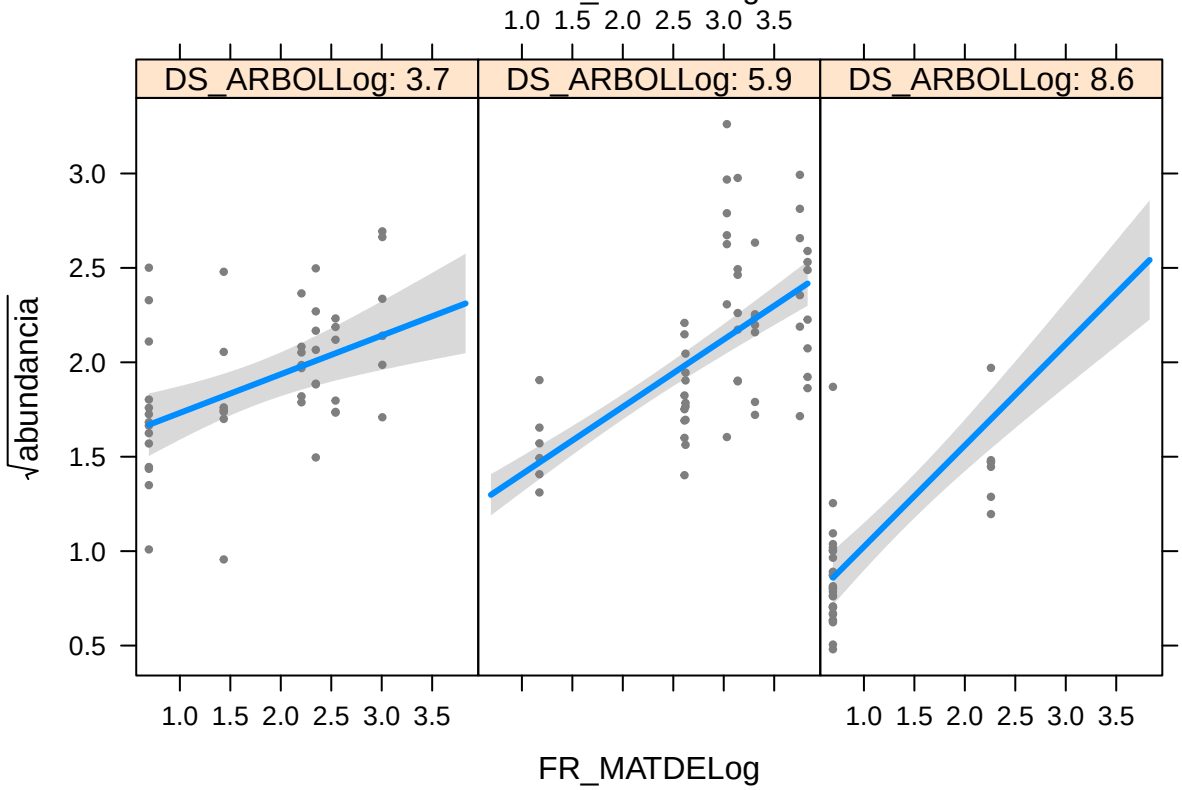
```
FR_MATDELog: 2.30291
HIDRO_ITH: 6.775455
```

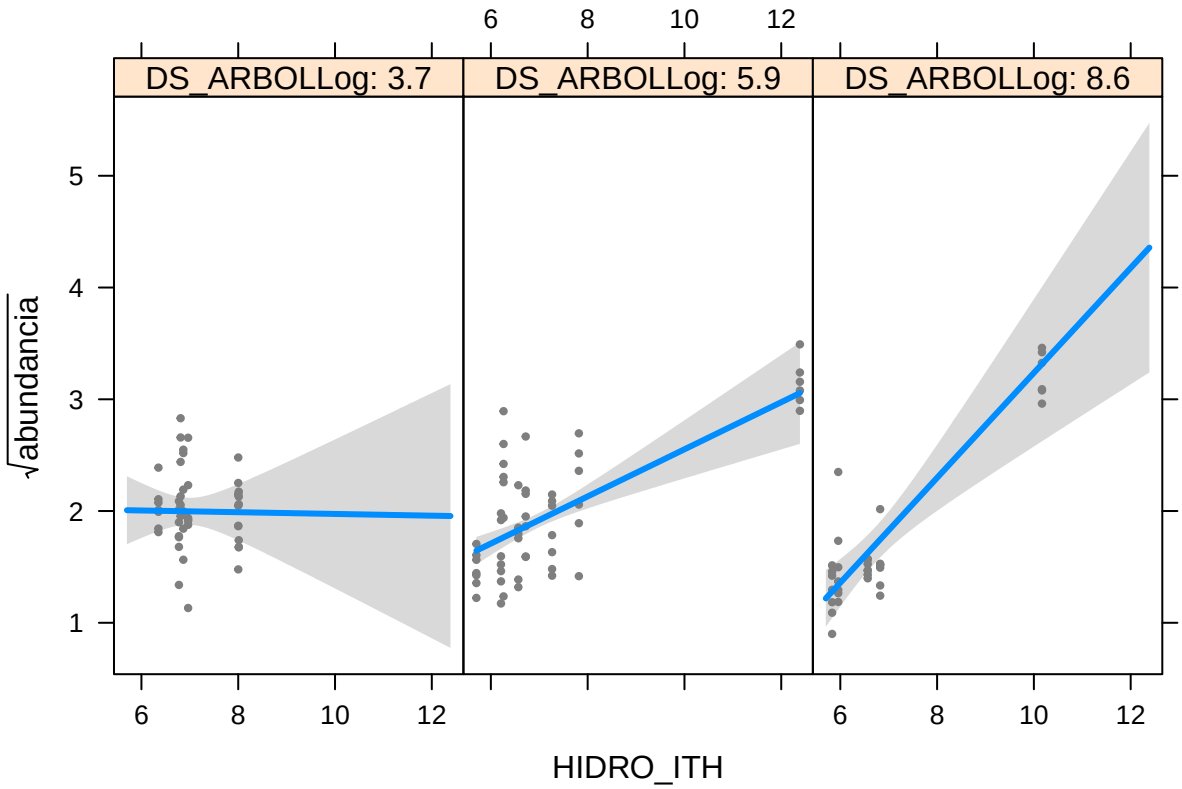



```
Conditions used in construction of plot
FR_MATDELog: 2.30291
DS_ARBOLLog: 5.901787
```



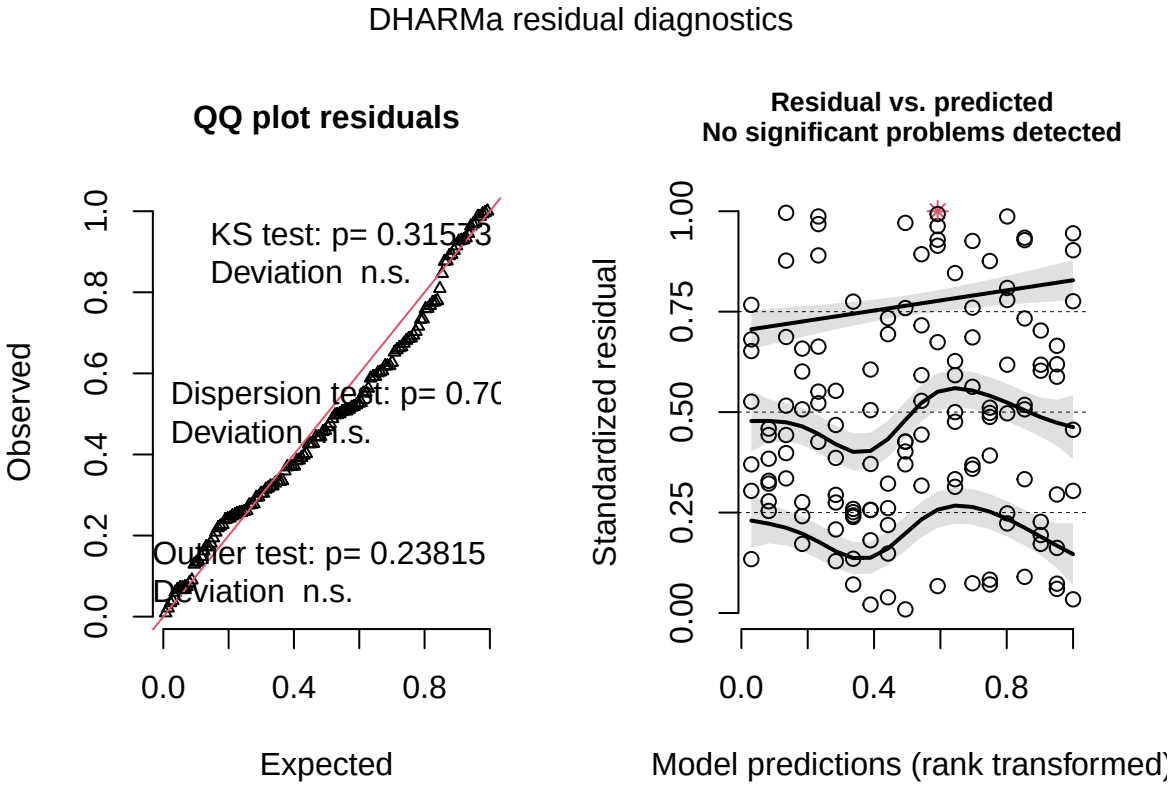

HIDRO_ITH: 5.8
HIDRO_ITH: 6.8
HIDRO_ITH: 8.0
√abundancia
FR_MATDELog


DS_ARBOLLog: 3.7
DS_ARBOLLog: 5.9
DS_ARBOLLog: 8.6
√abundancia
FR_MATDELog



VAS por aqui

```
numeric(0)
```



Seleccion de variables

old selection - FR_CONIF - Pp_ver - TP_RSD_P - TP_ES_OE - FR_PASTO - elevation - t_anual - HIDRO_ICT - TP_PEND - Pp_anu - FR_QUERC - FR_MATDE - FR_MATDI

Unir div_mean y den_mean y generar un dataframe para modelizar