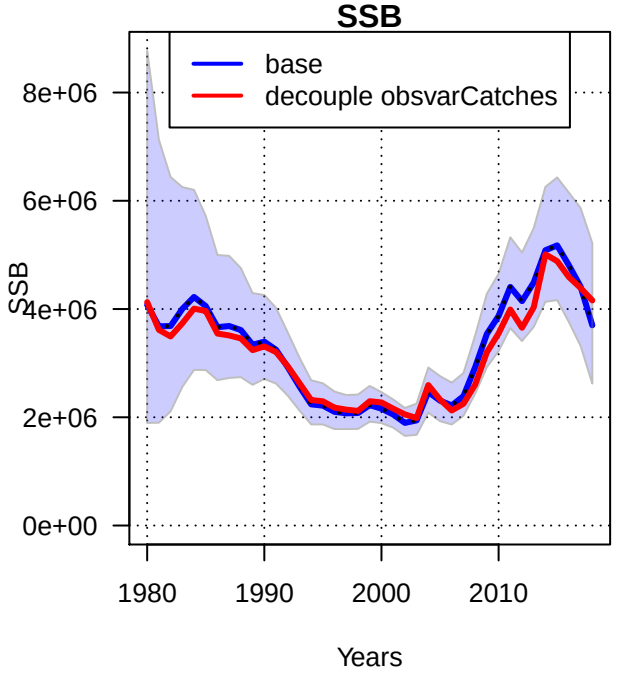
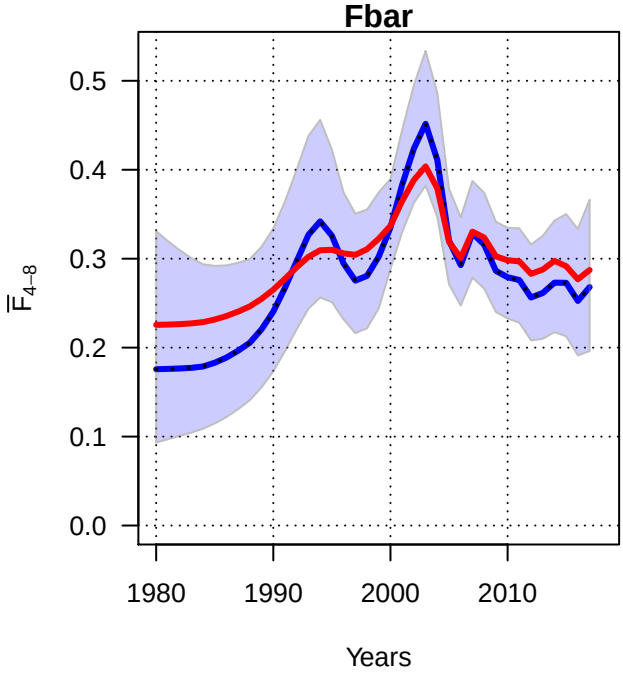
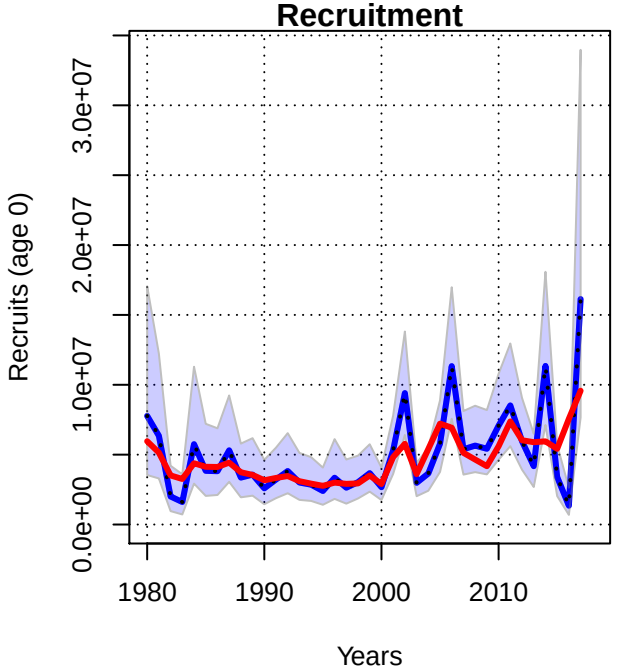
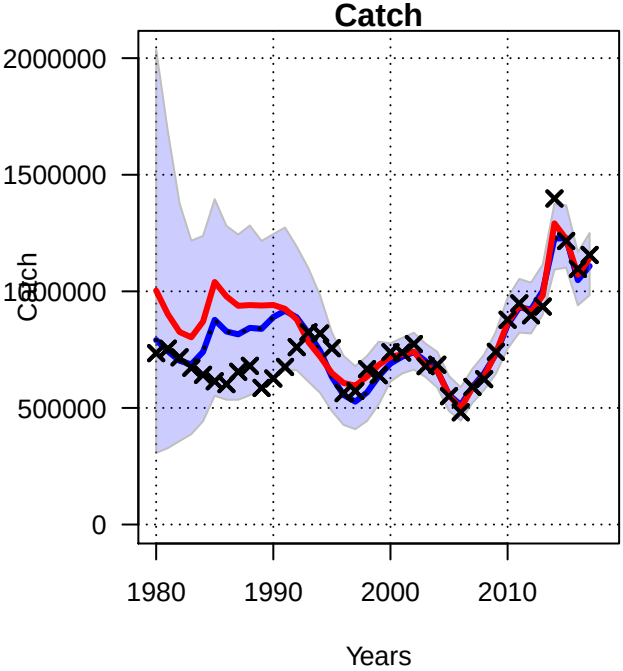
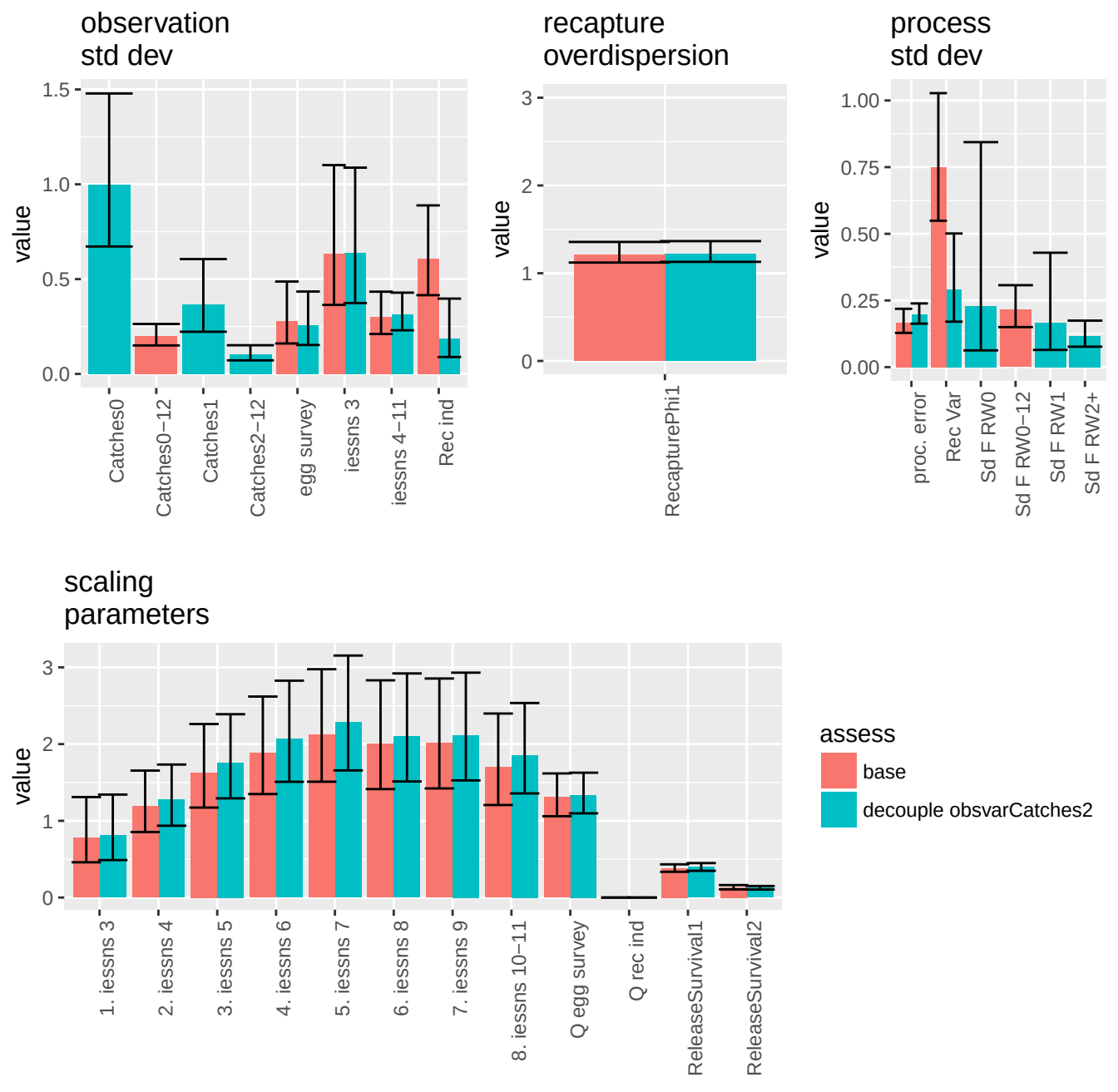
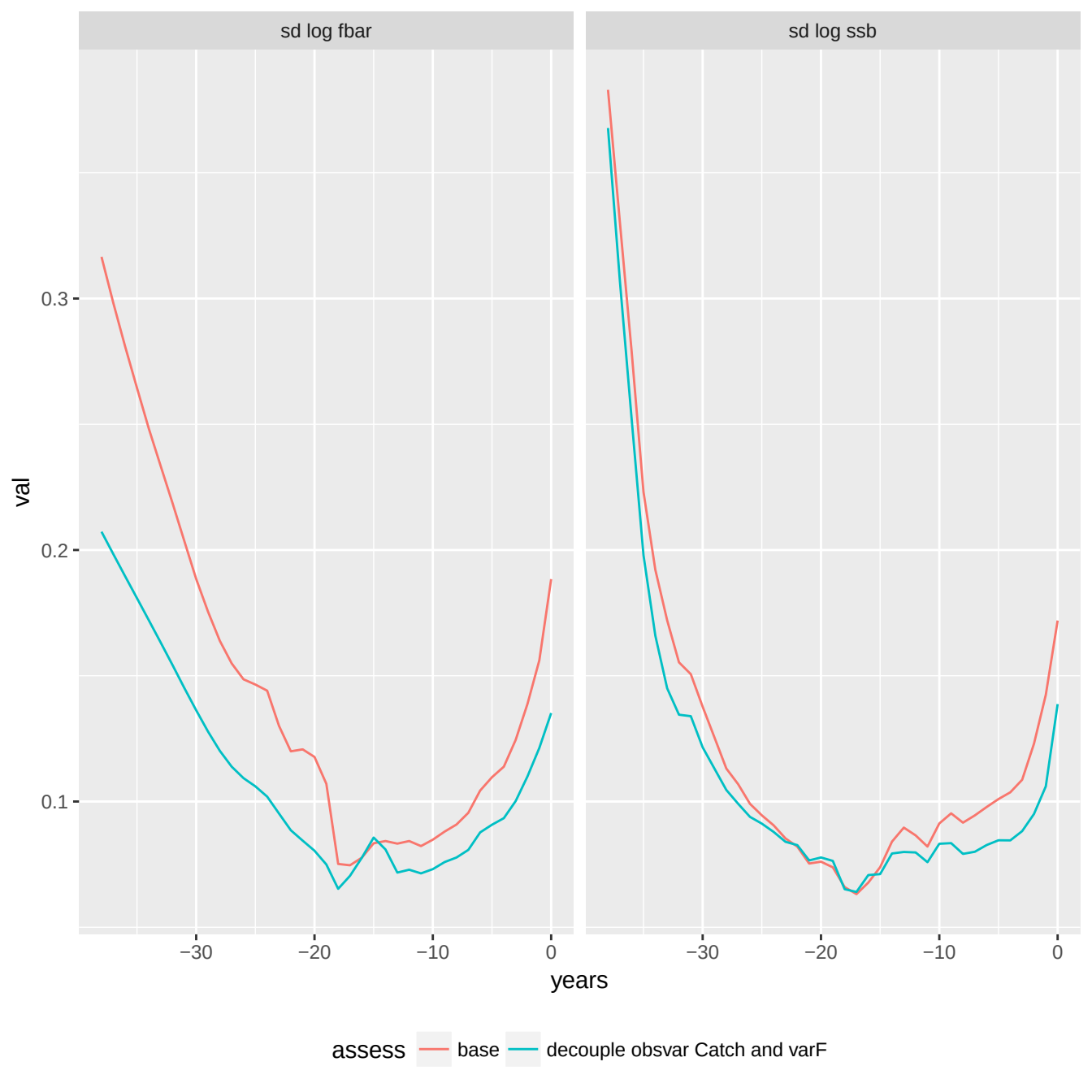

SSB
base
decouple obsvarCatches
8e+06
6e+06
4e+06
2e+06
0e+00
SSB
1980
1990
2000
2010
Years

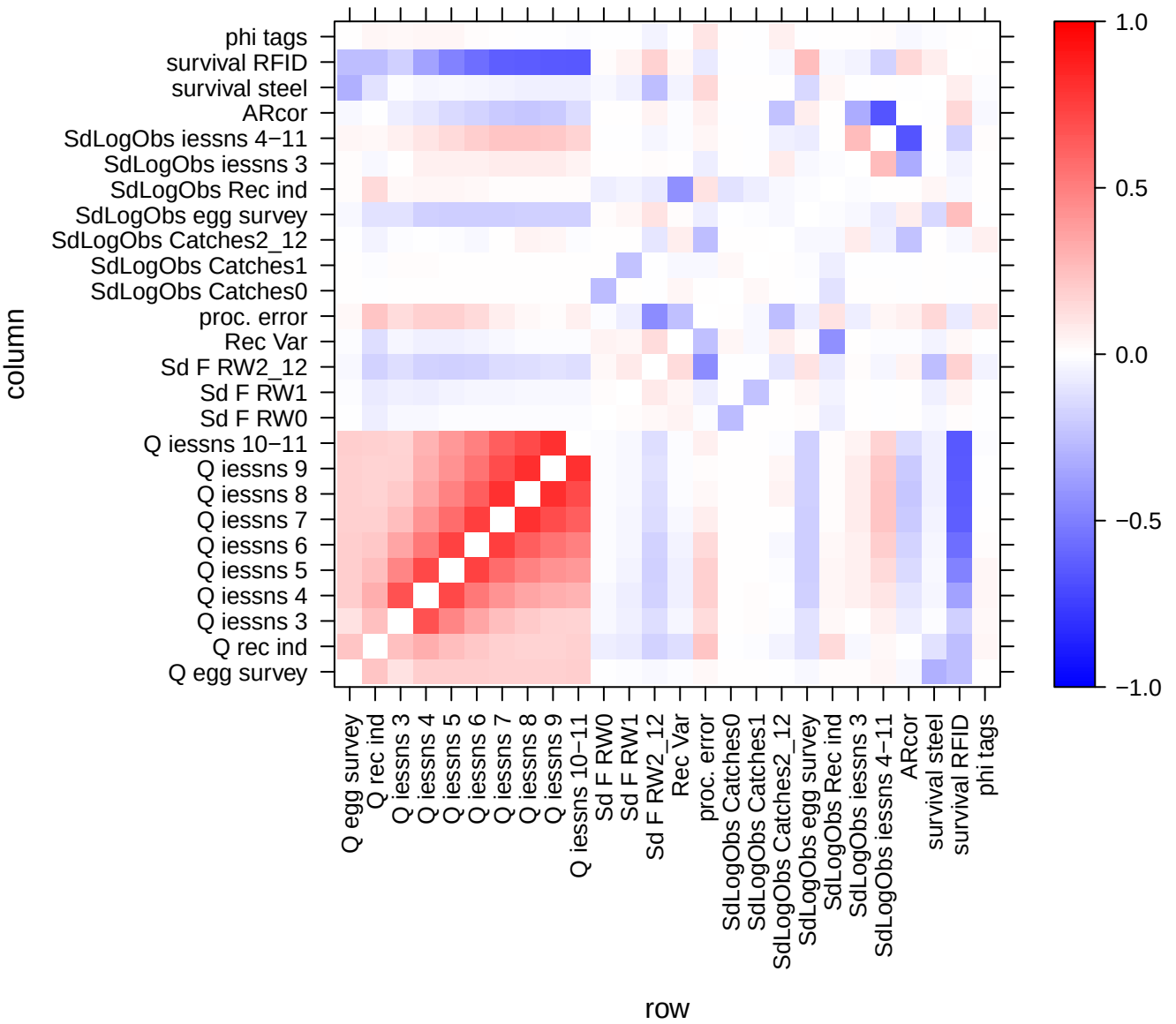

Fbar
0.5
0.4
0.3
0.2
0.1
0.0
$\bar{F}_{4-8}$
1980
1990
2000
2010
Years

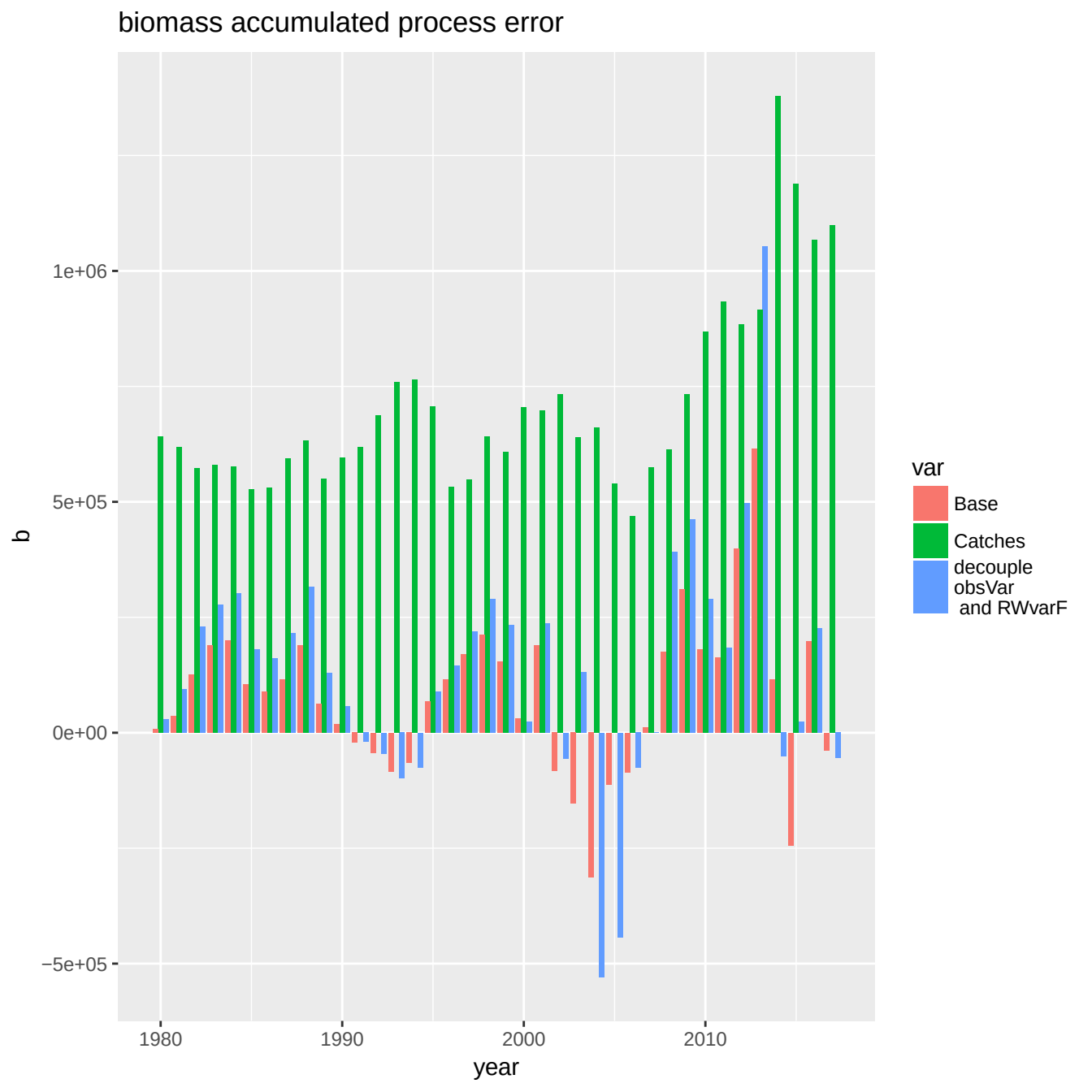
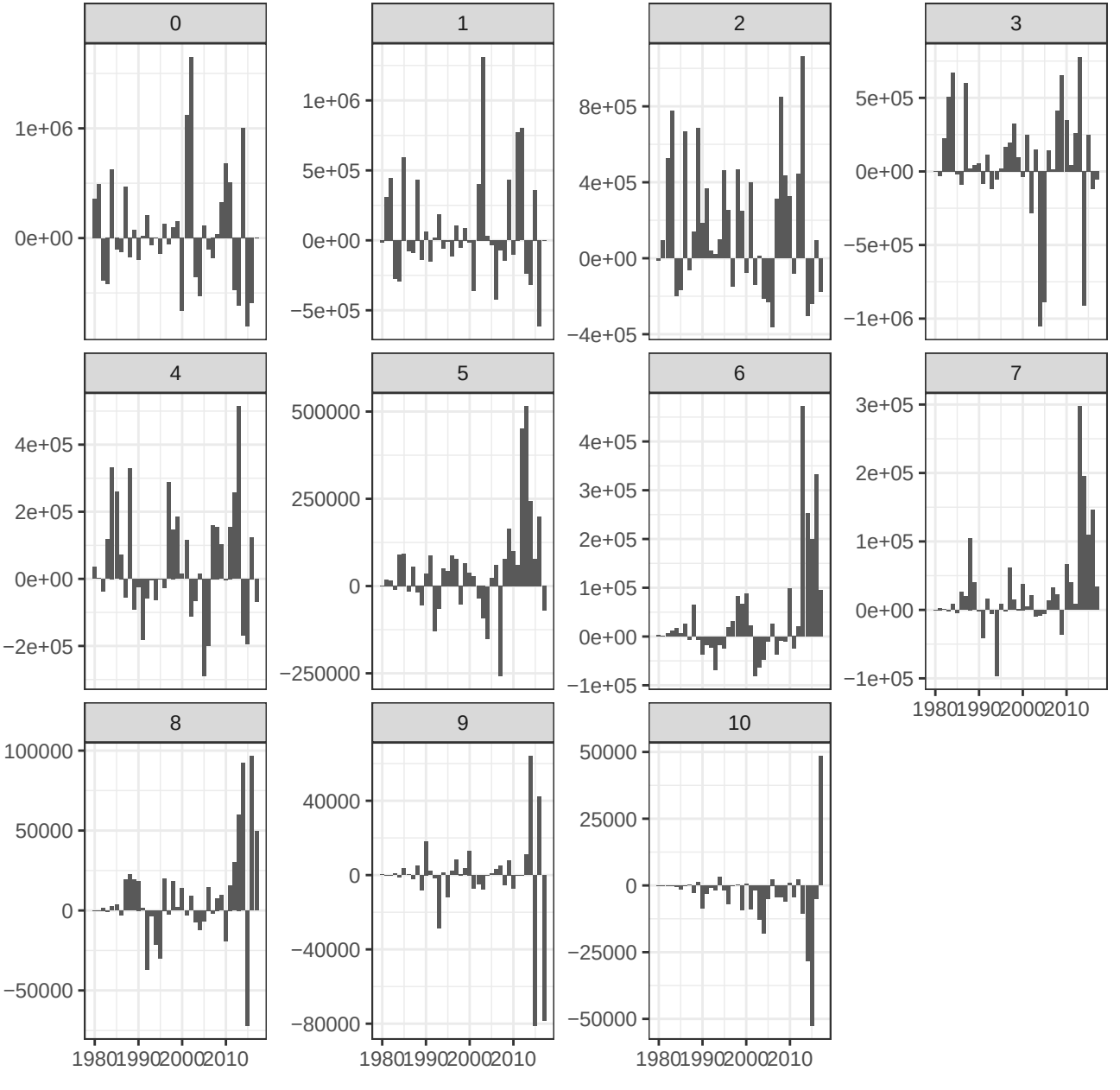

Recruitment
3.0e+07
2.0e+07
1.0e+07
0.0e+00
Recruits (age 0)
1980
1990
2000
2010
Years


Catch
2000000
1500000
1000000
500000
0
Catch
1980
1990
2000
2010
Years


observation
std dev
value
1.5
1.0
0.5
0.0
Catches0
Catches0−12
Catches1
Catches2−12
egg survey
iessns 3
iessns 4−11
Rec ind
recapture
overdispersion
value
3
2
1
0
RecapturePhi1
process
std dev
value
1.00
0.75
0.50
0.25
0.00
proc. error
Rec Var
Sd F RW0
Sd F RW0−12
Sd F RW1
Sd F RW2+
scaling
parameters
value
3
2
1
0
1. iessns 3
2. iessns 4
3. iessns 5
4. iessns 6
5. iessns 7
6. iessns 8
7. iessns 9
8. iessns 10−11
Q egg survey
Q rec ind
ReleaseSurvival1
ReleaseSurvival2
assess
base
decouple obsvarCatches2


sd log fbar
sd log ssb
val
0.3
0.2
0.1
−30
−20
−10
0
years
assess
base
decouple obsvar Catch and varF


column
phi tags
survival RFID
survival steel
ARcor
SdLogObs iessns 4−11
SdLogObs iessns 3
SdLogObs Rec ind
SdLogObs egg survey
SdLogObs Catches2_12
SdLogObs Catches1
SdLogObs Catches0
proc. error
Rec Var
Sd F RW2_12
Sd F RW1
Sd F RW0
Q iessns 10−11
Q iessns 9
Q iessns 8
Q iessns 7
Q iessns 6
Q iessns 5
Q iessns 4
Q iessns 3
Q rec ind
Q egg survey
row
Q egg survey
Q rec ind
Q iessns 3
Q iessns 4
Q iessns 5
Q iessns 6
Q iessns 7
Q iessns 8
Q iessns 9
Q iessns 10−11
Sd F RW0
Sd F RW1
Sd F RW2_12
Rec Var
proc. error
SdLogObs Catches0
SdLogObs Catches1
SdLogObs Catches2_12
SdLogObs egg survey
SdLogObs Rec ind
SdLogObs iessns 3
SdLogObs iessns 4−11
ARcor
survival steel
survival RFID
phi tags
1.0
0.5
0.0
−0.5
−1.0


biomass accumulated process error
1e+06
5e+05
0e+00
−5e+05
b
1980
1990
2000
2010
year
var
Base
Catches
decouple obsVar and RWvarF

Process error expressed as deviations in number of fish