

SSB I\_avg\_ssb\_ssbmsy s\_avg\_ssb\_ssbmsy Skate -PlanB -Itarg · Islope -ES-Fstable -ES-FSPR · IBM ES-Frecent -ES-FM-DLM -CC-FSPR -CC-FM-AIM -

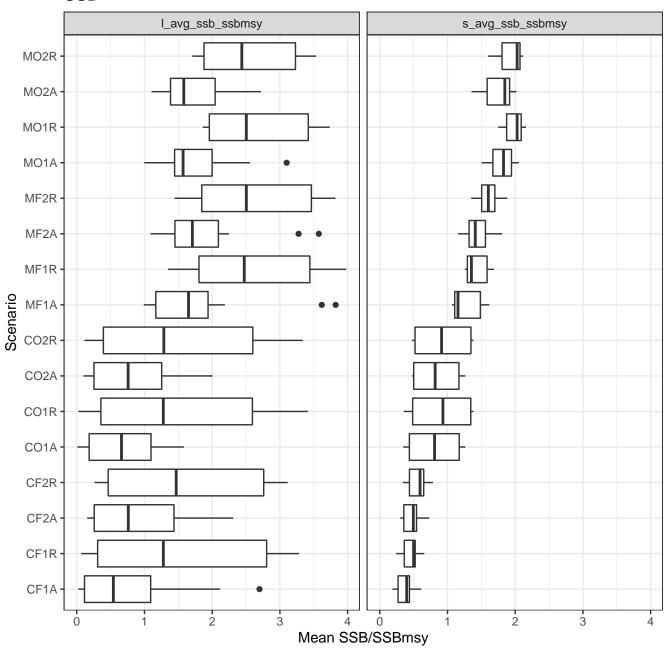
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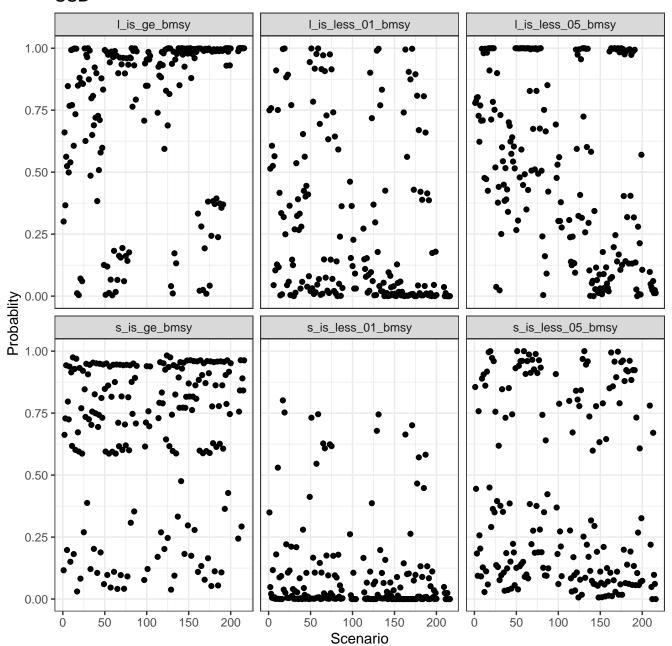
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2

3

Mean SSB/SSBmsy





SSB I\_is\_less\_01\_bmsy I\_is\_ge\_bmsy l\_is\_less\_05\_bmsy 1.00 0.75 -0.50 0.25 -Probablity 0.00 retro\_type Catch s\_is\_ge\_bmsy s\_is\_less\_01\_bmsy s\_is\_less\_05\_bmsy M 1.00 0.75 0.50 -0.25

100

Scenario

150

200

0

100

150

200

50

0.00

50

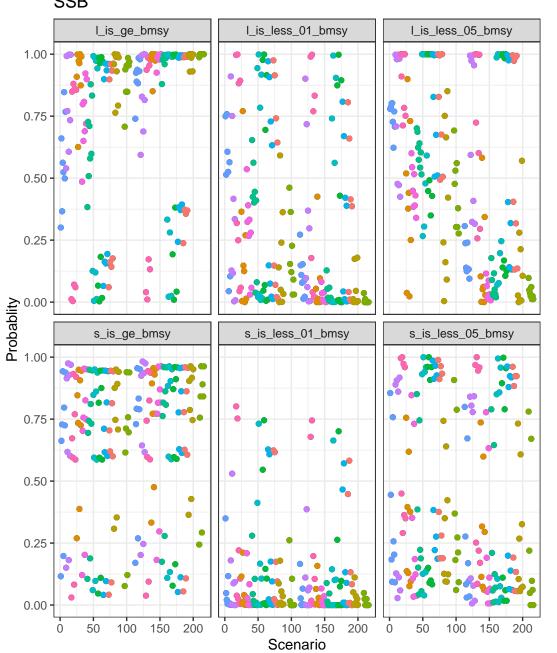
100

150

200

0

50



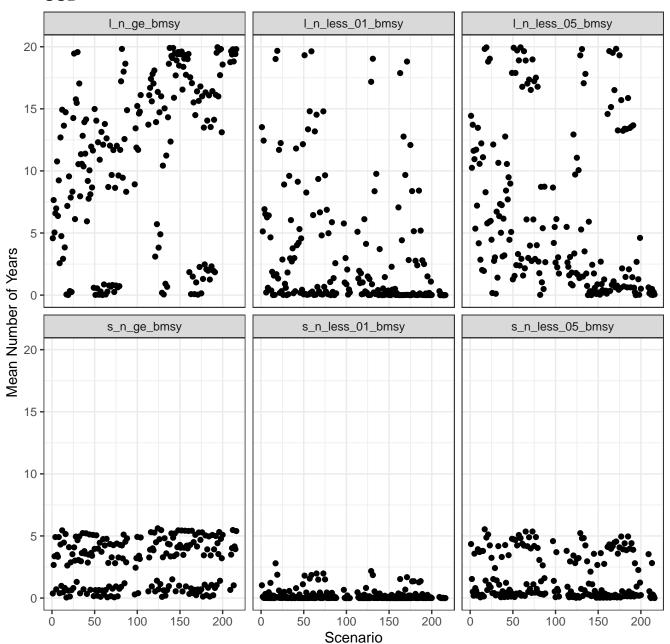
## IBMlab

- AIM
- CC-FM
- CC-FSPR
- DLM
- ES-FM
- ES-Frecent
- ES-FSPR
- ES-Fstable
- Islope
- Itarg
- PlanB
- Skate

SSB I\_is\_less\_01\_bmsy I\_is\_ge\_bmsy I\_is\_less\_05\_bmsy 1.00 -0.75 -0.50 0.25 -Probablity 0.00 co.0 factor(Fhist) 1 s\_is\_ge\_bmsy s\_is\_less\_01\_bmsy s\_is\_less\_05\_bmsy 2 0.75 0.50 0.25 0.00 100 150 50 100 150 200 0 50 200 0 50 100 150 200 Scenario

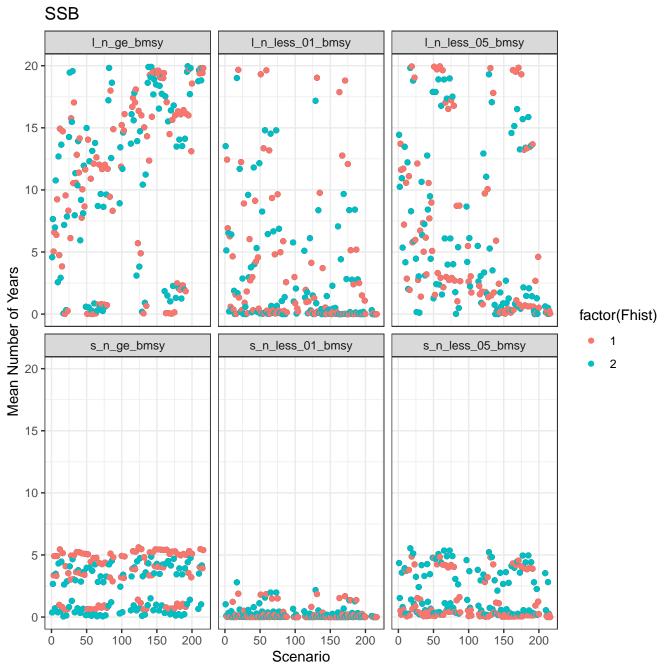
SSB I\_is\_less\_01\_bmsy I\_is\_ge\_bmsy l\_is\_less\_05\_bmsy 1.00 0.75 -0.50 0.25 -Probablity 0.00 co.0 factor(n\_selblocks) s\_is\_ge\_bmsy s\_is\_less\_01\_bmsy s\_is\_less\_05\_bmsy 2 0.75 0.50 -0.25 0.00 100 150 200 50 100 150 200 50 50 100 150 200 Scenario

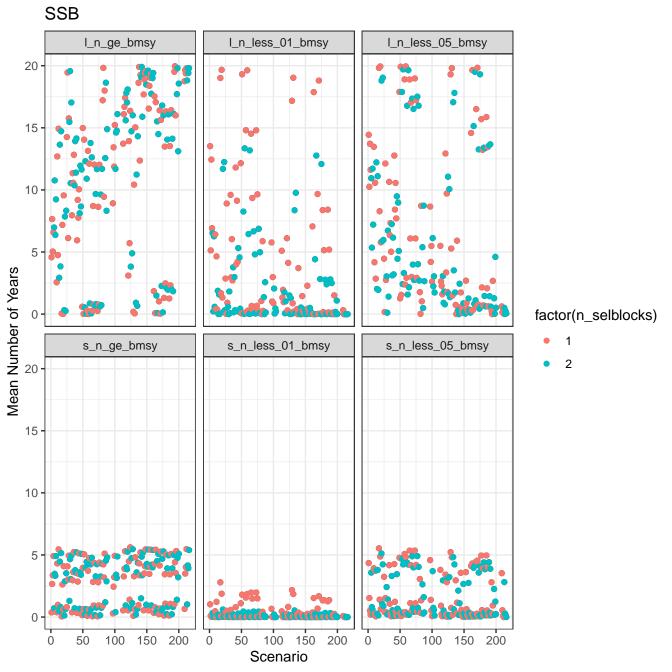
SSB l\_is\_less\_01\_bmsy I\_is\_ge\_bmsy I\_is\_less\_05\_bmsy 1.00 0.75 -0.50 -0.25 -Probablity
0.00 factor(catch.mult) 0.75 s\_is\_ge\_bmsy s\_is\_less\_01\_bmsy s\_is\_less\_05\_bmsy 1.00 0.75 0.50 0.25 0.00 100 150 50 100 150 200 0 50 200 50 100 150 200 0 Scenario

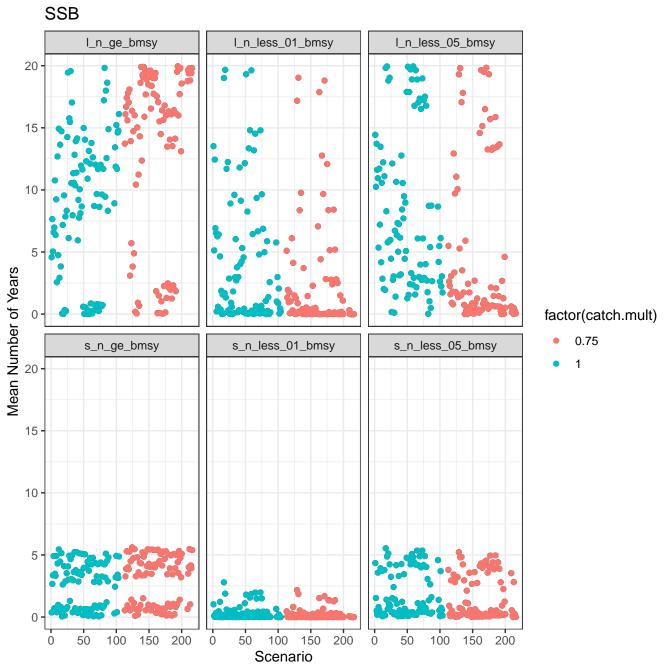


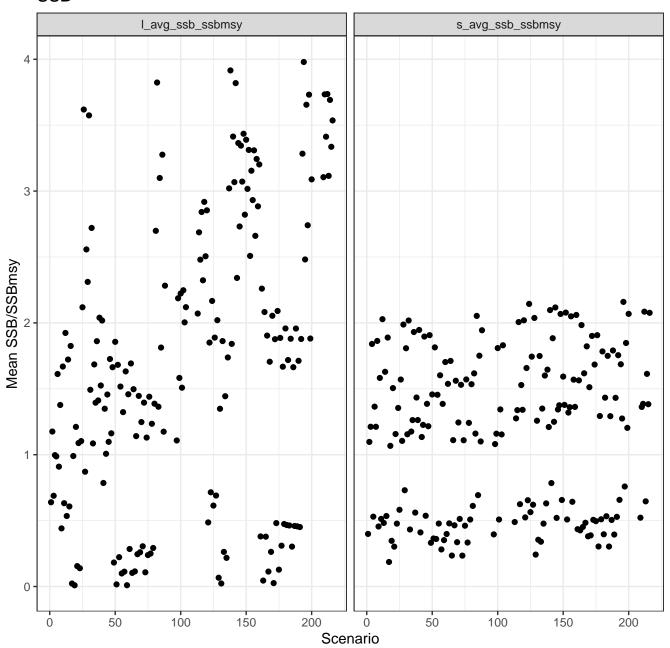
SSB I\_n\_ge\_bmsy I\_n\_less\_01\_bmsy I\_n\_less\_05\_bmsy 20 -15 -10 -Mean Number of Years retro\_type Catch s\_n\_ge\_bmsy s\_n\_less\_01\_bmsy s\_n\_less\_05\_bmsy M 15 -10 -100 150 50 100 150 200 0 50 200 50 100 150 200 Scenario

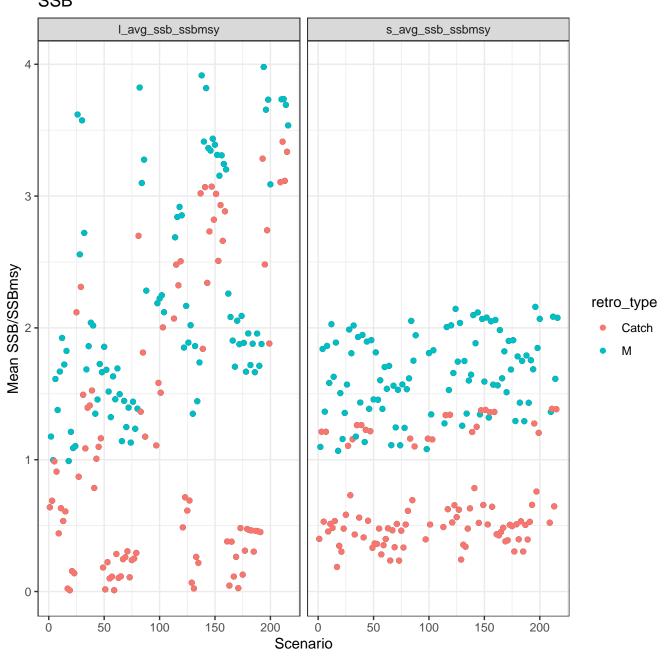
SSB I\_n\_ge\_bmsy I\_n\_less\_01\_bmsy I\_n\_less\_05\_bmsy 20 -15 -10 -**IBMIab** AIM CC-FM CC-FSPR Mean Number of Years DLM ES-FM ES-Frecent s\_n\_ge\_bmsy s\_n\_less\_01\_bmsy s\_n\_less\_05\_bmsy ES-FSPR ES-Fstable Islope 15 -Itarg PlanB Skate 10 -50 100 150 200 50 100 150 200 50 100 150 200 0 0 Scenario

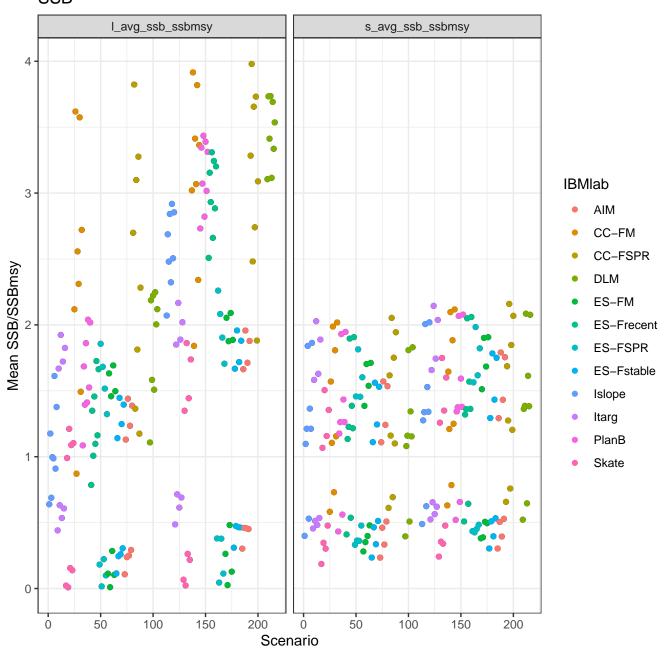


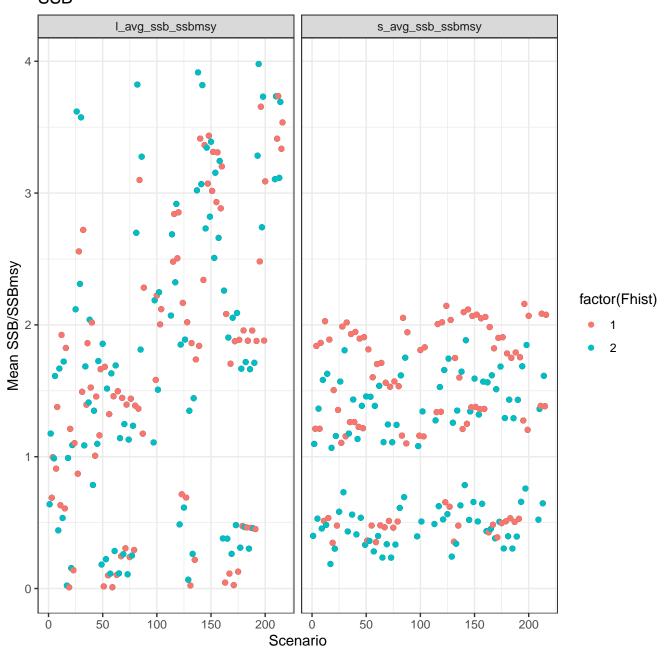


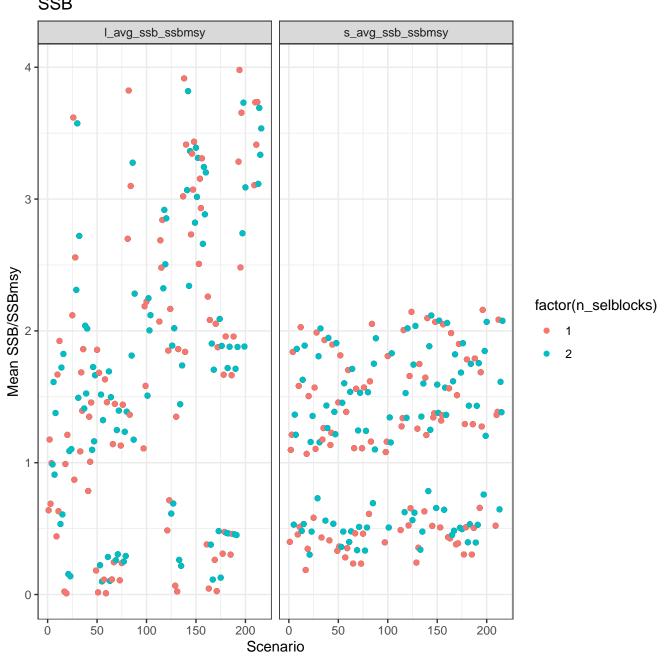


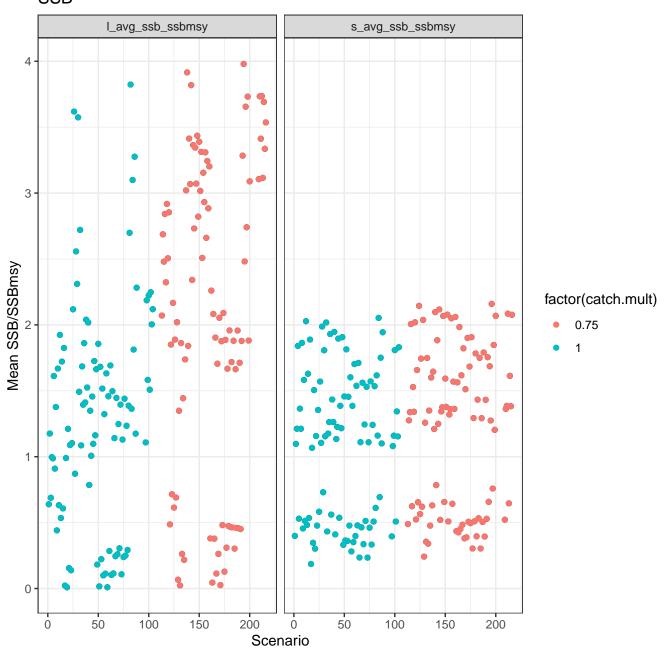


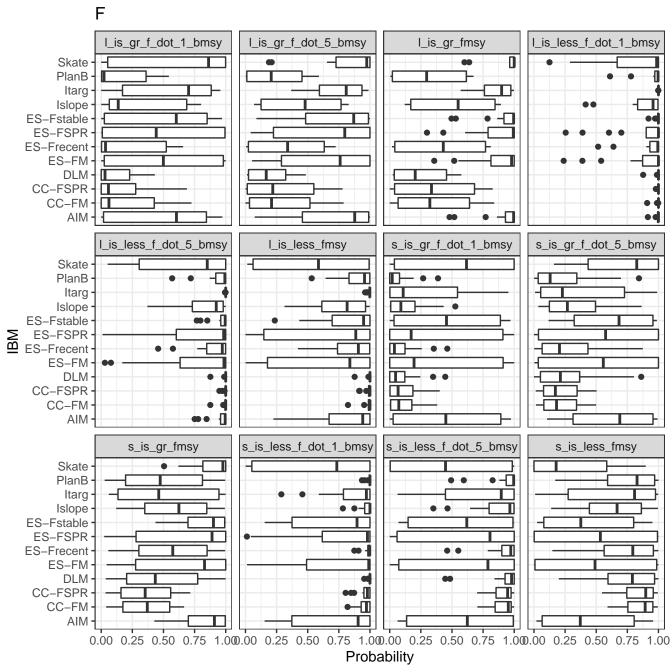


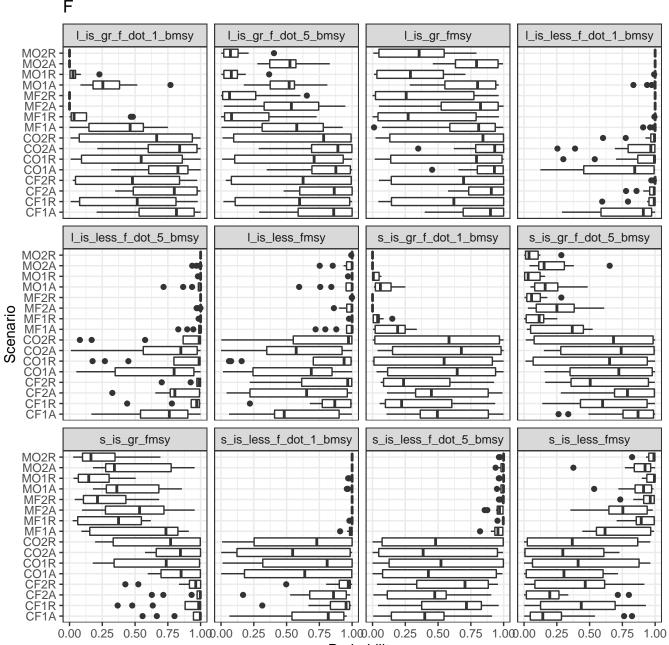




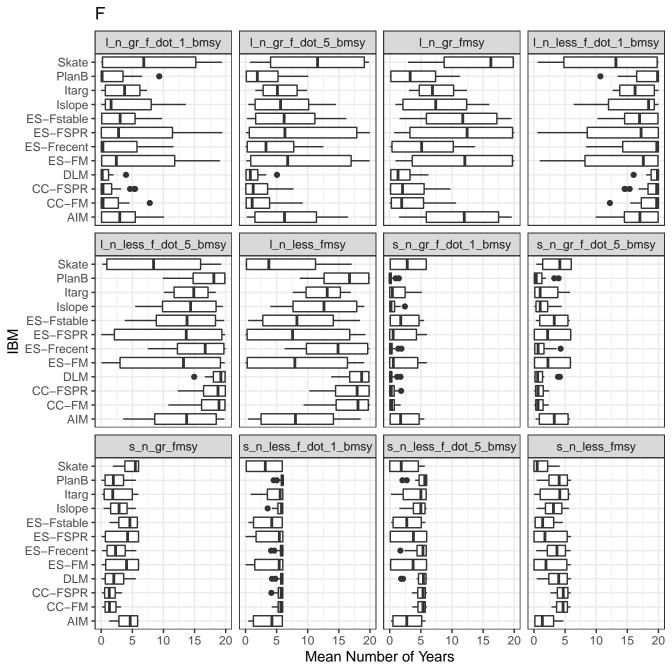


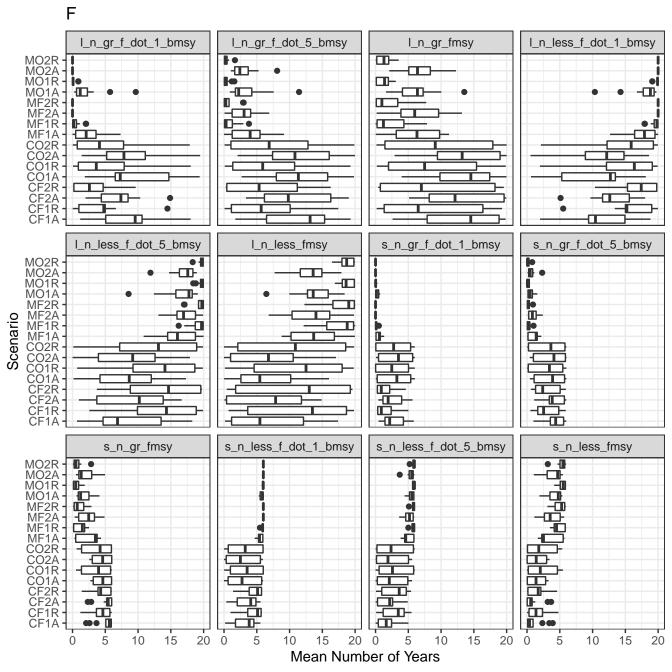


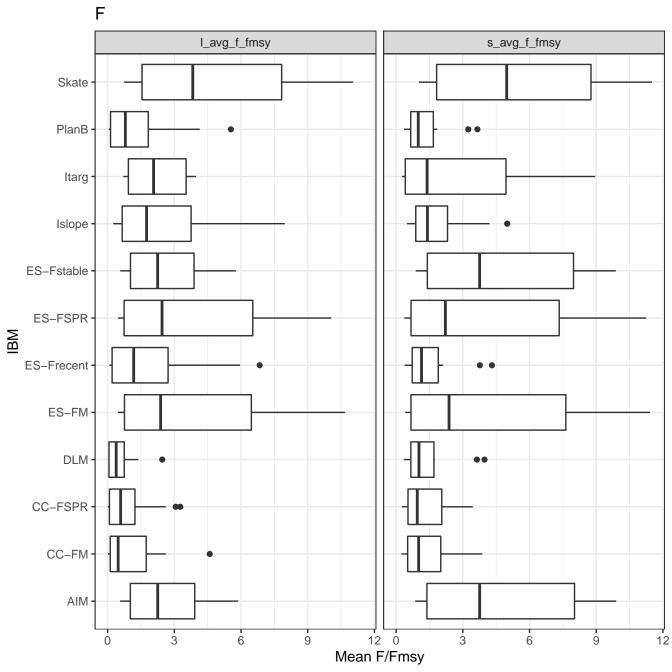


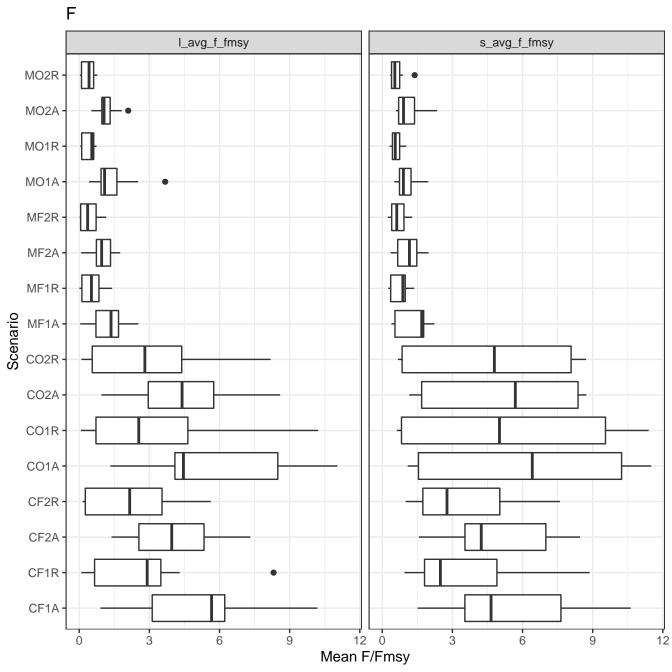


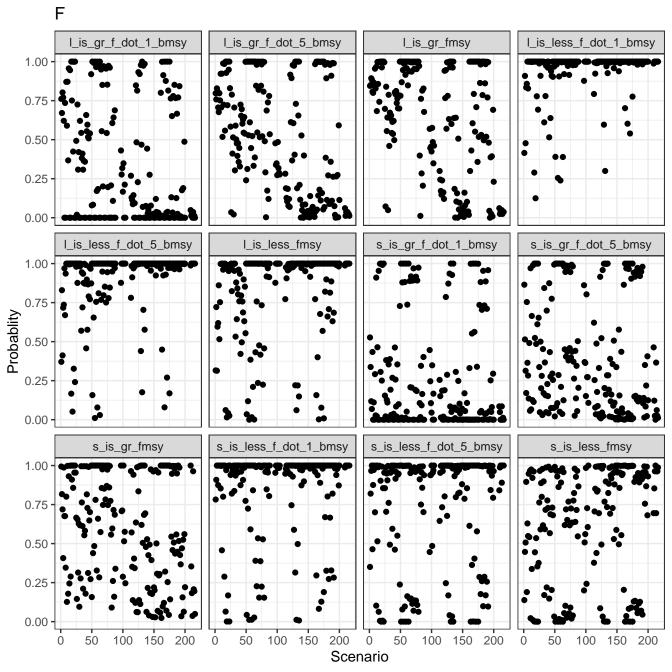
Probability

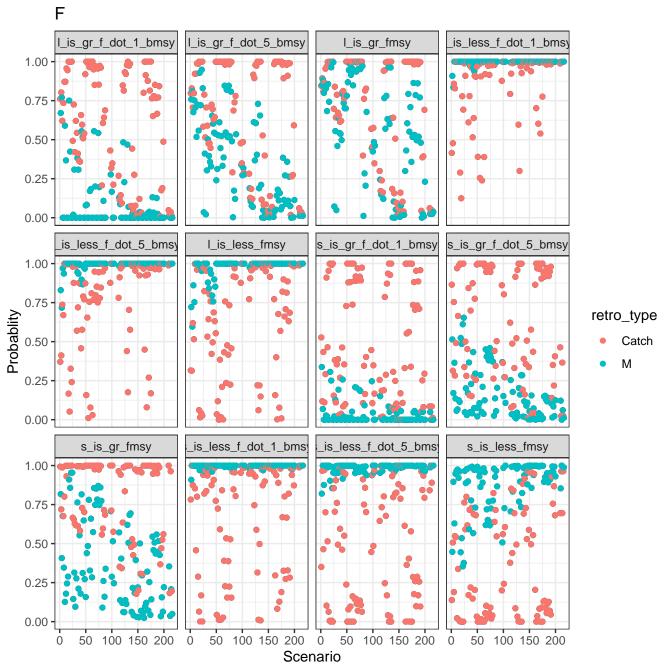


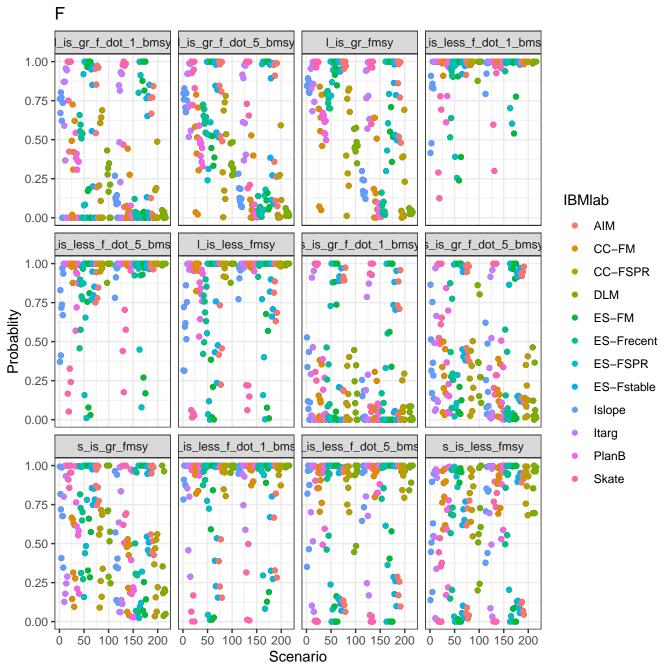


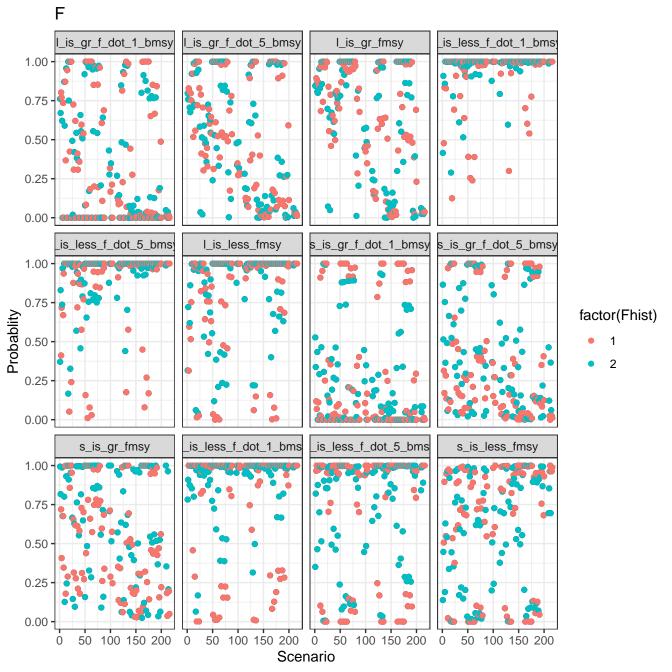


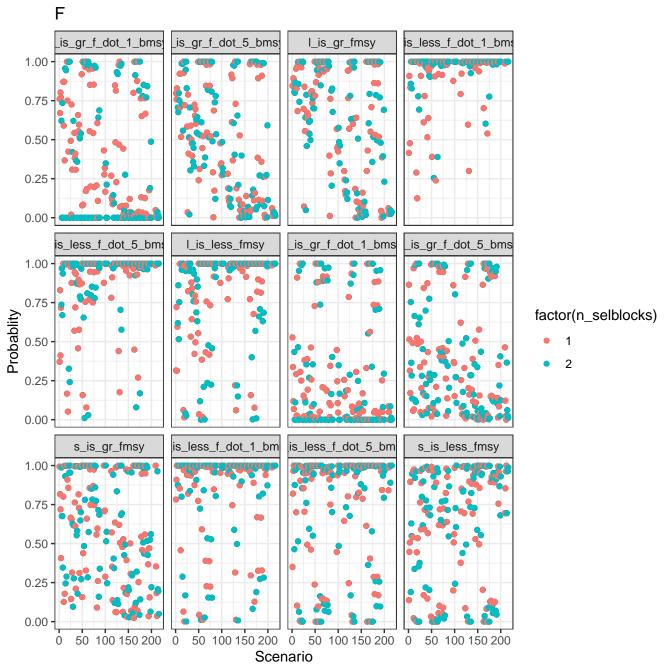


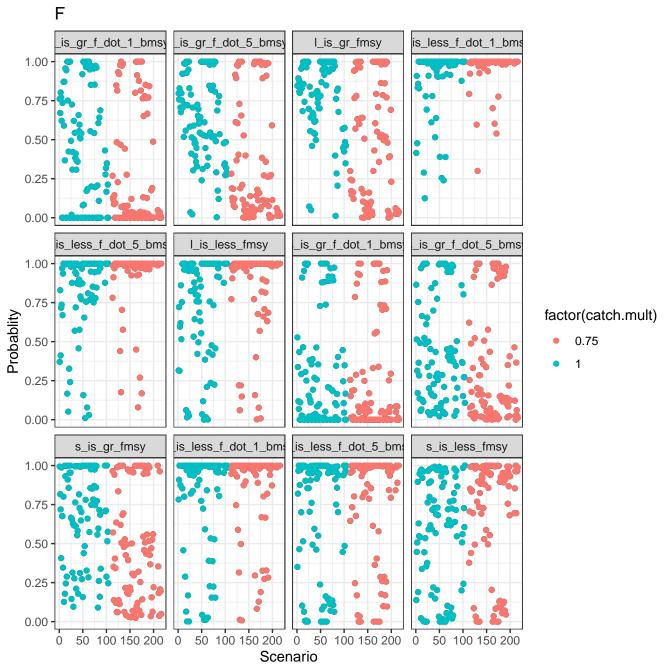




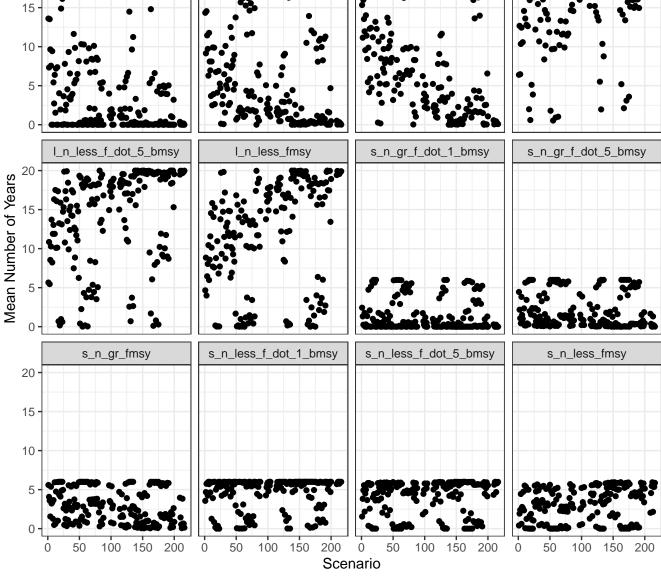


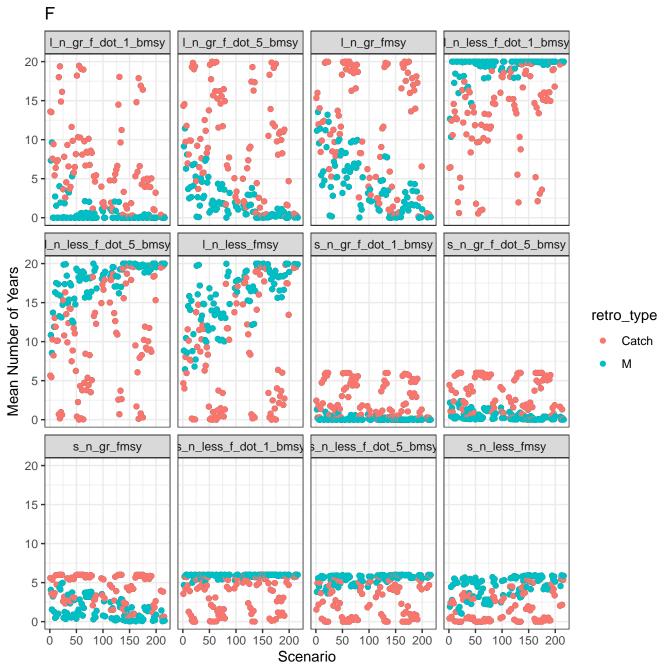


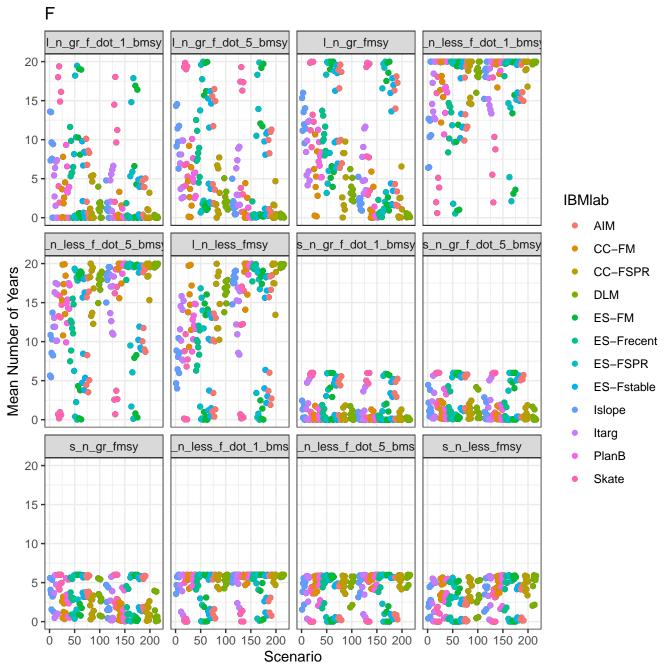


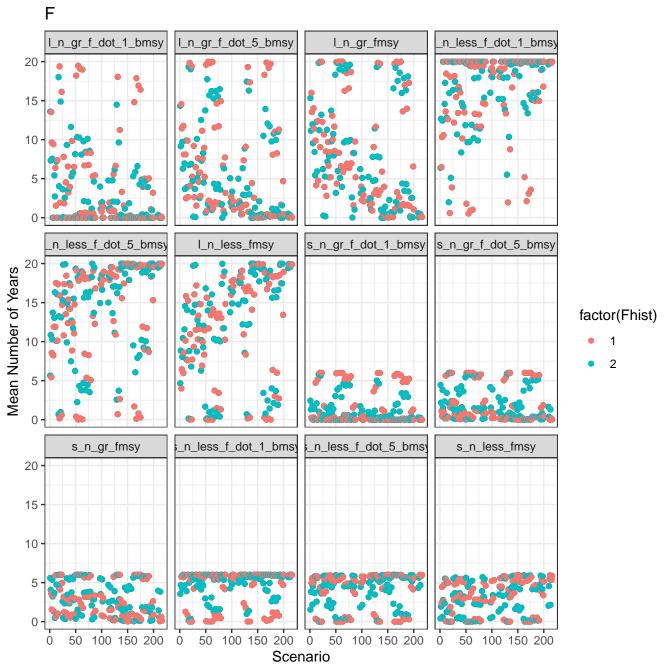


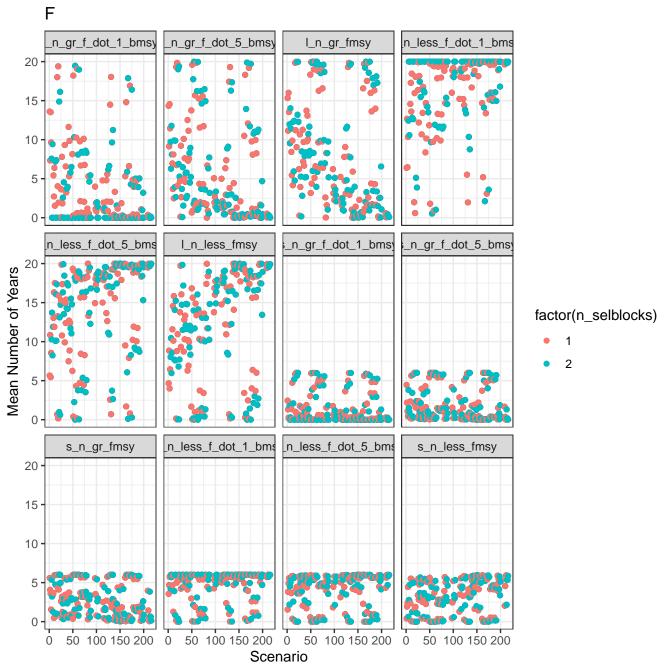
F I\_n\_gr\_f\_dot\_1\_bmsy I\_n\_gr\_f\_dot\_5\_bmsy I\_n\_gr\_fmsy I\_n\_less\_f\_dot\_1\_bmsy 20 s\_n\_gr\_f\_dot\_1\_bmsy I\_n\_less\_f\_dot\_5\_bmsy I\_n\_less\_fmsy s\_n\_gr\_f\_dot\_5\_bmsy 5 s\_n\_less\_f\_dot\_1\_bmsy s\_n\_less\_f\_dot\_5\_bmsy s\_n\_less\_fmsy s\_n\_gr\_fmsy

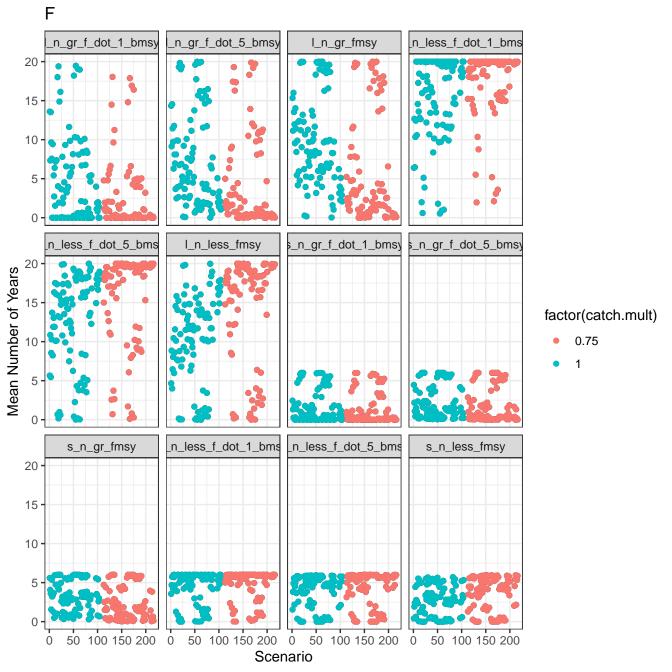


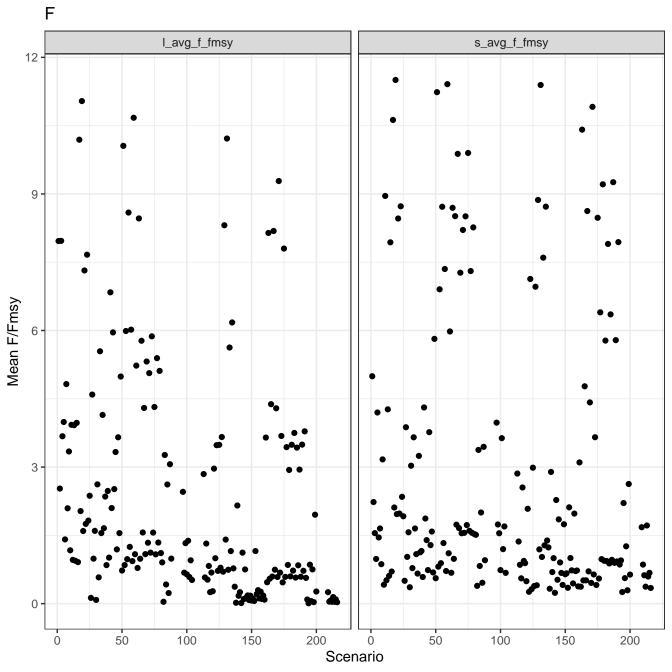


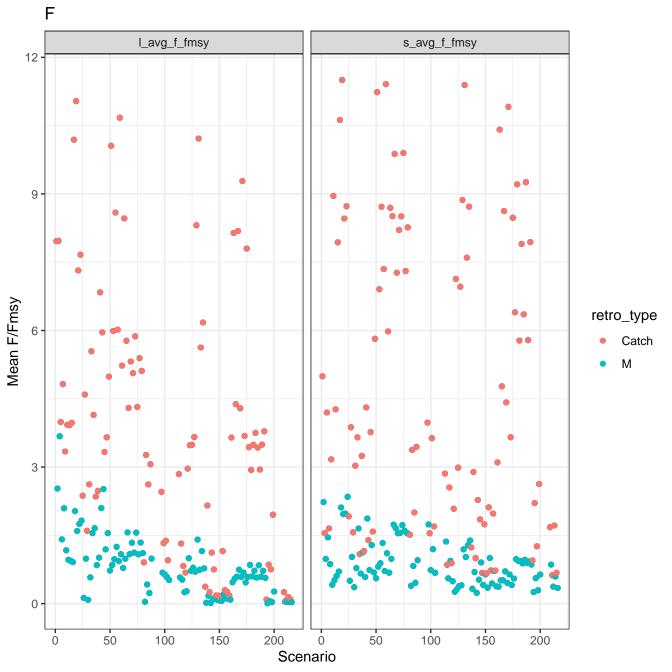


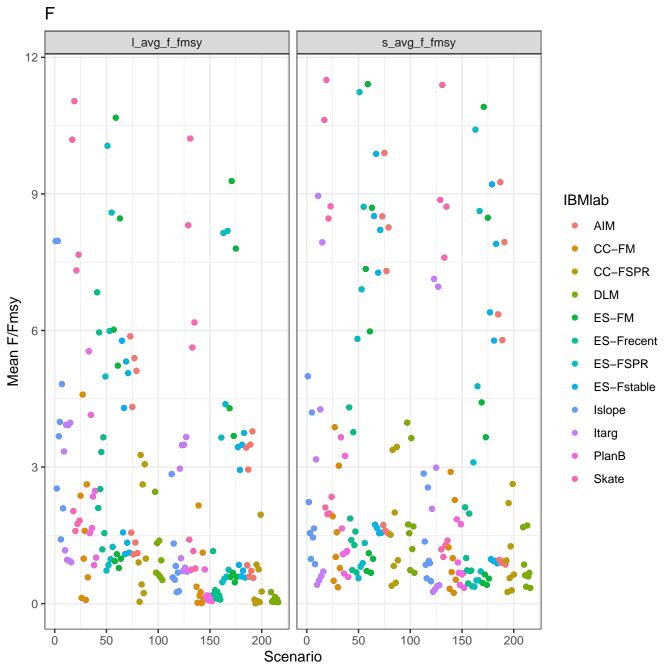


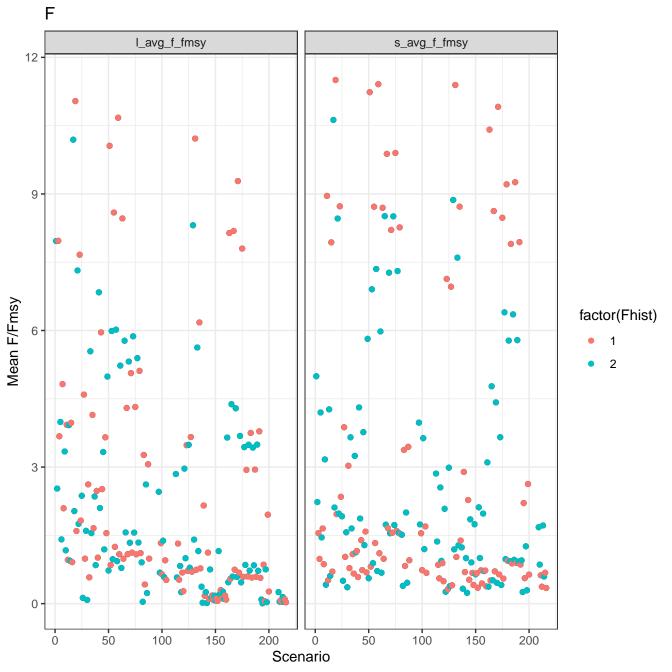


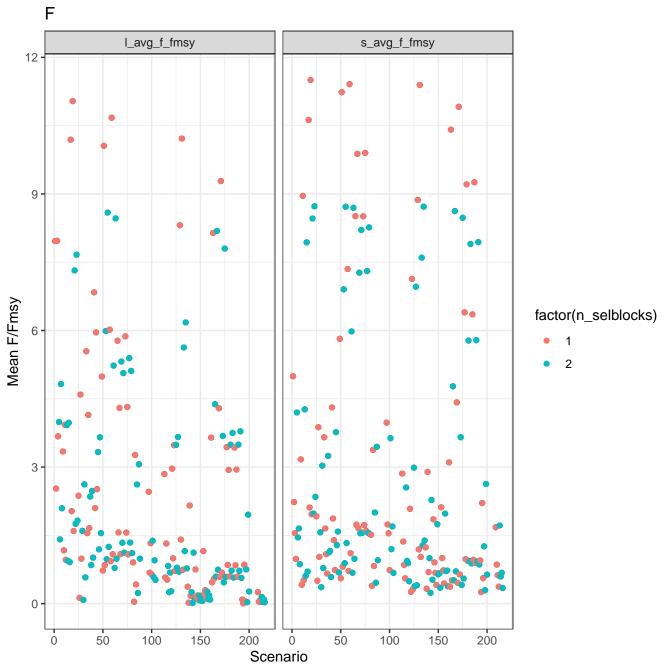


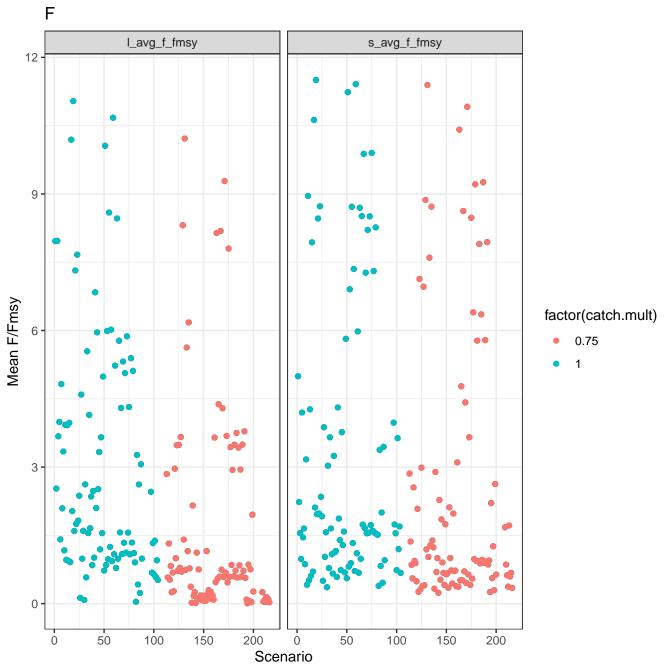






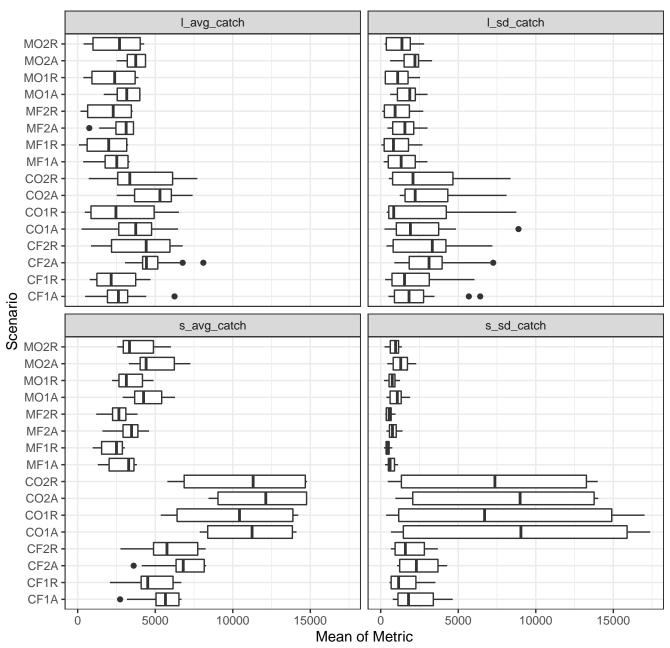


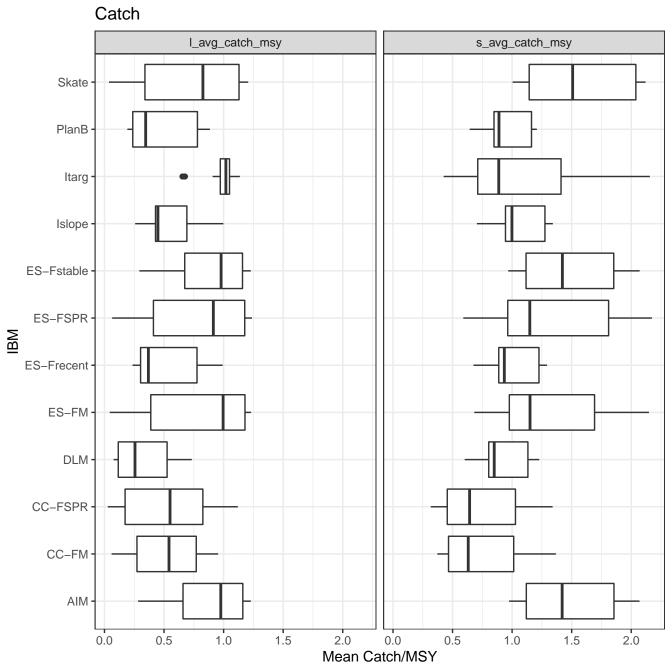




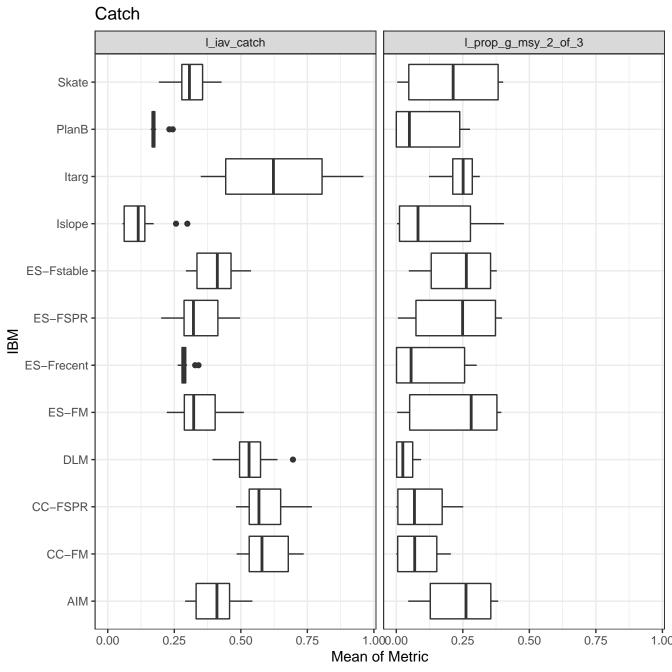
Catch I\_avg\_catch I\_sd\_catch Skate -PlanB Itarg Islope · ES-Fstable ES-FSPR ES-Frecent ES-FM-DLM -CC-FSPR CC-FM-AIM BM s\_avg\_catch s\_sd\_catch Skate -PlanB · Itarg Islope · ES-Fstable · ES-FSPR ES-Frecent -ES-FM DLM -CC-FSPR CC-FM-AIM · 15000 0 5000 10000 5000 10000 15000 Mean of Metric

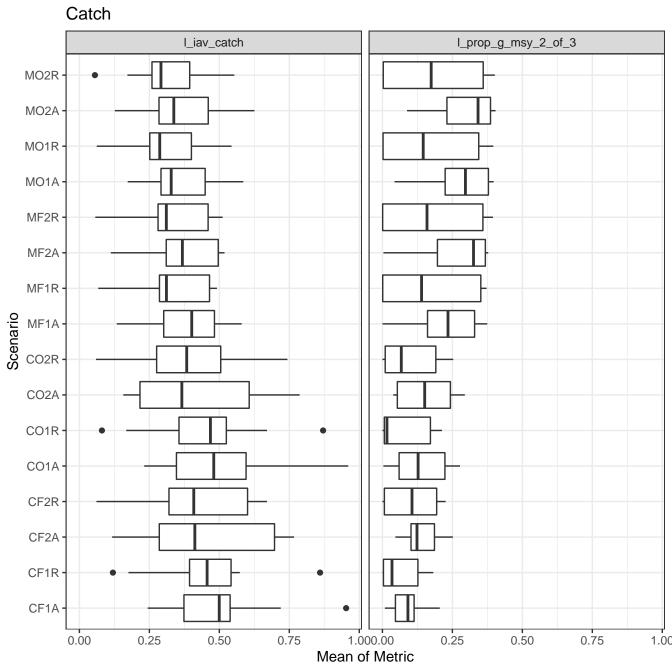
Catch

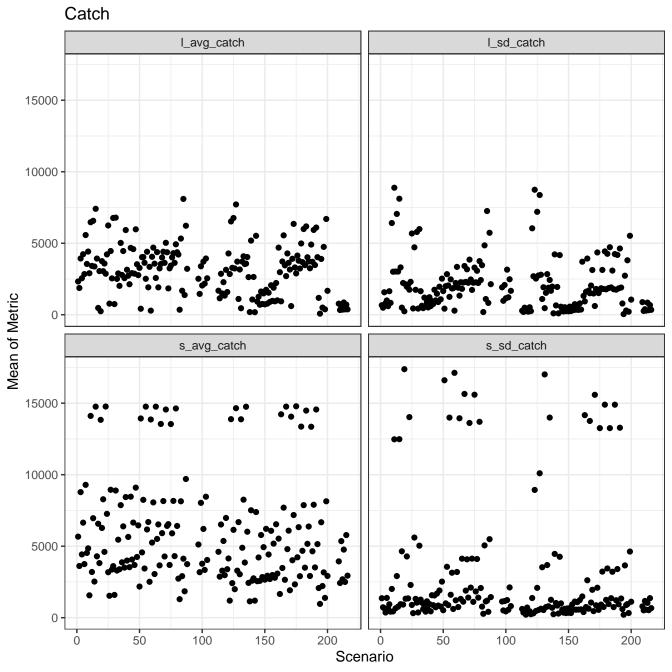


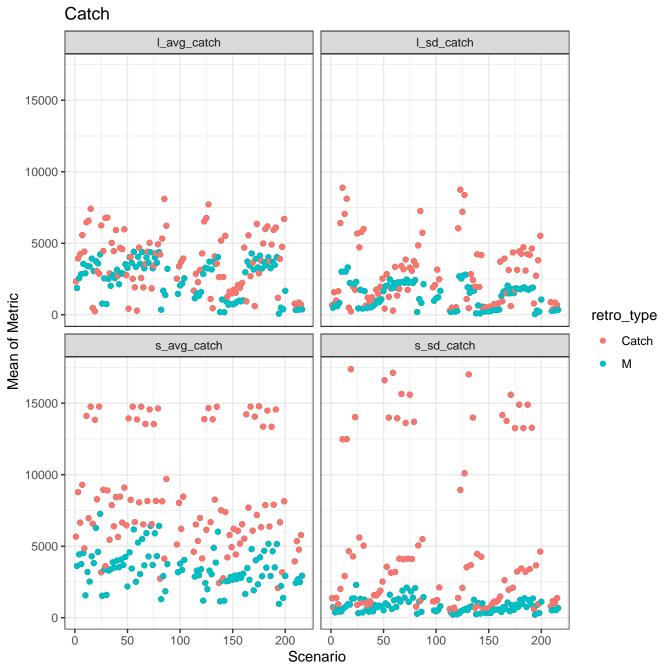


Catch I\_avg\_catch\_msy s\_avg\_catch\_msy MO2R MO2A -MO1R MO1A MF2R MF2A MF1R Scenario MF1A CO2R CO2A · CO1R CO1A CF2R CF2A CF1R CF1A 0.5 1.5 2.0 0.0 1.0 0.0 0.5 1.0 1.5 2.0 Mean Catch/MSY

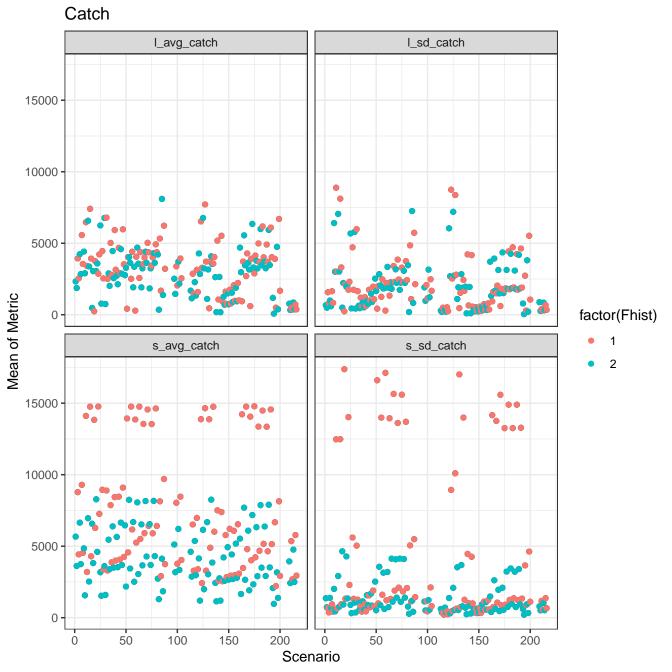


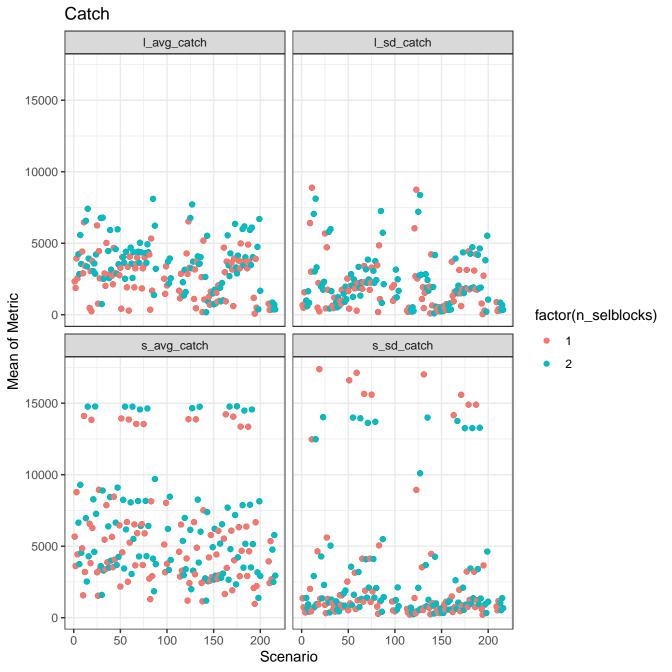


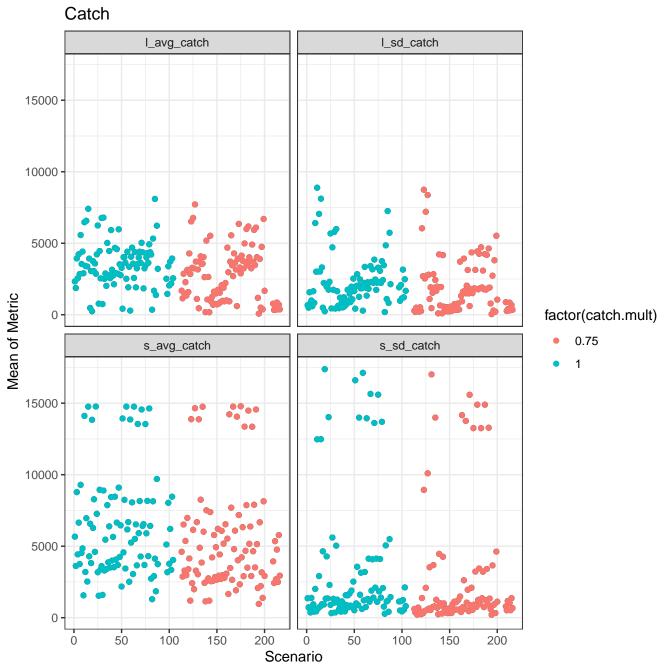




## Catch I\_avg\_catch I\_sd\_catch 15000 -10000 -**IBMlab** AIM 5000 -CC-FM CC-FSPR DLM Mean of Metric 0 ES-FM ES-Frecent s\_sd\_catch s\_avg\_catch ES-FSPR ES-Fstable 15000 -Islope Itarg PlanB 10000 -Skate 5000 0 50 100 150 200 50 100 150 Ö 200 Scenario







Catch I\_avg\_catch\_msy s\_avg\_catch\_msy 2.0 1.5 -Mean Catch/MSY 1555 0.5 0.0 -

200

Ö

Scenario

50

100

150

200

150

50

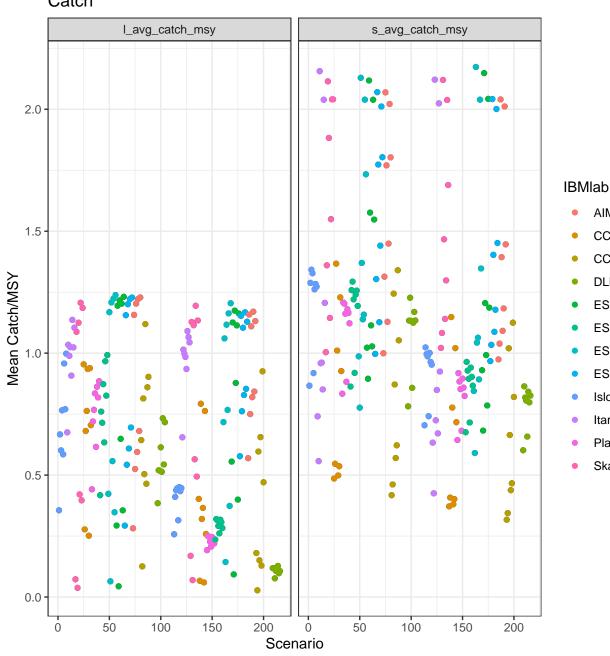
Ö

100

Catch I\_avg\_catch\_msy s\_avg\_catch\_msy 2.0 1.5 -Mean Catch/MSY 1588 retro\_type Catch Μ 0.5 0.0 -Ó 50 100 150 200 50 100 150 Ö 200

Scenario

## Catch



AIM

DLM ES-FM ES-Frecent ES-FSPR ES-Fstable

Islope Itarg PlanB Skate

CC-FM CC-FSPR

Catch I\_avg\_catch\_msy s\_avg\_catch\_msy 2.0 1.5 -. Mean Catch/MSY factor(Fhist) 2 0.5 0.0 -50 50 100 100 150 200 150 200 Ö Scenario

Catch I\_avg\_catch\_msy s\_avg\_catch\_msy 2.0 1.5 -Mean Catch/MSY factor(n\_selblocks) 2 0.5 0.0 200 0 Scenario 50 100 50 100 150 150 200

Catch I\_avg\_catch\_msy s\_avg\_catch\_msy . 2.0 1.5 -Mean Catch/MSY factor(catch.mult) 0.75 0.5 0.0 -50 100 150 50 150 200 200 Ö 100 Scenario

Catch I\_iav\_catch I\_prop\_g\_msy\_2\_of\_3 1.00 -0.75 -Mean of Metric 0.25 -0.00 -Scenario 50 50 100 200 100 150 Ö 150 200

Catch I\_iav\_catch I\_prop\_g\_msy\_2\_of\_3 1.00 -0.75 -Mean of Metric retro\_type 0.50 -Catch Μ 0.25 -0.00 -200 0 Scenario 50 100 150 50 100 200 150 Ö

Catch I\_iav\_catch I\_prop\_g\_msy\_2\_of\_3 1.00 -• 0.75 -**IBMlab** AIM CC-FM CC-FSPR DLM Mean of Metric ES-FM 0.50 -ES-Frecent ES-FSPR ES-Fstable Islope Itarg PlanB 0.25 -Skate 0.00 -

50

0

100

150

200

Ó

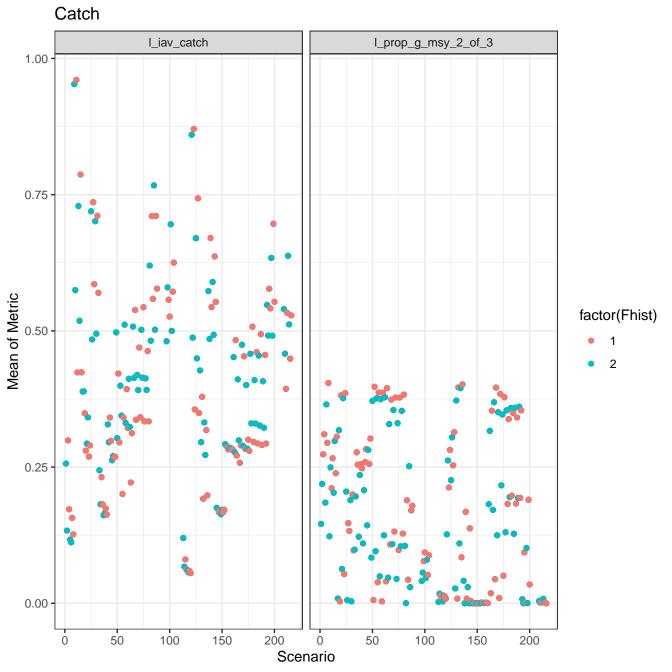
Scenario

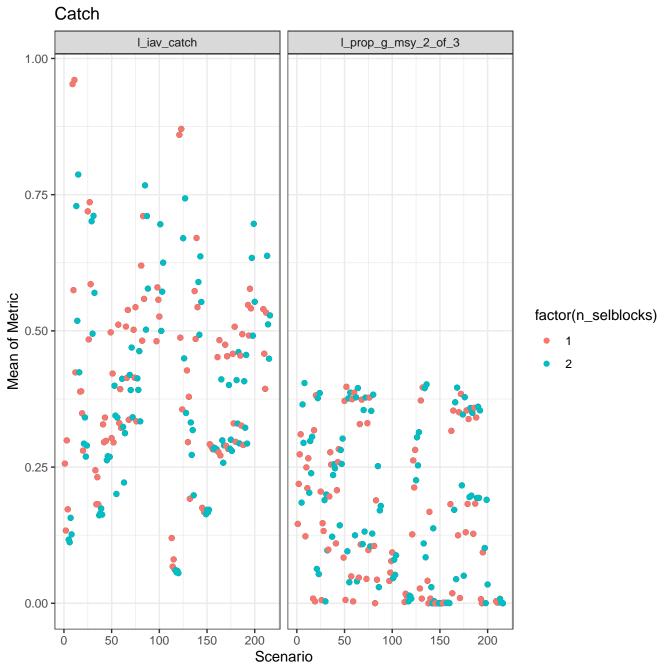
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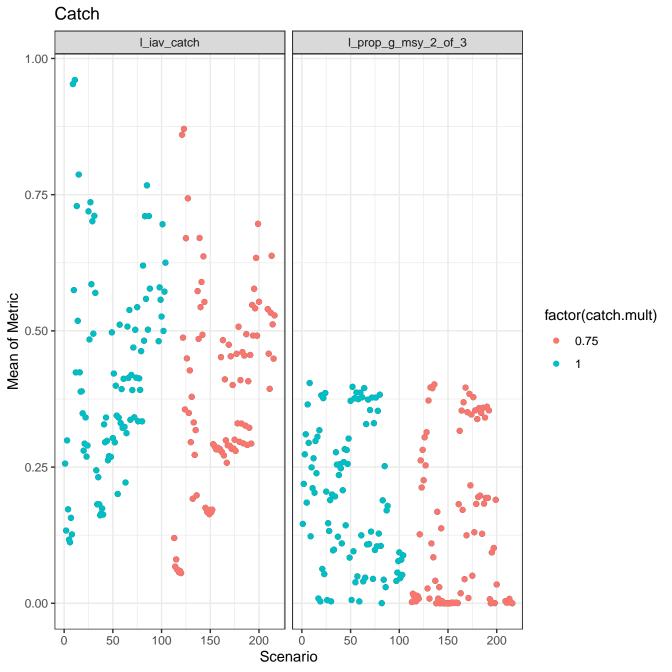
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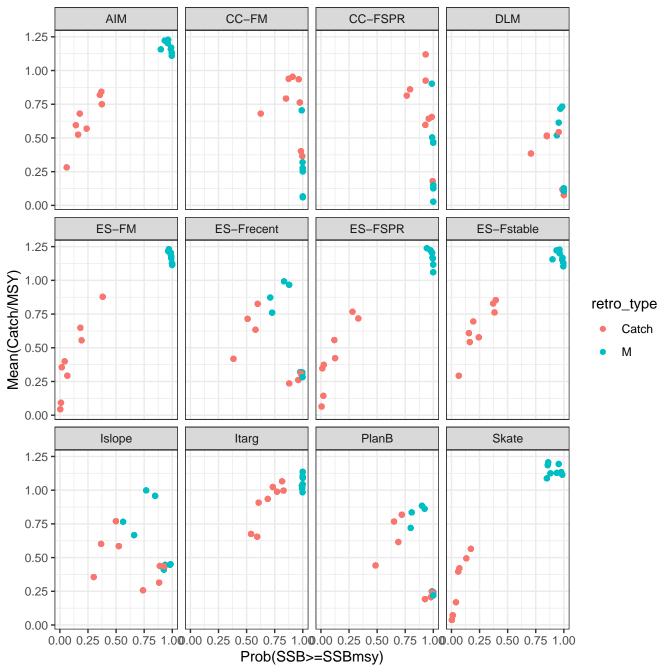
150

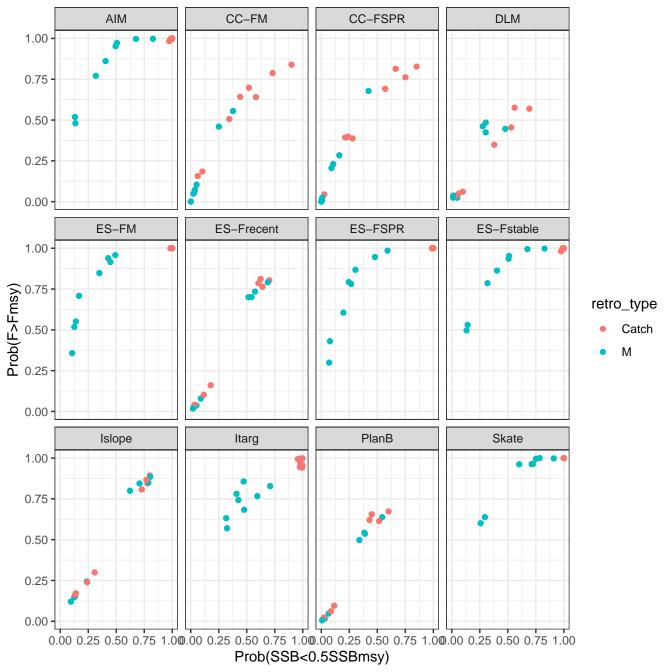
200



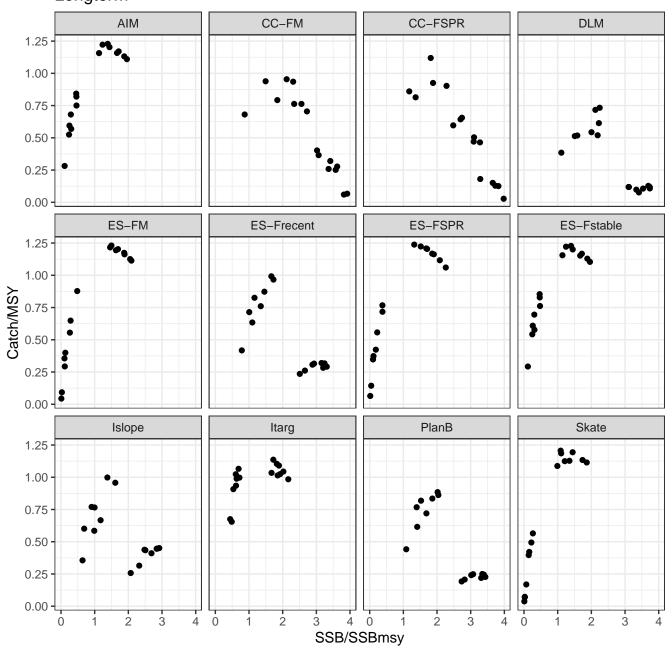








Longterm



CF1A Long Term AIM CC-FM CC-FSPR DLM 4 2 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY Islope PlanB Skate Itarg 10 10 10 5 10 5 SSB/SSBmsy

CF1R Long Term AIM CC-FM CC-FSPR DLM 4 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY 2 Islope PlanB Skate Itarg 2 5 10 10 10 5 10 SSB/SSBmsy

CF2A Long Term AIM CC-FM CC-FSPR DLM 4 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY 2 Islope PlanB Skate Itarg 10 10 10 5 10 5

CF2R Long Term AIM CC-FM CC-FSPR DLM 4 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY 2 Islope PlanB Skate Itarg 2 10 10 10 5 10 5 SSB/SSBmsy

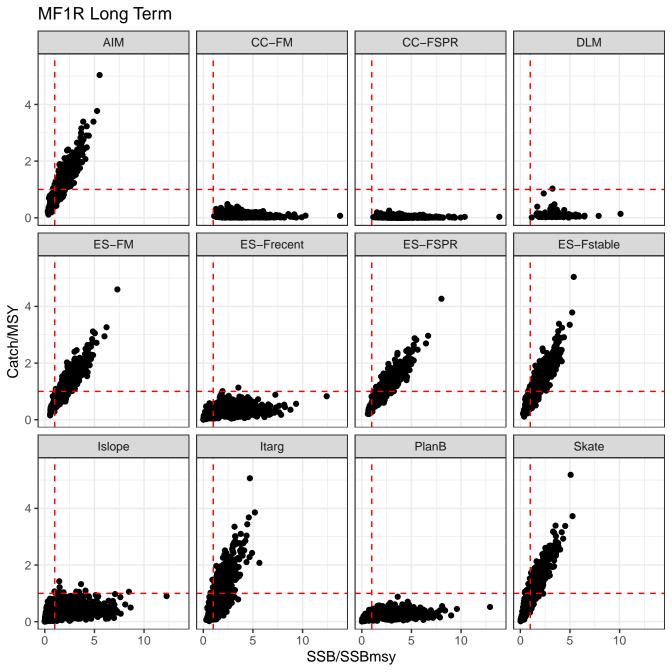
CO1A Long Term AIM CC-FM CC-FSPR DLM 4 2 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY Islope PlanB Itarg Skate 4 5 10 10 10 5 10 5

CO1R Long Term AIM CC-FM CC-FSPR DLM 4 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY Islope PlanB Itarg Skate 2 10 10 10 5 10 5 SSB/SSBmsy

CO2A Long Term AIM CC-FM CC-FSPR DLM 4 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY Islope PlanB Skate Itarg 4 10 10 10 5 10 5 5

CO2R Long Term AIM CC-FM CC-FSPR DLM 4 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY Islope PlanB Skate Itarg 4 2 5 10 10 10 5 5 10 SSB/SSBmsy

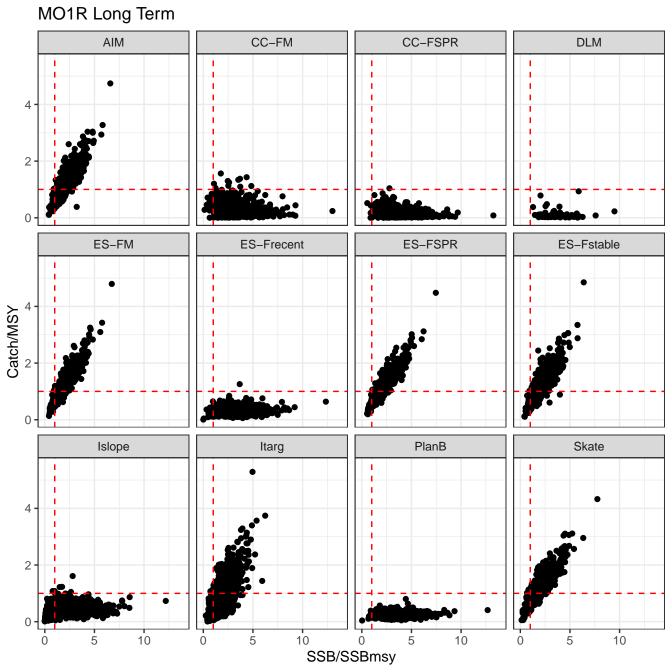
MF1A Long Term AIM CC-FM CC-FSPR DLM 4 2 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY 2 Islope PlanB Skate Itarg 2 10 10 10 10 5 5 SSB/SSBmsy



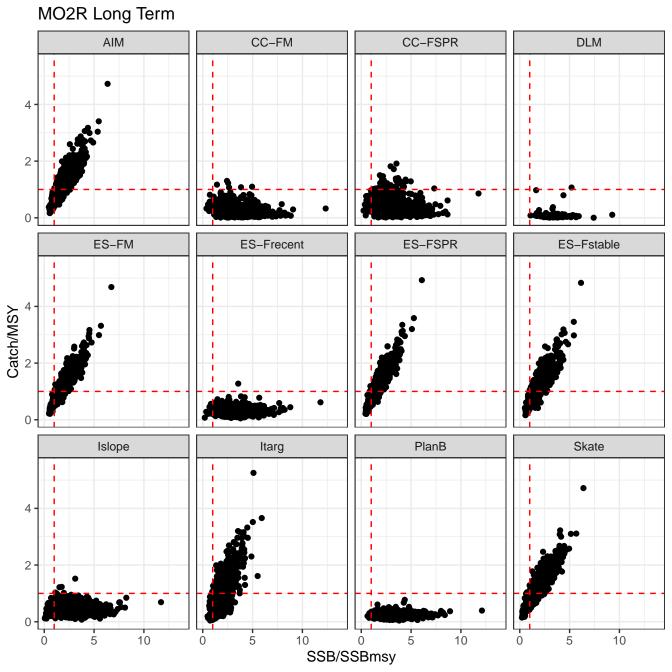
MF2A Long Term AIM CC-FM CC-FSPR DLM 4 2 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY 2 Islope PlanB Skate Itarg 4 2 10 10 10 10 5 5 SSB/SSBmsy

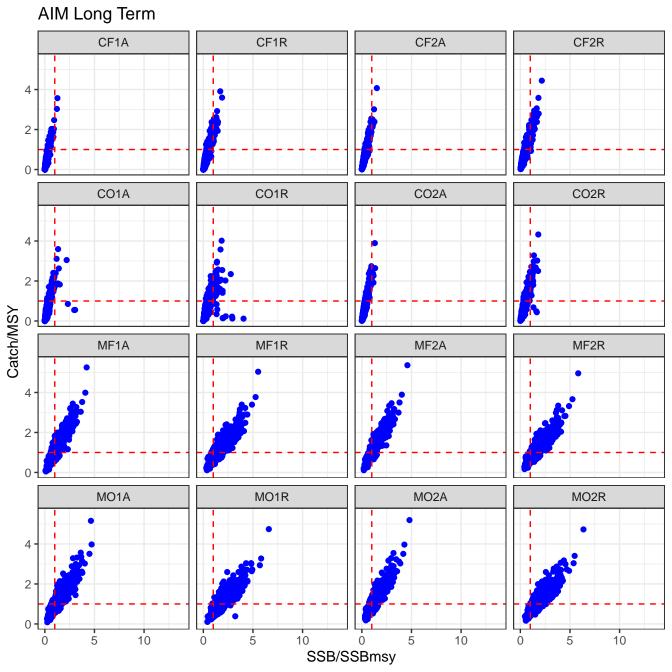
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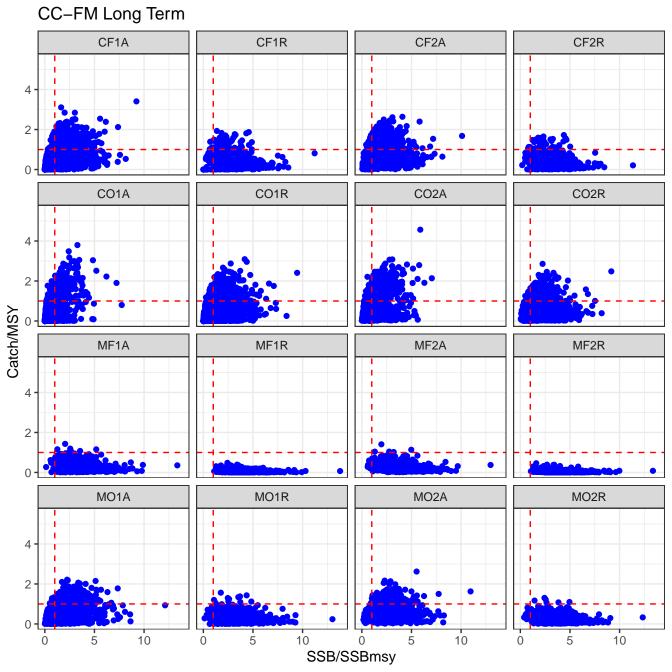
MO1A Long Term AIM CC-FM CC-FSPR DLM 4 2 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY 2 Islope PlanB Skate Itarg 4 10 10 10 10 5 5 SSB/SSBmsy



MO2A Long Term AIM CC-FM CC-FSPR DLM 4 2 ES-FM ES-Frecent ES-FSPR ES-Fstable Catch/MSY 2 Islope PlanB Skate Itarg 4 10 10 10 10 5 5 SSB/SSBmsy







CC-FSPR Long Term CF1A CF1R CF2A CF2R 4 2 CO1A CO1R CO2A CO2R 4 2 Catch/MSY MF1A MF1R MF2A MF2R 4 2 MO1A MO1R MO2A MO2R 2 10 5 10 Ö 5 10 10 5 SSB/SSBmsy

**DLM Long Term** CF1A CF1R CF2A CF2R 2 CO1A CO1R CO2A CO2R 4 2 Catch/MSY MF1A MF1R MF2A MF2R 4 2 MO1R MO2A MO1A MO2R 4 2 10 10 Ö 10 10 5 SSB/SSBmsy

ES-FM Long Term CF1A CF1R CF2A CF2R 2 CO1A CO1R CO2A CO2R 4 2 Catch/MSY MF1A MF1R MF2R MF2A 4 2 MO1A MO1R MO2A MO2R 4 2 10 10 10 5 10 5 5 5 SSB/SSBmsy

**ES-Frecent Long Term** CF1A CF1R CF2A CF2R 4 CO1A CO1R CO2A CO2R 4 2 Catch/MSY MF1A MF1R MF2A MF2R 4 2 MO1A MO1R MO2A MO2R 4 2

10

5

10

5

0

5

10

5

10

ES-FSPR Long Term CF1A CF1R CF2A CF2R 2 CO1A CO1R CO2A CO2R 4 2 Catch/MSY MF1A MF1R MF2R MF2A 4 2 MO1A MO1R MO2A MO2R 4 2

10

SSB/SSBmsy

5

10

5

10

5

10

5

ES-Fstable Long Term CF1A CF1R CF2A CF2R 2 CO1A CO1R CO2A CO2R 4 2 Catch/MSY MF1R MF1A MF2A MF2R 4 2 MO1A MO1R MO2A MO2R 4 2 10 10 10 10 5 5 5 5

