

# Mediterranean-Black Sea Stocks

## v4.66 (Nov-03-2024)

Not present Present Preferred

| Stock  | B/Bmsy | Time Series Types |        |        |  |
|--|--------|-------------------|--------|--------|--|
|  |        | U/Umsy            | B/Bmgt | U/Umgt |  |
| 1. ALBAMED [Albacore tuna Mediterranean Sea]   | TB SSB | ER F              | TB SSB | ER F   |  |
| 2. ANCHMEDGSA1 [Anchovy Northern Alboran Sea]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 3. ANCHMEDGSA16 [Anchovy South of Sicily]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 4. ANCHMEDGSA17-18 [Anchovy Adriatic Sea (GSA 17,18)]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 5. ANCHMEDGSA19 [Anchovy Western Ionian Sea]   | TB SSB | ER F              | TB SSB | ER F   |  |
| 6. ANCHMEDGSA20 [Anchovy Eastern Ionian Sea]   | TB SSB | ER F              | TB SSB | ER F   |  |
| 7. ANCHMEDGSA22-23 [Anchovy Aegean Sea and Crete Island (GSA 22,23)]                         | TB SSB | ER F              | TB SSB | ER F   |  |
| 8. ANCHMEDGSA29 [Anchovy Black Sea]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 9. ANCHMEDGSA6 [Anchovy Northern Spain]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 10. ANCHMEDGSA7 [Anchovy Gulf of Lions]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 11. ANCHMEDGSA9-11 [Anchovy Geographical Sub-Areas 9-11]                                     | TB SSB | ER F              | TB SSB | ER F   |  |
| 12. ANGLMEDGSA15-16 [Black bellied angler Malta Island and South of Sicily (GSA 15, 16)]     | TB SSB | ER F              | TB SSB | ER F   |  |
| 13. ANGLMEDGSA5 [Black bellied angler Balearic Island]                                       | TB SSB | ER F              | TB SSB | ER F   |  |
| 14. ANGLMEDGSA6 [Black bellied angler Northern Spain]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 15. ANGLMEDGSA7 [Black bellied angler Gulf of Lions]   | TB SSB | ER F              | TB SSB | ER F   |  |
| 16. BWHITMEDGSA1 [Blue whiting Northern Alboran Sea]   | TB SSB | ER F              | TB SSB | ER F   |  |
| 17. BWHITMEDGSA6 [Blue whiting Northern Spain]   | TB SSB | ER F              | TB SSB | ER F   |  |
| 18. BWHITMEDGSA9 [Blue whiting Ligurian and North Tyrrhenian Sea]                            | TB SSB | ER F              | TB SSB | ER F   |  |
| 19. CPANDMEDGSA15-16 [Common pandora Malta Island and South of Sicily (GSA 15, 16)]          | TB SSB | ER F              | TB SSB | ER F   |  |
| 20. CPANDMEDGSA9 [Common pandora Ligurian and North Tyrrhenian Sea]                          | TB SSB | ER F              | TB SSB | ER F   |  |
| 21. EBASSGSA7 [European seabass Gulf of Lions]   | TB SSB | ER F              | TB SSB | ER F   |  |
| 22. GFORKBMEDGSA9 [Greater forkbeard Ligurian and North Tyrrhenian Sea]                      | TB SSB | ER F              | TB SSB | ER F   |  |
| 23. GHBRMGSA7 [Gilthead seabream Gulf of Lions]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 24. GRSHRIMPEDGSA12-16 [Giant red shrimp Geographical Sub-Areas 12-16]                       | TB SSB | ER F              | TB SSB | ER F   |  |
| 25. GRSHRIMPEDGSA18-19 [Giant red shrimp South Adriatic Sea and West Ionian Sea (GSA 18,19)] | TB SSB | ER F              | TB SSB | ER F   |  |
| 26. GRSHRIMPEDGSA9-11 [Giant red shrimp Geographical Sub-Areas 9-11]                         | TB SSB | ER F              | TB SSB | ER F   |  |
| 27. HAKEMEDGSA15-16 [Hake Malta Island and South of Sicily (GSA 15, 16)]                     | TB SSB | ER F              | TB SSB | ER F   |  |
| 28. HAKEMEDGSA1-7 [Hake Geographical Sub-Areas 1-7]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 29. HAKEMEDGSA17-18 [Hake Adriatic Sea (GSA 17,18)]  | TB SSB | ER F              | TB SSB | ER F   |  |
| 30. HAKEMEDGSA19 [Hake Western Ionian Sea]   | TB SSB | ER F              | TB SSB | ER F   |  |

|  |        |      |        |      |
|--|--------|------|--------|------|
| 31. HAKEMEDGSA20 [Hake Eastern Ionian Sea]   | TB SSB | ER F | TB SSB | ER F |
| 32. HAKEMEDGSA22-23 [Hake Aegean Sea and Crete Island (GSA 22,23)]                     | TB SSB | ER F | TB SSB | ER F |
| 33. HAKEMEDGSA7 [Hake Gulf of Lions]   | TB SSB | ER F | TB SSB | ER F |
| 34. HAKEMEDGSA8-11 [Hake Geographical Sub-Areas 8-11]                                  | TB SSB | ER F | TB SSB | ER F |
| 35. HMACKMEDGSA9-11 [Horse mackerel Geographical Sub-Areas 9-11]                       | TB SSB | ER F | TB SSB | ER F |
| 36. MHMACKMEDGSA29 [Mediterranean horse mackerel Black Sea]                            | TB SSB | ER F | TB SSB | ER F |
| 37. NEPHMEDGSA1 [Norway lobster Northern Alboran Sea]                                  | TB SSB | ER F | TB SSB | ER F |
| 38. NEPHMEDGSA11 [Norway lobster Sardinia]   | TB SSB | ER F | TB SSB | ER F |
| 39. NEPHMEDGSA15-16 [Norway lobster Malta Island and South of Sicily (GSA 15, 16)]     | TB SSB | ER F | TB SSB | ER F |
| 40. NEPHMEDGSA17-18 [Norway lobster Adriatic Sea (GSA 17,18)]                          | TB SSB | ER F | TB SSB | ER F |
| 41. NEPHMEDGSA5 [Norway lobster Balearic Island]                                       | TB SSB | ER F | TB SSB | ER F |
| 42. NEPHMEDGSA6 [Norway lobster Northern Spain]  | TB SSB | ER F | TB SSB | ER F |
| 43. NEPHMEDGSA9 [Norway lobster Ligurian and North Tyrrhenian Sea]                     | TB SSB | ER F | TB SSB | ER F |
| 44. PICAMEDGSA25 [Picarel Cyprus Island]   | TB SSB | ER F | TB SSB | ER F |
| 45. PRCODMEDGSA9 [Poor cod Ligurian and North Tyrrhenian Sea]                          | TB SSB | ER F | TB SSB | ER F |
| 46. PSHRMPMEDGSA6 [Deep water rose shrimp Northern Spain]                              | TB SSB | ER F | TB SSB | ER F |
| 47. RBRMMEDGSA1-3 [Red seabream Alboran Island Sea (GSA 1,3)]                          | TB SSB | ER F | TB SSB | ER F |
| 48. RDSHRMPMEDGSA1 [Red shrimp Northern Alboran Sea]                                   | TB SSB | ER F | TB SSB | ER F |
| 49. RDSHRMPMEDGSA15-16 [Red shrimp Malta Island and South of Sicily (GSA 15, 16)]      | TB SSB | ER F | TB SSB | ER F |
| 50. RDSHRMPMEDGSA6-7 [Red shrimp Geographical Sub-Areas 6-7]                           | TB SSB | ER F | TB SSB | ER F |
| 51. RDSHRMPMEDGSA9-11 [Red shrimp Geographical Sub-Areas 9-11]                         | TB SSB | ER F | TB SSB | ER F |
| 52. RMULLMEDGSA1 [Red mullet Northern Alboran Sea]                                     | TB SSB | ER F | TB SSB | ER F |
| 53. RMULLMEDGSA10 [Red mullet South Tyrrhenian Sea]                                    | TB SSB | ER F | TB SSB | ER F |
| 54. RMULLMEDGSA11 [Red mullet Sardinia]  | TB SSB | ER F | TB SSB | ER F |
| 55. RMULLMEDGSA15-16 [Red mullet Malta Island and South of Sicily (GSA 15, 16)]        | TB SSB | ER F | TB SSB | ER F |
| 56. RMULLMEDGSA17-18 [Red mullet Adriatic Sea (GSA 17,18)]                             | TB SSB | ER F | TB SSB | ER F |
| 57. RMULLMEDGSA19 [Red mullet Western Ionian Sea]                                      | TB SSB | ER F | TB SSB | ER F |
| 58. RMULLMEDGSA22 [Red mullet Aegean Sea]  | TB SSB | ER F | TB SSB | ER F |
| 59. RMULLMEDGSA25 [Red mullet Cyprus Island]   | TB SSB | ER F | TB SSB | ER F |
| 60. RMULLMEDGSA29 [Red mullet Black Sea]   | TB SSB | ER F | TB SSB | ER F |
| 61. RMULLMEDGSA5 [Red mullet Balearic Island]  | TB SSB | ER F | TB SSB | ER F |
| 62. RMULLMEDGSA6 [Red mullet Northern Spain]   | TB SSB | ER F | TB SSB | ER F |
| 63. RMULLMEDGSA7 [Red mullet Gulf of Lions]  | TB SSB | ER F | TB SSB | ER F |
| 64. RMULLMEDGSA9 [Red mullet Ligurian and North Tyrrhenian Sea]                        | TB SSB | ER F | TB SSB | ER F |
| 65. RSHRMPMEDGSA1 [Deep water rose shrimp Northern Alboran Sea]                        | TB SSB | ER F | TB SSB | ER F |
| 66. RSHRMPMEDGSA12-16 [Deep water rose shrimp Geographical Sub-Areas 12-16]            | TB SSB | ER F | TB SSB | ER F |
| 67. RSHRMPMEDGSA17-19 [Deep water rose shrimp Geographical Sub-Areas 17-19]            | TB SSB | ER F | TB SSB | ER F |
| 68. RSHRMPMEDGSA22-23 [Deep water rose shrimp Aegean Sea and Crete Island (GSA 22,23)] | TB SSB | ER F | TB SSB | ER F |

|   |        |      |        |      |
|---|--------|------|--------|------|
| 69. RSHRMPMEDGSA5 [Deep water rose shrimp Balearic Island]                      | TB SSB | ER F | TB SSB | ER F |
| 70. RSHRMPMEDGSA9-11 [Deep water rose shrimp Geographical Sub-Areas 9-11]       | TB SSB | ER F | TB SSB | ER F |
| 71. SARDMEDGSA1 [European pilchard Northern Alboran Sea]                        | TB SSB | ER F | TB SSB | ER F |
| 72. SARDMEDGSA16 [Sardine South of Sicily]                                      | TB SSB | ER F | TB SSB | ER F |
| 73. SARDMEDGSA17-18 [Sardine Adriatic Sea (GSA 17,18)]                          | TB SSB | ER F | TB SSB | ER F |
| 74. SARDMEDGSA20 [European pilchard Eastern Ionian Sea]                         | TB SSB | ER F | TB SSB | ER F |
| 75. SARDMEDGSA22-23 [European pilchard Aegean Sea and Crete Island (GSA 22,23)] | TB SSB | ER F | TB SSB | ER F |
| 76. SARDMEDGSA6 [European pilchard Northern Spain]                              | TB SSB | ER F | TB SSB | ER F |
| 77. SARDMEDGSA7 [Sardine Gulf of Lions]   | TB SSB | ER F | TB SSB | ER F |
| 78. SARDMEDGSA9 [European pilchard Ligurian and North Tyrrhenian Sea]           | TB SSB | ER F | TB SSB | ER F |
| 79. SDOGBLKGSA29 [Spiny dogfish Black Sea]                                      | TB SSB | ER F | TB SSB | ER F |
| 80. SMSHRMPMEDGSA10 [Spottail mantis shrimp South Tyrrhenian Sea]               | TB SSB | ER F | TB SSB | ER F |
| 81. SMSHRMPMEDGSA17-18 [Spottail mantis shrimp Adriatic Sea (GSA 17,18)]        | TB SSB | ER F | TB SSB | ER F |
| 82. SMSHRMPMEDGSA9 [Spottail mantis shrimp Ligurian and North Tyrrhenian Sea]   | TB SSB | ER F | TB SSB | ER F |
| 83. SMULLMEDGSA15-16 [Surmullet Malta Island and South of Sicily (GSA 15, 16)]  | TB SSB | ER F | TB SSB | ER F |
| 84. SMULLMEDGSA5 [Surmullet Balearic Island]                                    | TB SSB | ER F | TB SSB | ER F |
| 85. SMULLMEDGSA9 [Surmullet Ligurian and North Tyrrhenian Sea]                  | TB SSB | ER F | TB SSB | ER F |
| 86. SOLMEDGSA17 [Common sole Northern Adriatic Sea]                             | TB SSB | ER F | TB SSB | ER F |
| 87. SOLMEDGSA7 [Common sole Gulf of Lions]                                      | TB SSB | ER F | TB SSB | ER F |
| 88. SPRBLKGSA29 [Sprat Black Sea]   | TB SSB | ER F | TB SSB | ER F |
| 89. SWORDMED [Swordfish Mediterranean Sea]                                      | TB SSB | ER F | TB SSB | ER F |
| 90. TBSKAMEDGSA29 [Thornback skate Black Sea]                                   | TB SSB | ER F | TB SSB | ER F |
| 91. TURBLKGSA29 [Turbot Black Sea]  | TB SSB | ER F | TB SSB | ER F |
| 92. WANGLGSA1-7 [White anglerfish Geographical Sub-Areas 1-7]                   | TB SSB | ER F | TB SSB | ER F |
| 93. WHITMEDGSA29 [Whiting Black Sea]  | TB SSB | ER F | TB SSB | ER F |

## Albacore tuna Mediterranean Sea [ALBAMED]

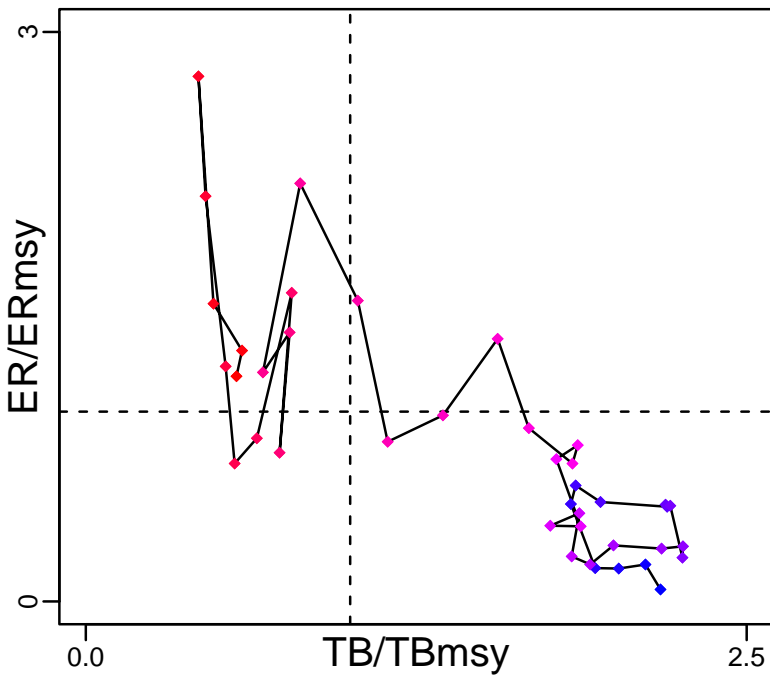
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Thunnus alalunga  |
| <b>Current Assess ID</b>    | ICCAT-ALBAMED-1950-2020-LAWSON                                  |
| <b>Area</b>                 | Mediterranean Sea   |
| <b>Management Authority</b> | International Commission for the Conservation of Atlantic Tunas |
| <b>Assessor</b>             | International Commission for the Conservation of Atlantic Tunas |
| <b>Asmts in RAM</b>         | 2020, 2016, 2011  |

| Reference Points |                  |           |         |
|------------------|------------------|-----------|---------|
| Type             | ID               | Asmt Year | Value   |
| <b>TBmsy</b>     | TBmsy-MT         | 2020      | 19,703  |
| <b>SSBmsy</b>    | -                | -         | -       |
| <b>Fmsy</b>      | Fmsy-1/yr        | 2020      | 0.184   |
| <b>ERmsy</b>     | ERmsy-calc-ratio | 2020      | 0.185   |
| <b>TBmgt</b>     | -                | -         | -       |
| <b>SSBmgt</b>    | -                | -         | -       |
| <b>Fmgt</b>      | -                | -         | -       |
| <b>ERmgt</b>     | -                | -         | -       |
| <b>TB0</b>       | TB0-MT           | 2011      | 322,000 |
| <b>SSB0</b>      | -                | -         | -       |
| <b>MSY</b>       | MSY-MT           | 2020      | 3654    |
| <b>M</b>         | -                | -         | -       |
| <b>TBlim</b>     | -                | -         | -       |
| <b>SSBlim</b>    | -                | -         | -       |
| <b>Flim</b>      | -                | -         | -       |
| <b>ERlim</b>     | -                | -         | -       |

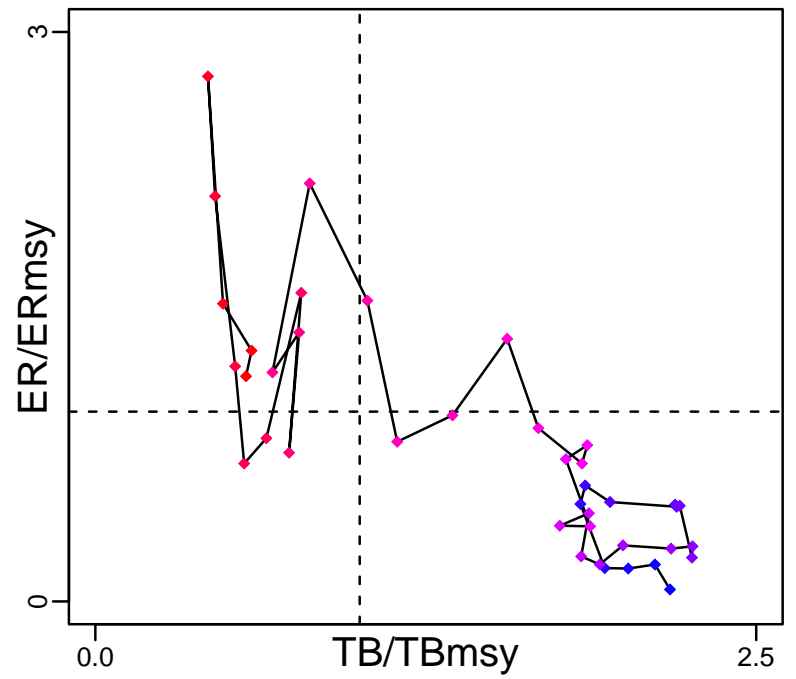
| Time Series       |                                |           |            |     |     |
|-------------------|--------------------------------|-----------|------------|-----|-----|
| Type              | ID                             | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | TB-MT                          | 2020      | 11,292     | -   | -   |
| <b>SSB</b>        | -                              | -         | -          | -   | -   |
| <b>TN</b>         | -                              | -         | -          | -   | -   |
| <b>R</b>          | -                              | -         | -          | -   | -   |
| <b>F</b>          | F-1/yr                         | 2020      | 0.22       | -   | -   |
| <b>ER</b>         | ER-calc-ratio                  | 2020      | 0.22       | -   | -   |
| <b>TC</b>         | TC-MT                          | 2011      | 2120       |     |     |
| <b>TL</b>         | TL-MT                          | 2020      | 2675       |     |     |
| <b>TB/TBmsy</b>   | TBdivTBmsy-dimensionless       | 2020      | 0.57       |     |     |
| <b>SSB/SSBmsy</b> | -                              | -         | -          |     |     |
| <b>F/Fmsy</b>     | FdivFmsy-dimensionless         | 2020      | 1.213      |     |     |
| <b>ER/ERmsy</b>   | ER-calc-ratio/ERmsy-calc-ratio | 2020      | 1.186      |     |     |
| <b>TB/TBmgt</b>   | -                              | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                              | -         | -          |     |     |
| <b>F/Fmgt</b>     | -                              | -         | -          |     |     |
| <b>ER/ERmgt</b>   | -                              | -         | -          |     |     |

# Albacore tuna Mediterranean Sea [ALBAMED]

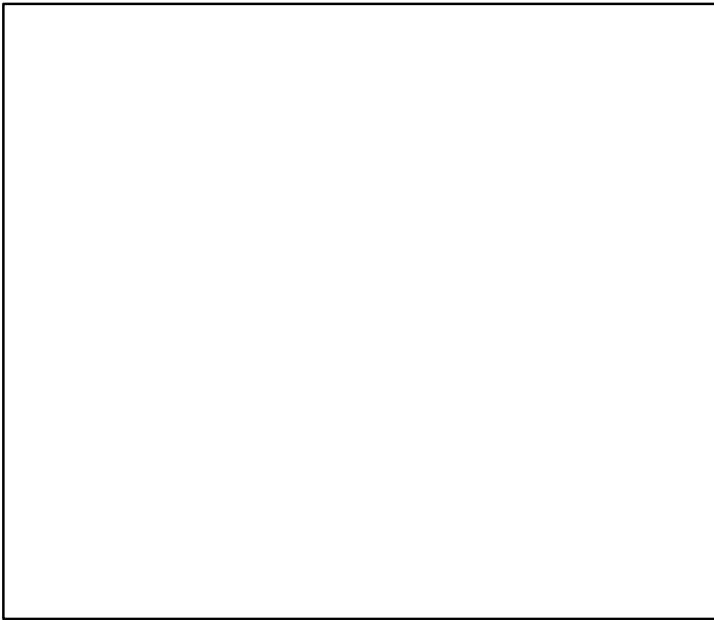
Kobe MSYpref (1950–2020–LAWSON)



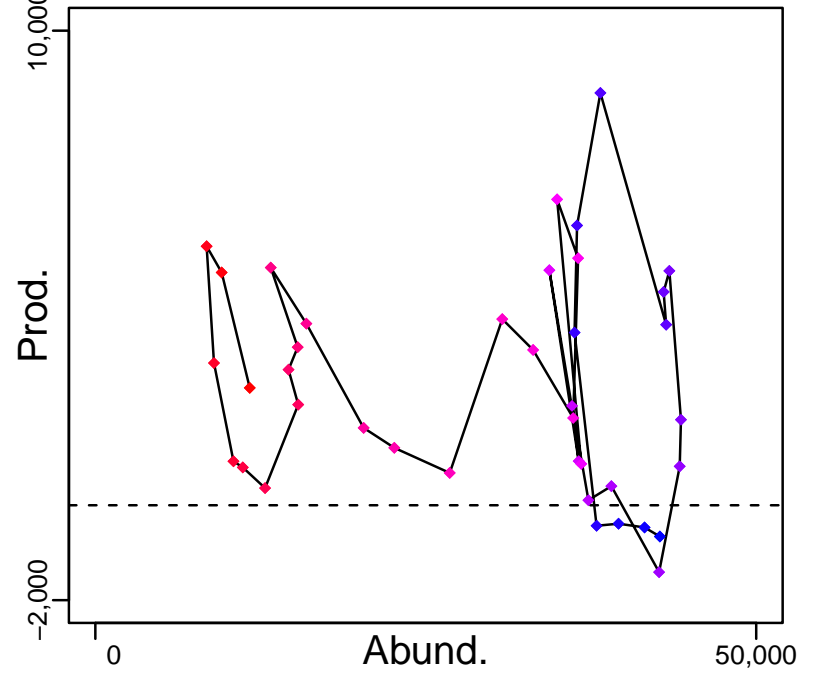
Kobe MGTpref (1950–2020–LAWSON)



Spawner Recruit\*



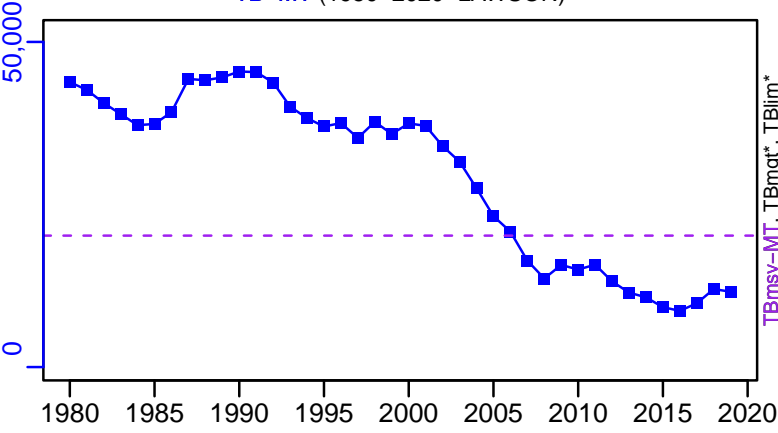
Production (1950–2020–LAWSON)



◆ Start Year ◆ End Year \* No Data

# Albacore tuna Mediterranean Sea [ALBAMED]

TB-MT (1950-2020-LAWSON)



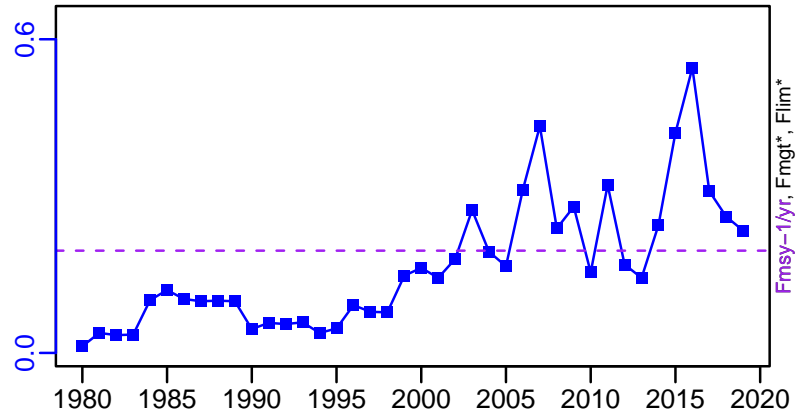
SSB\*



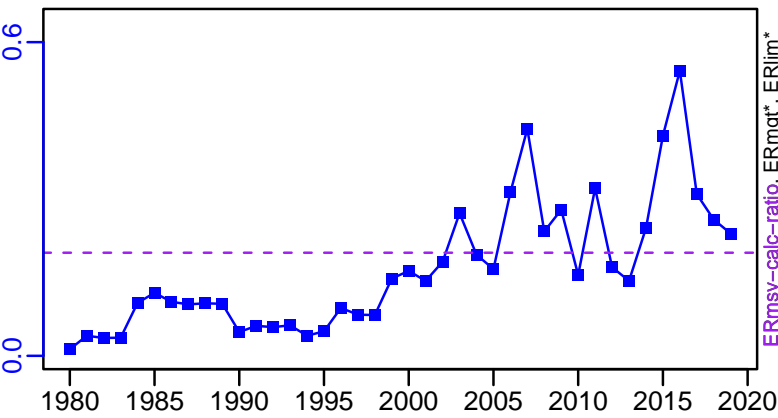
TN \*



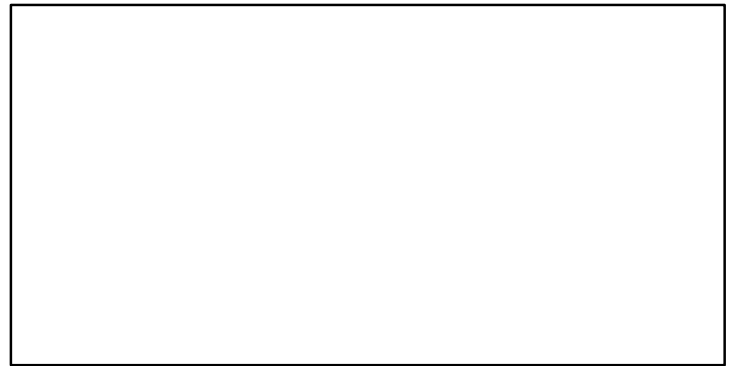
F-1/yr (1950-2020-LAWSON)



ER-calc-ratio (1950-2020-LAWSON)

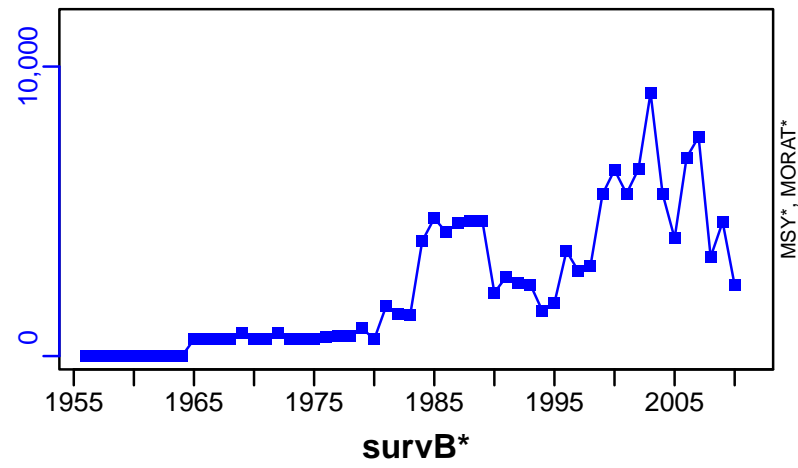


Recruits\*



# Albacore tuna Mediterranean Sea [ALBAMED]

TC-MT, TL\*, RecC\* (1956–2011–CHING)



TAC\*, Cpair\*, Cadv\*



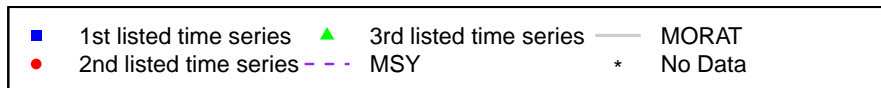
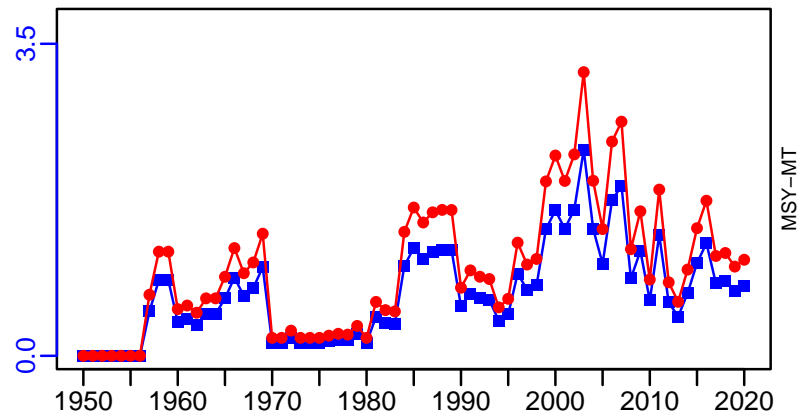
CPUE\*



EFFORT\*



TL-MT/MSY-MT, CdivMEANC-ratio, (1950–2020–LAWSON)



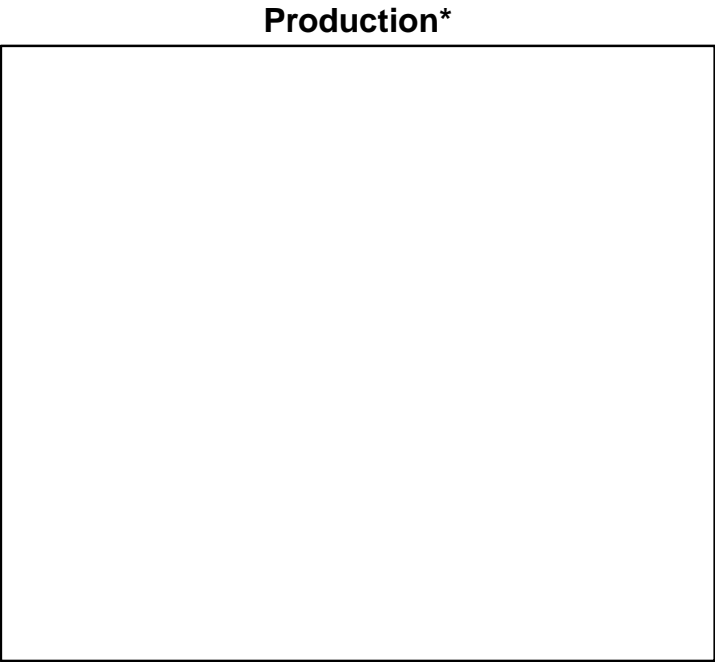
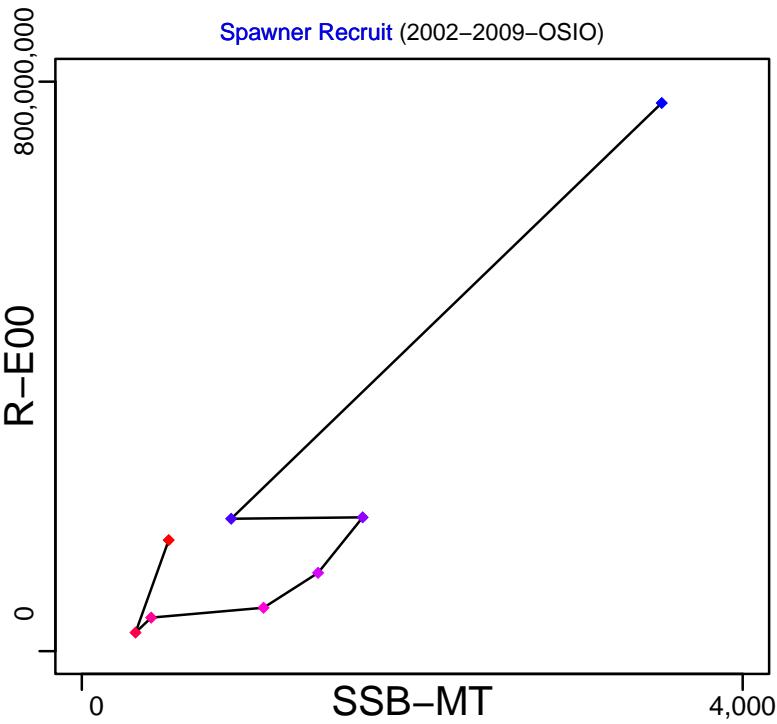
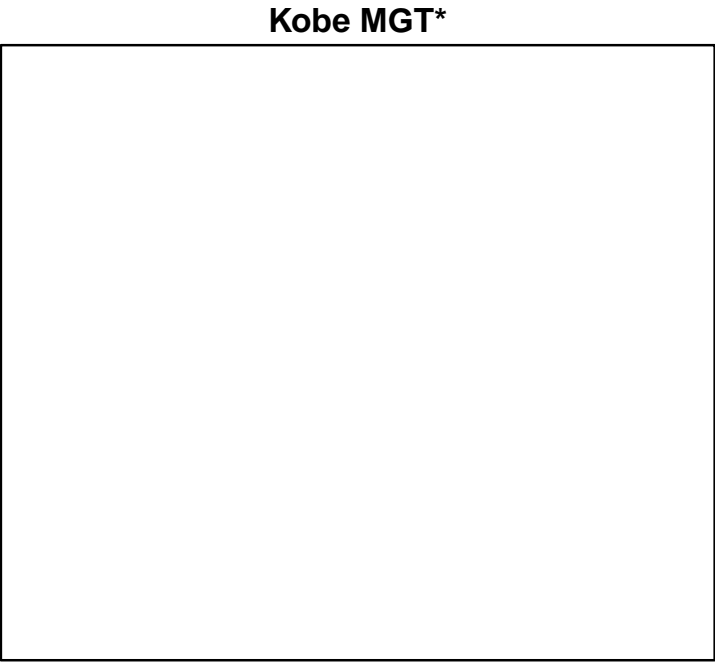
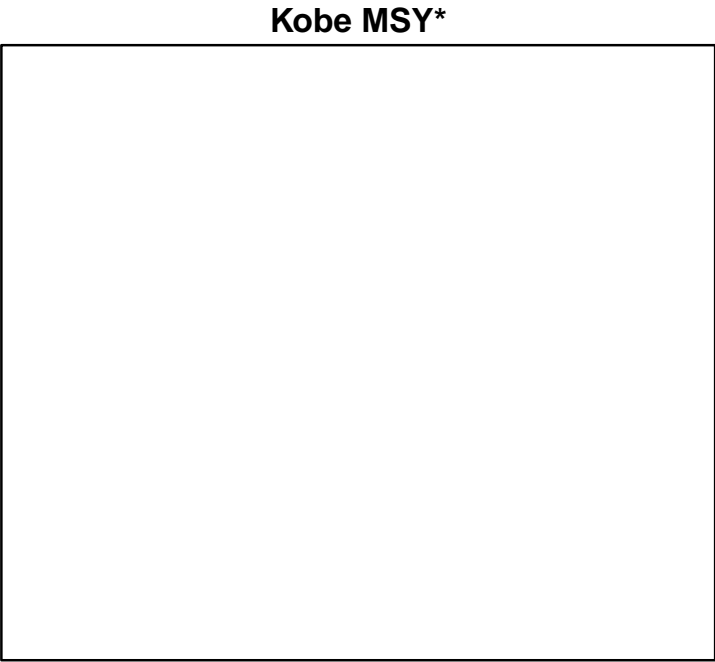
## Anchovy Northern Alboran Sea [ANCHMEDGSA1]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | STECF-ANCHMEDGSA1-2002-2009-OSIO  |
| <b>Area</b>                 | Northern Alboran Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2009  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2009      | 0.452 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |                    |     |     |
|-------------------|------------------|-----------|--------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value         | Sex | Age |
| <b>TB</b>         | -                | -         | -                  | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2009      | 526                | -   | -   |
| <b>TN</b>         | -                | -         | -                  | -   | -   |
| <b>R</b>          | R-E00            | 2009      | $1.56 \times 10^8$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2009      | 1.05               | -   | -   |
| <b>ER</b>         | -                | -         | -                  | -   | -   |
| <b>TC</b>         | TC-MT            | 2009      | 292                |     |     |
| <b>TL</b>         | -                | -         | -                  |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                  |     |     |
| <b>F/Fmsy</b>     | -                | -         | -                  |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                  |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                  |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2009      | 2.324              |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                  |     |     |





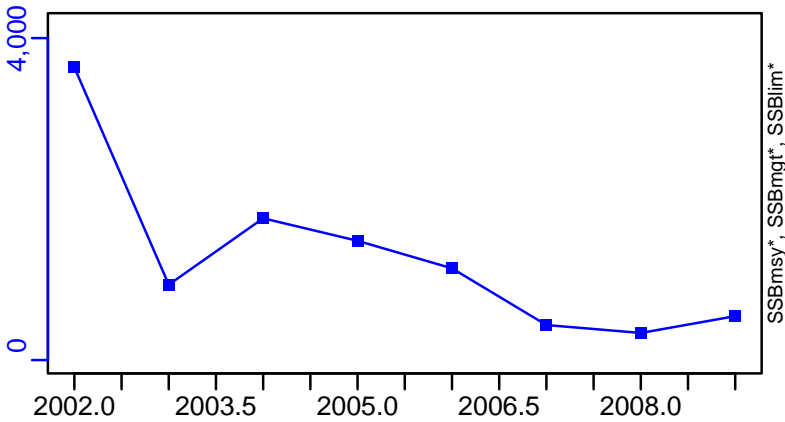
◆ Start Year ◆ End Year \* No Data

Anchovy Northern Alboran Sea [ANCHMEDGSA1]

TB\*



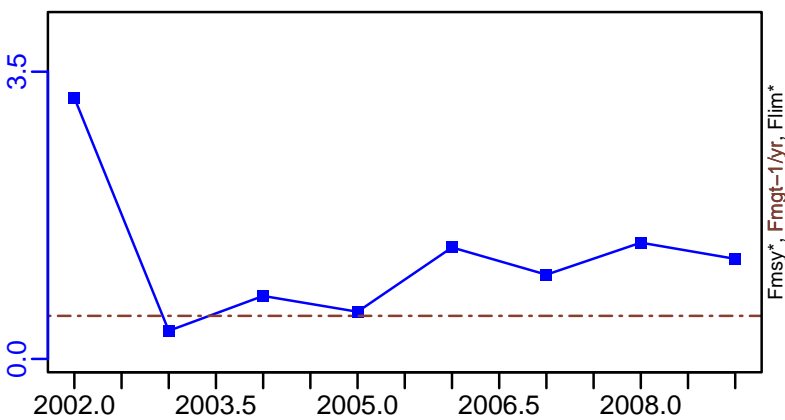
SSB-MT (2002–2009–OSIO)



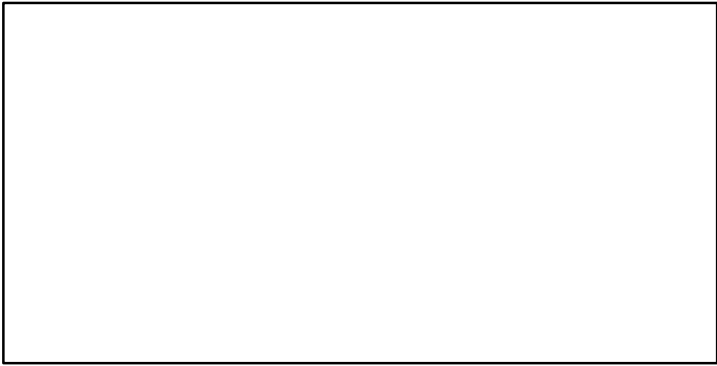
TN \*



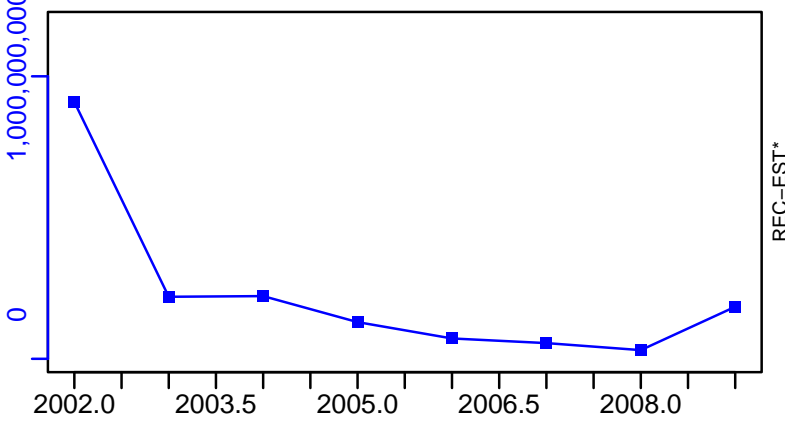
F-1/yr (2002–2009–OSIO)



ER\*

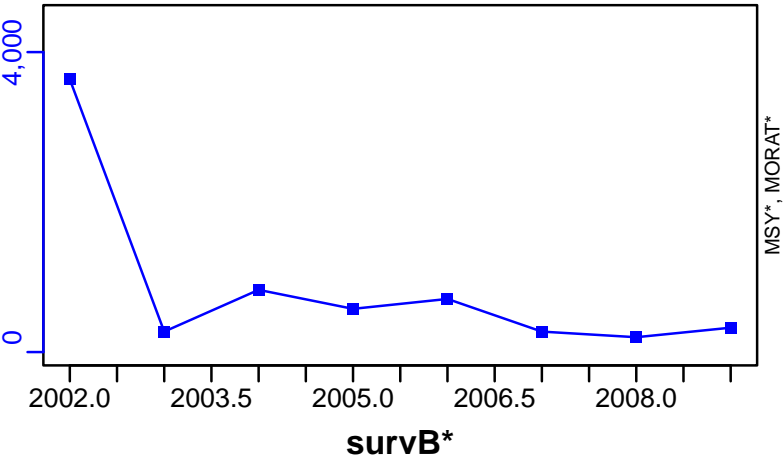


R-E00 (2002–2009–OSIO)



Anchovy Northern Alboran Sea [ANCHMEDGSA1]

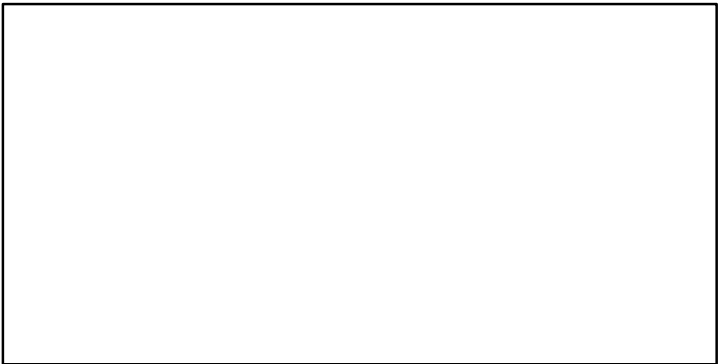
TC-MT, TL\*, RecC\* (2002-2009-OSIO)



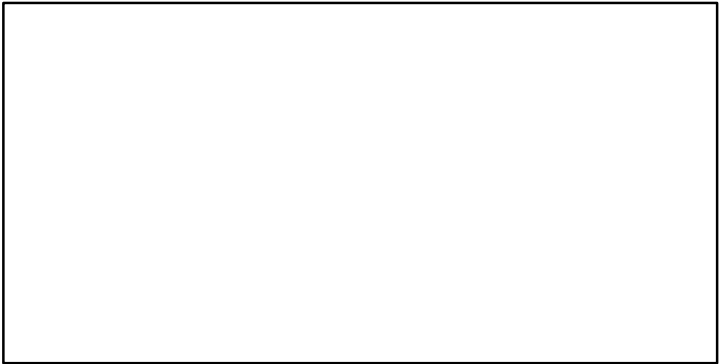
TAC\*, Cpair\*, Cadv\*



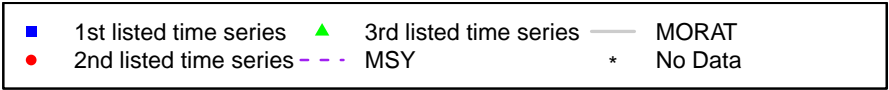
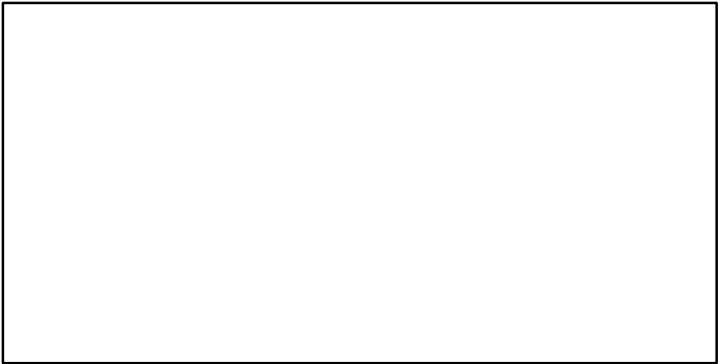
CPUE\*



EFFORT\*



CdivMSY\*



## Anchovy South of Sicily [ANCHMEDGSA16]

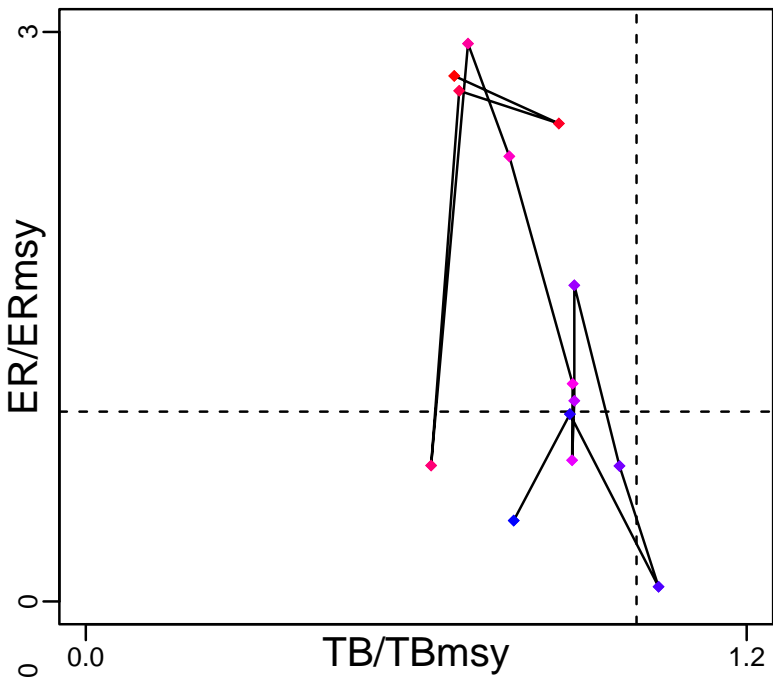
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | WGSASP-ANCHMEDGSA16-2005-2021-HIVELY  |
| <b>Area</b>                 | South of Sicily   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Small Pelagic species                    |
| <b>Asmts in RAM</b>         | 2011, 2011, 2021  |

| Reference Points |                  |           |        |
|------------------|------------------|-----------|--------|
| Type             | ID               | Asmt Year | Value  |
| <b>TBmsy</b>     | TBmsy-MT         | 2011      | 14,152 |
| <b>SSBmsy</b>    | -                | -         | -      |
| <b>Fmsy</b>      | Fmsy-1/yr        | 2011      | 0.17   |
| <b>ERmsy</b>     | ERmsy-calc-ratio | 2011      | 0.167  |
| <b>TBmgt</b>     | -                | -         | -      |
| <b>SSBmgt</b>    | -                | -         | -      |
| <b>Fmgt</b>      | Fmgt-1/yr        | 2021      | 0.454  |
| <b>ERmgt</b>     | -                | -         | -      |
| <b>TB0</b>       | -                | -         | -      |
| <b>SSB0</b>      | -                | -         | -      |
| <b>MSY</b>       | MSY-MT           | 2011      | 2359   |
| <b>M</b>         | M-1/yr           | 2011      | 0.66   |
| <b>TBlim</b>     | TBlim-MT         | 2011      | 3130   |
| <b>SSBlim</b>    | -                | -         | -      |
| <b>Flim</b>      | -                | -         | -      |
| <b>ERlim</b>     | -                | -         | -      |

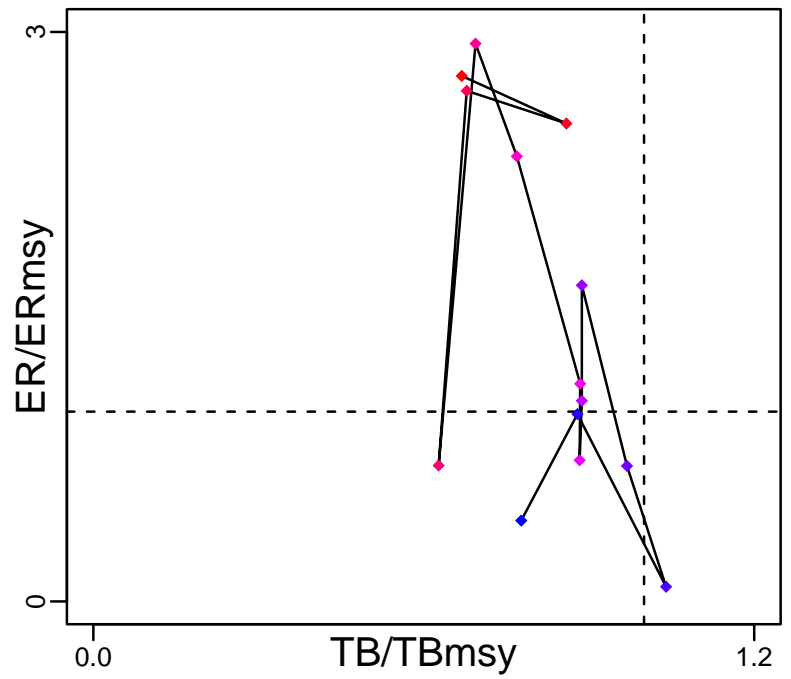
| Time Series       |                                |           |             |     |     |
|-------------------|--------------------------------|-----------|-------------|-----|-----|
| Type              | ID                             | Asmt Year | Curr Value  | Sex | Age |
| <b>TB</b>         | TB-MT                          | 2021      | 11,288      | -   | -   |
| <b>SSB</b>        | SSB-MT                         | 2021      | 3634        | -   | -   |
| <b>TN</b>         | -                              | -         | -           | -   | -   |
| <b>R</b>          | R-E00                          | 2021      | 691,493,000 | -   | -   |
| <b>F</b>          | F-1/yr                         | 2021      | 0.426       | -   | -   |
| <b>ER</b>         | ER-calc-ratio                  | 2021      | 0.133       | -   | -   |
| <b>TC</b>         | TC-MT                          | 2011      | 4370        |     |     |
| <b>TL</b>         | TL-MT                          | 2021      | 1500        |     |     |
| <b>TB/TBmsy</b>   | TBdivTBmsy-dimensionless       | 2011      | 0.669       |     |     |
| <b>SSB/SSBmsy</b> | -                              | -         | -           |     |     |
| <b>F/Fmsy</b>     | FdivFmsy-dimensionless         | 2011      | 1.62        |     |     |
| <b>ER/ERmsy</b>   | ER-calc-ratio/ERmsy-calc-ratio | 2011      | 2.768       |     |     |
| <b>TB/TBmgt</b>   | -                              | -         | -           |     |     |
| <b>SSB/SSBmgt</b> | -                              | -         | -           |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr               | 2021      | 0.937       |     |     |
| <b>ER/ERmgt</b>   | -                              | -         | -           |     |     |

# Anchovy South of Sicily [ANCHMEDGSA16]

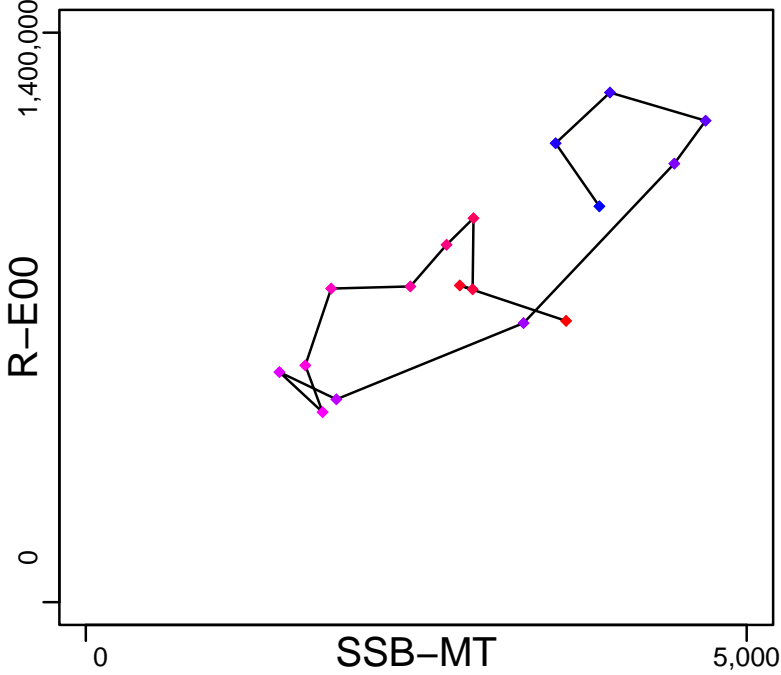
Kobe MSYpref (1998–2011–BANOB1)



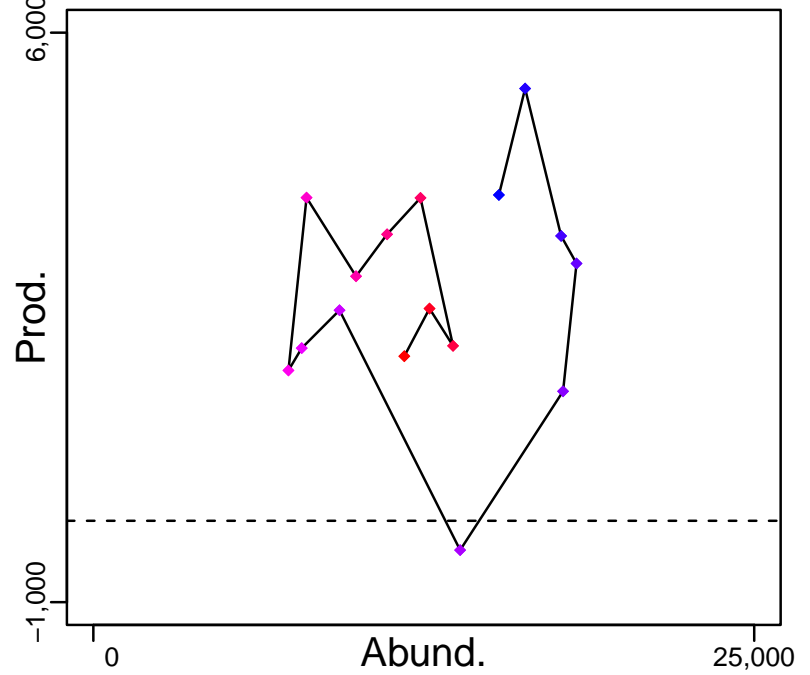
Kobe MGTpref (1998–2011–BANOB1)



Spawner Recruit (2005–2021–HIVELY)



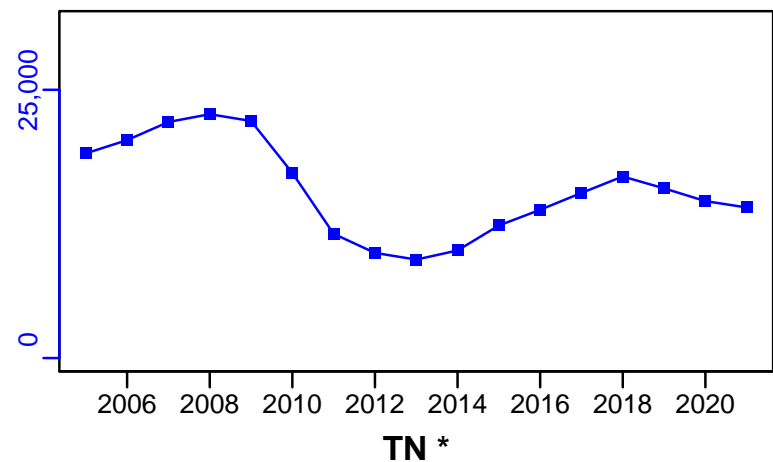
Production (2005–2021–HIVELY)



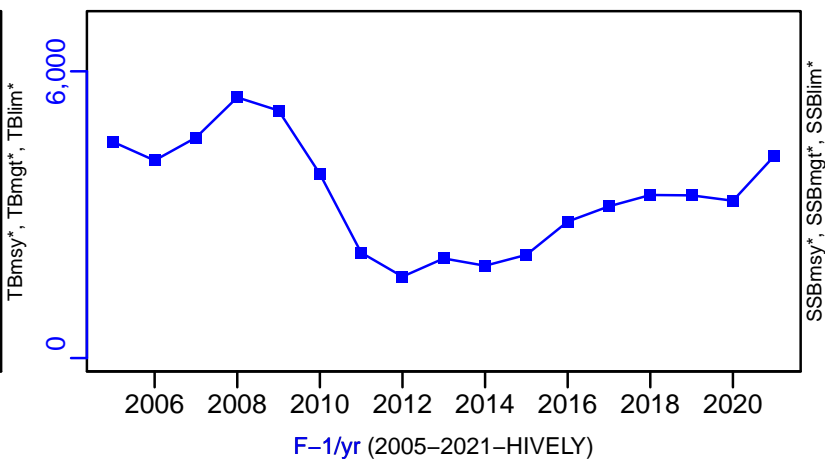
◆ Start Year ◆ End Year \* No Data

# Anchovy South of Sicily [ANCHMEDGSA16]

TB-MT (2005–2021–HIVELY)



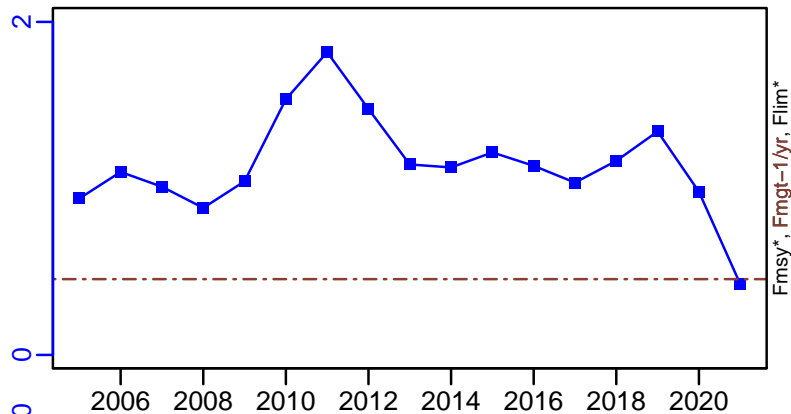
SSB-MT (2005–2021–HIVELY)



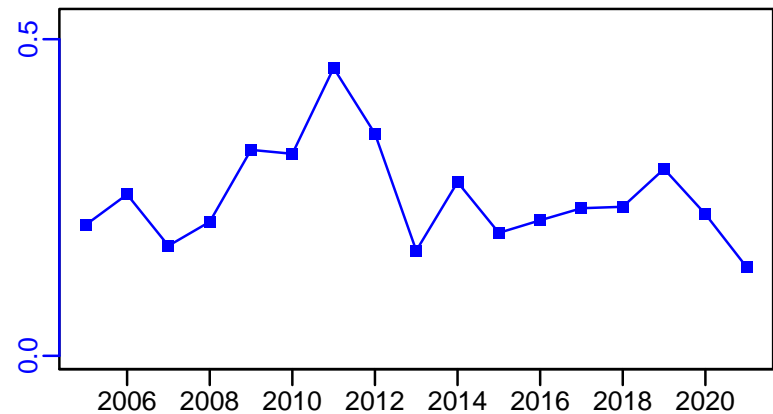
TN \*



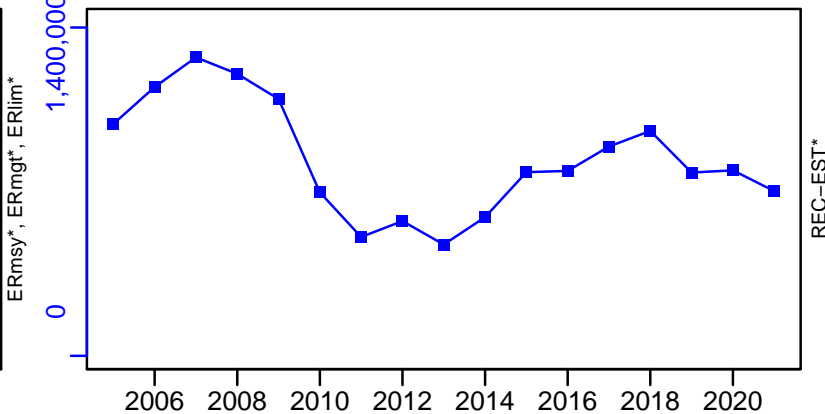
F-1/yr (2005–2021–HIVELY)



ER-calc-ratio (2005–2021–HIVELY)

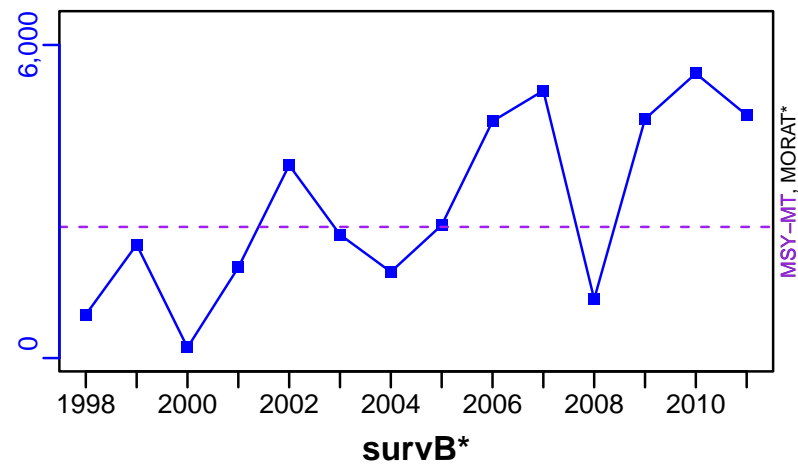


R-E00 (2005–2021–HIVELY)



# Anchovy South of Sicily [ANCHMEDGSA16]

TC-MT, TL\*, RecC\* (1998–2011–BANOB)



TAC\*, Cpair\*, Cadv\*



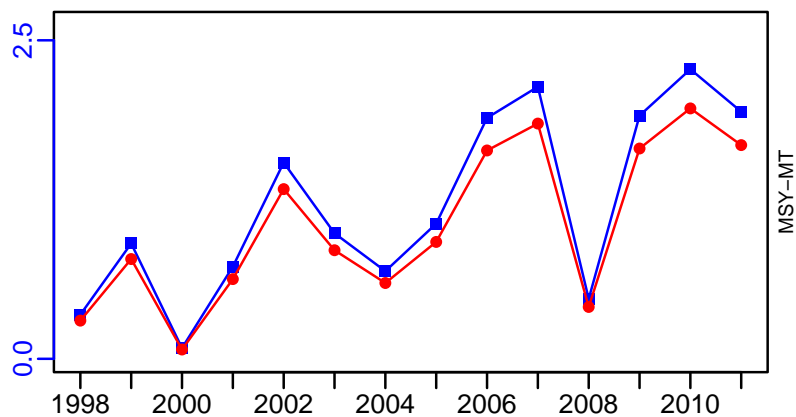
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1998–2011–BANOB)



- 1st listed time series
- 2nd listed time series
- 3rd listed time series
- MSY
- MORAT
- No Data

## Anchovy Adriatic Sea (GSA 17,18) [ANCHMEDGSA17-18]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | WGSASP-ANCHMEDGSA17-18-2000-2022-HIVELY                                       |
| <b>Area</b>                 | Adriatic Sea (GSA 17,18)  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Small Pelagic species                    |
| <b>Asmts in RAM</b>         | 2015, 2016, 2013, 2022  |

| Reference Points |           |           |        |
|------------------|-----------|-----------|--------|
| Type             | ID        | Asmt Year | Value  |
| <b>TBmsy</b>     | -         | -         | -      |
| <b>SSBmsy</b>    | -         | -         | -      |
| <b>Fmsy</b>      | Fmsy-1/yr | 2022      | 0.81   |
| <b>ERmsy</b>     | -         | -         | -      |
| <b>TBmgt</b>     | -         | -         | -      |
| <b>SSBmgt</b>    | -         | -         | -      |
| <b>Fmgt</b>      | Fmgt-1/yr | 2022      | 0.81   |
| <b>ERmgt</b>     | -         | -         | -      |
| <b>TB0</b>       | -         | -         | -      |
| <b>SSB0</b>      | -         | -         | -      |
| <b>MSY</b>       | -         | -         | -      |
| <b>M</b>         | -         | -         | -      |
| <b>TBlim</b>     | -         | -         | -      |
| <b>SSBlim</b>    | SSBlim-MT | 2022      | 16,200 |
| <b>Flim</b>      | -         | -         | -      |
| <b>ERlim</b>     | -         | -         | -      |

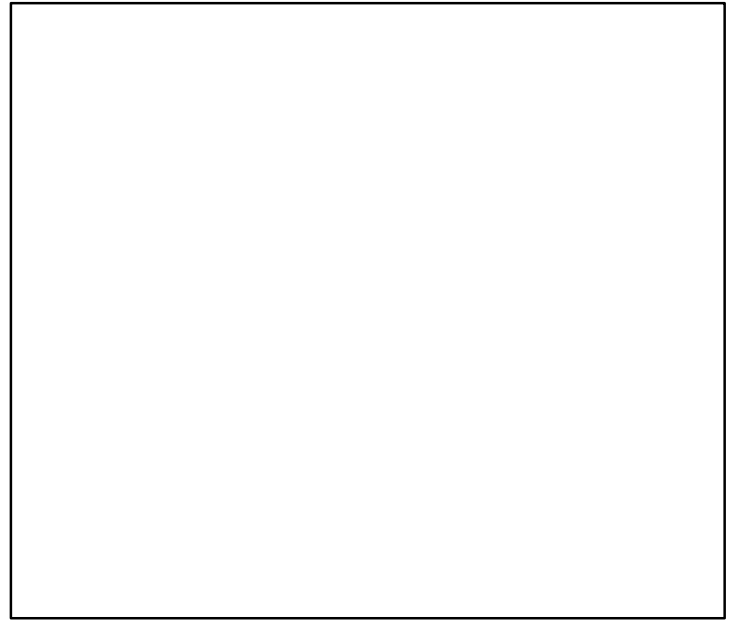
| Time Series       |                  |           |                |     |     |
|-------------------|------------------|-----------|----------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value     | Sex | Age |
| <b>TB</b>         | TB-MT            | 2015      | 349,000        | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2022      | 20,178         | -   | -   |
| <b>TN</b>         | -                | -         | -              | -   | -   |
| <b>R</b>          | R-E00            | 2022      | 72,574,075,600 | -   | -   |
| <b>F</b>          | F-1/yr           | 2022      | 1.003          | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2015      | 0.113          | -   | -   |
| <b>TC</b>         | TC-MT            | 2022      | 28,665         |     |     |
| <b>TL</b>         | TL-MT            | 2015      | 39,400         |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -              |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -              |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2022      | 1.238          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -              |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -              |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -              |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2022      | 1.238          |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -              |     |     |



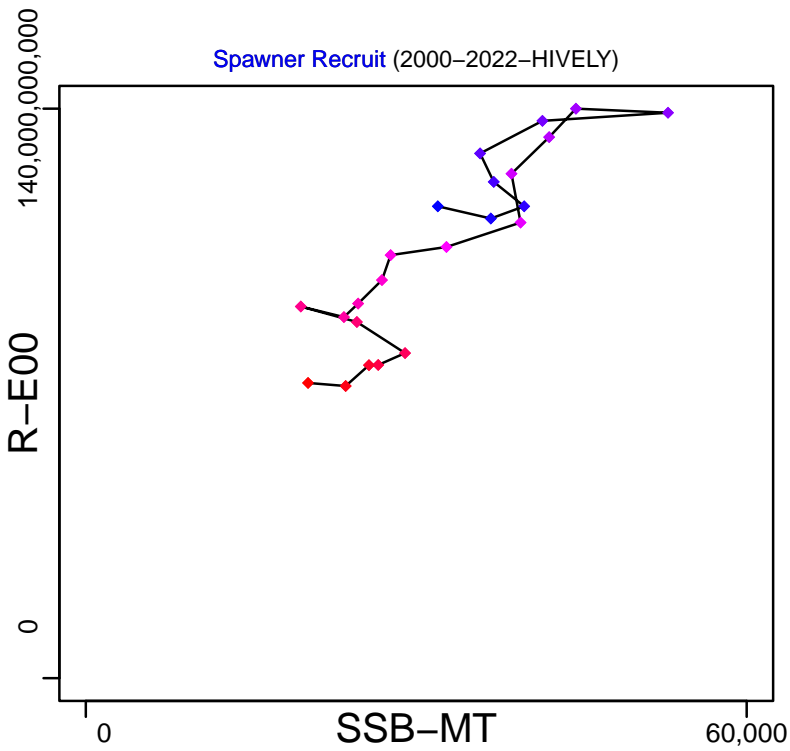
Kobe MSY\*



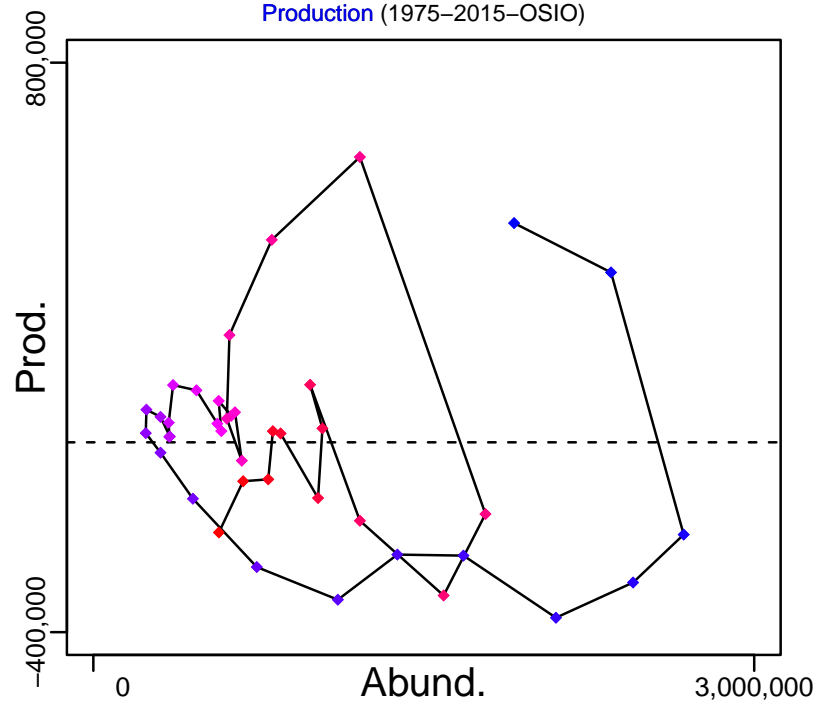
Kobe MGT\*



Spawner Recruit (2000–2022–HIVELY)

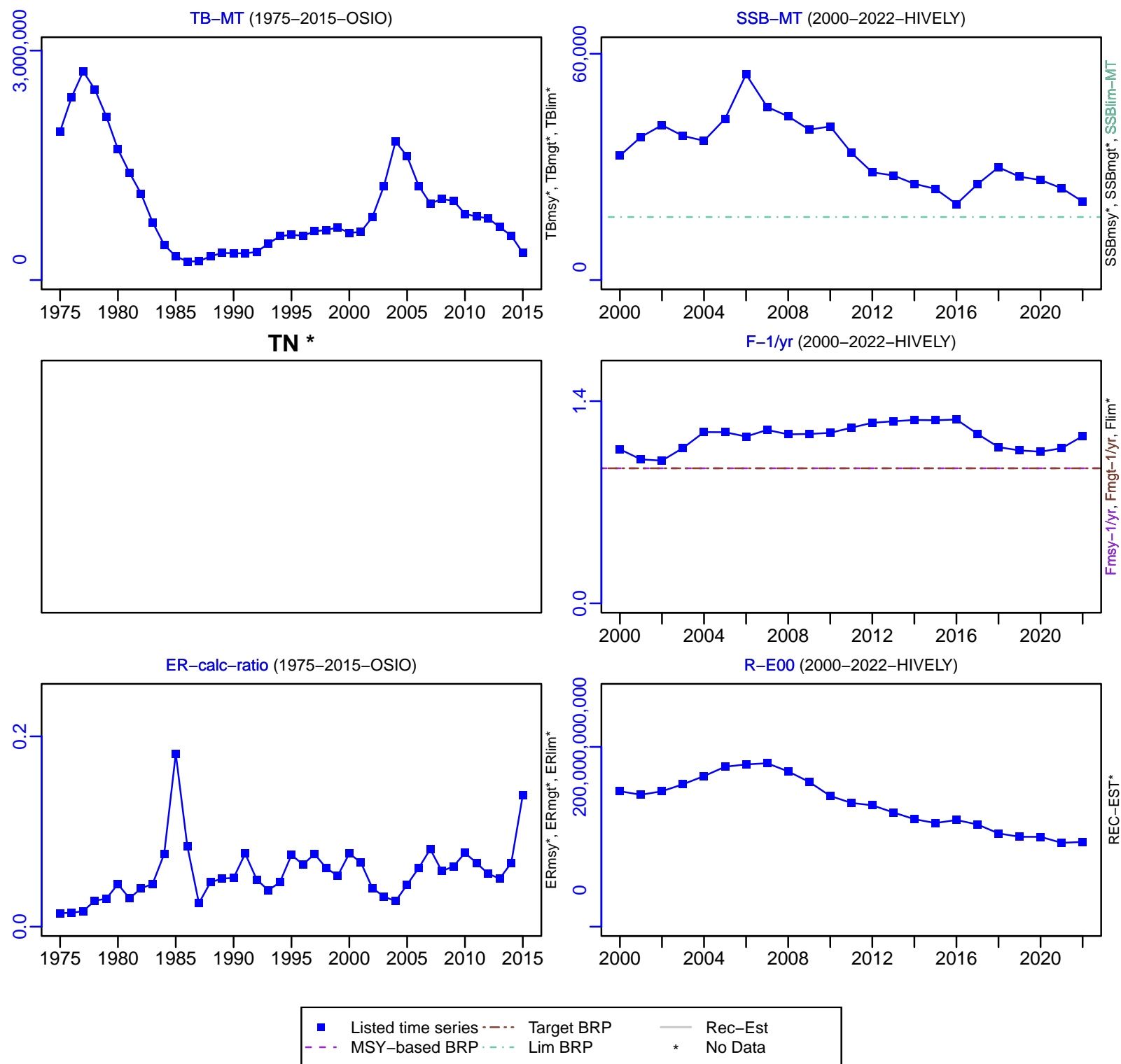


Production (1975–2015–OSIO)



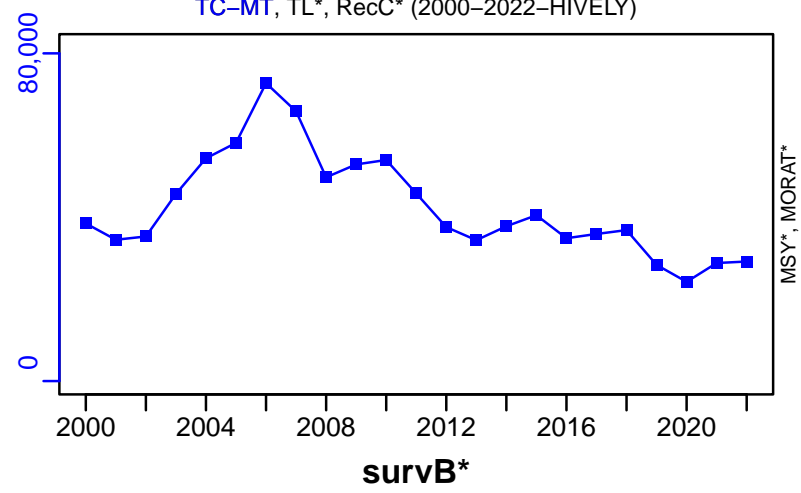
◆ Start Year ◆ End Year \* No Data

# Anchovy Adriatic Sea (GSA 17,18) [ANCHMEDGSA17-18]



# Anchovy Adriatic Sea (GSA 17,18) [ANCHMEDGSA17-18]

TC-MT, TL\*, RecC\* (2000-2022-HIVELY)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Anchovy Western Ionian Sea [ANCHMEDGSA19]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | STECF-ANCHMEDGSA19-2006-2012-OSIO   |
| <b>Area</b>                 | Western Ionian Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012  |

| Reference Points |    |           |       |
|------------------|----|-----------|-------|
| Type             | ID | Asmt Year | Value |
| TBmsy            | -  | -         | -     |
| SSBmsy           | -  | -         | -     |
| Fmsy             | -  | -         | -     |
| ERmsy            | -  | -         | -     |
| TBmgt            | -  | -         | -     |
| SSBmgt           | -  | -         | -     |
| Fmgt             | -  | -         | -     |
| ERmgt            | -  | -         | -     |
| TB0              | -  | -         | -     |
| SSB0             | -  | -         | -     |
| MSY              | -  | -         | -     |
| M                | -  | -         | -     |
| TBlim            | -  | -         | -     |
| SSBlim           | -  | -         | -     |
| Flim             | -  | -         | -     |
| ERlim            | -  | -         | -     |

| Time Series |       |           |            |     |     |
|-------------|-------|-----------|------------|-----|-----|
| Type        | ID    | Asmt Year | Curr Value | Sex | Age |
| TB          | -     | -         | -          | -   | -   |
| SSB         | -     | -         | -          | -   | -   |
| TN          | -     | -         | -          | -   | -   |
| R           | -     | -         | -          | -   | -   |
| F           | -     | -         | -          | -   | -   |
| ER          | -     | -         | -          | -   | -   |
| TC          | TC-MT | 2012      | 817        |     |     |
| TL          | -     | -         | -          |     |     |
| TB/TBmsy    | -     | -         | -          |     |     |
| SSB/SSBmsy  | -     | -         | -          |     |     |
| F/Fmsy      | -     | -         | -          |     |     |
| ER/ERmsy    | -     | -         | -          |     |     |
| TB/TBmgt    | -     | -         | -          |     |     |
| SSB/SSBmgt  | -     | -         | -          |     |     |
| F/Fmgt      | -     | -         | -          |     |     |
| ER/ERmgt    | -     | -         | -          |     |     |

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year   ◆ End Year   \* No Data

TB\*



SSB\*



TN \*



F\*



ER\*



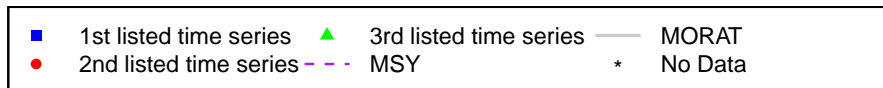
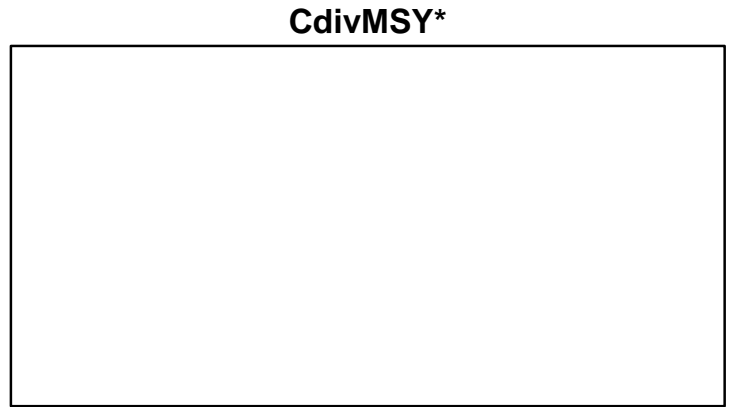
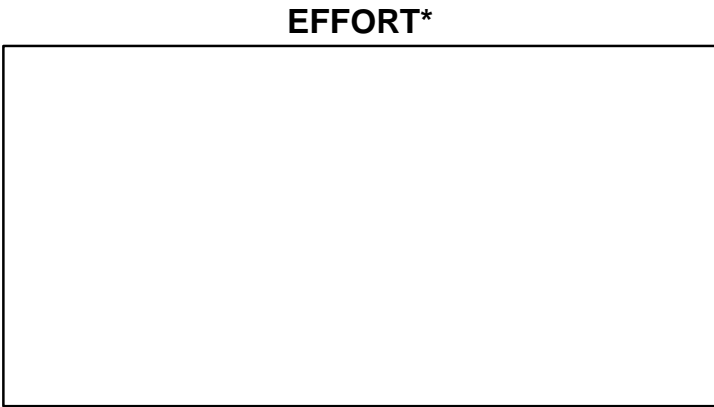
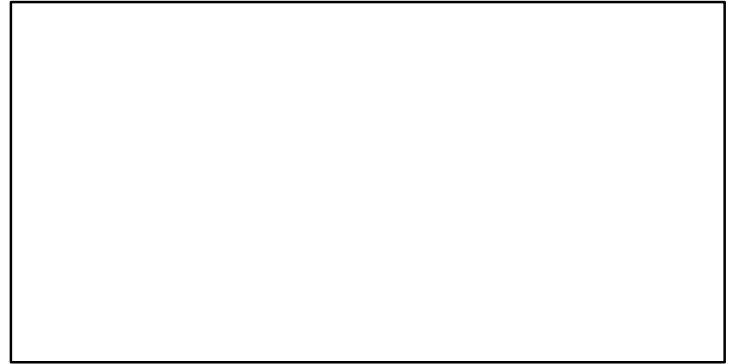
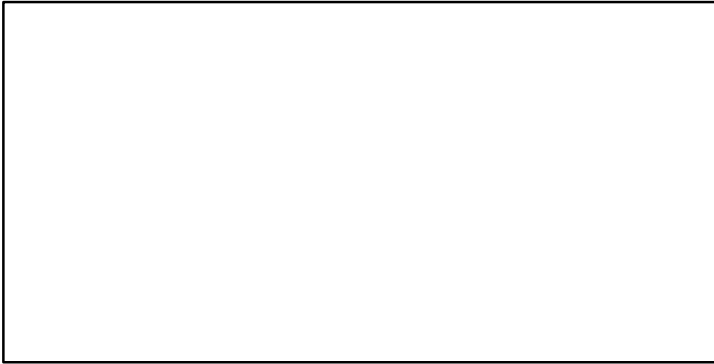
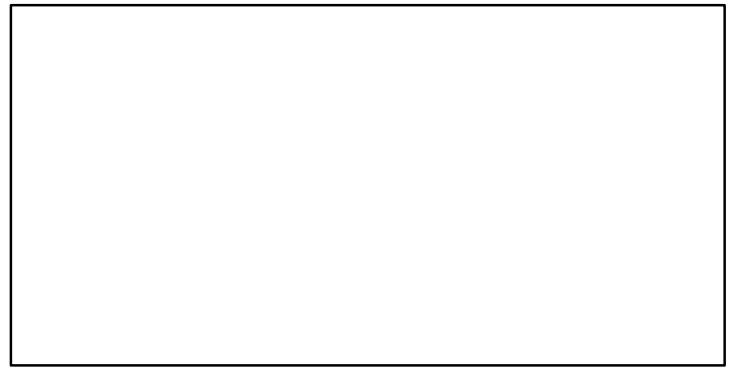
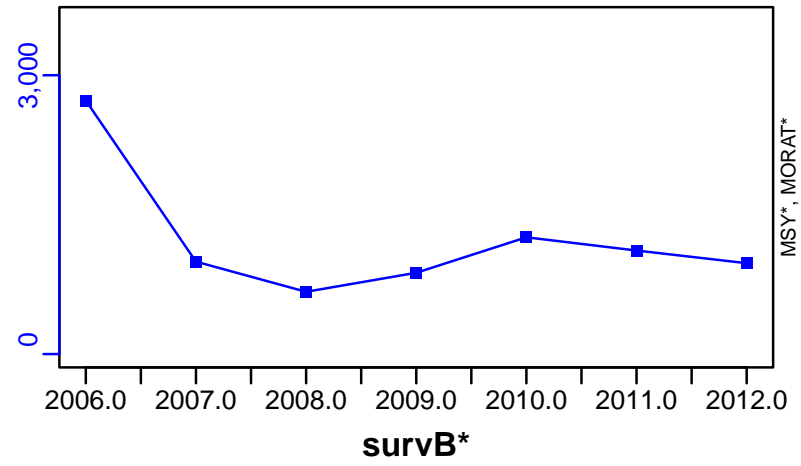
Recruits\*



# Anchovy Western Ionian Sea [ANCHMEDGSA19]

TC-MT, TL\*, RecC\* (2006–2012–OSIO)

TAC\*, Cpair\*, Cadv\*



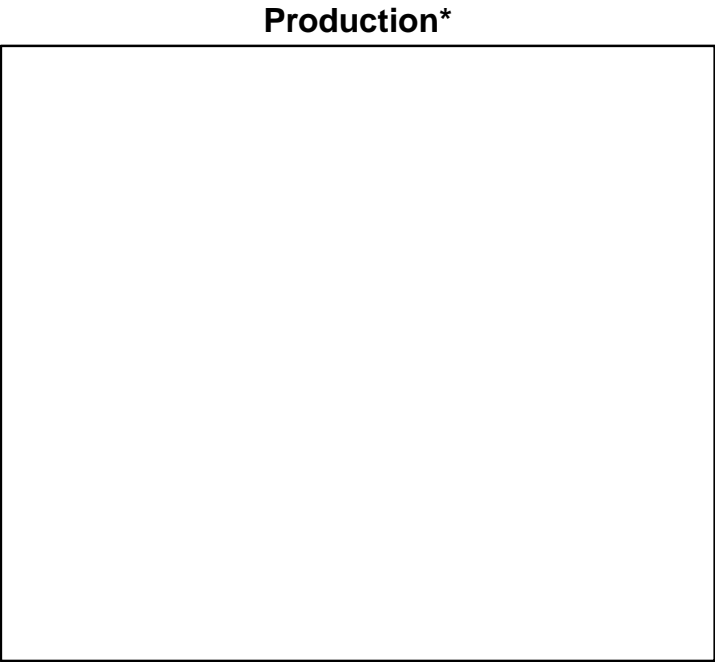
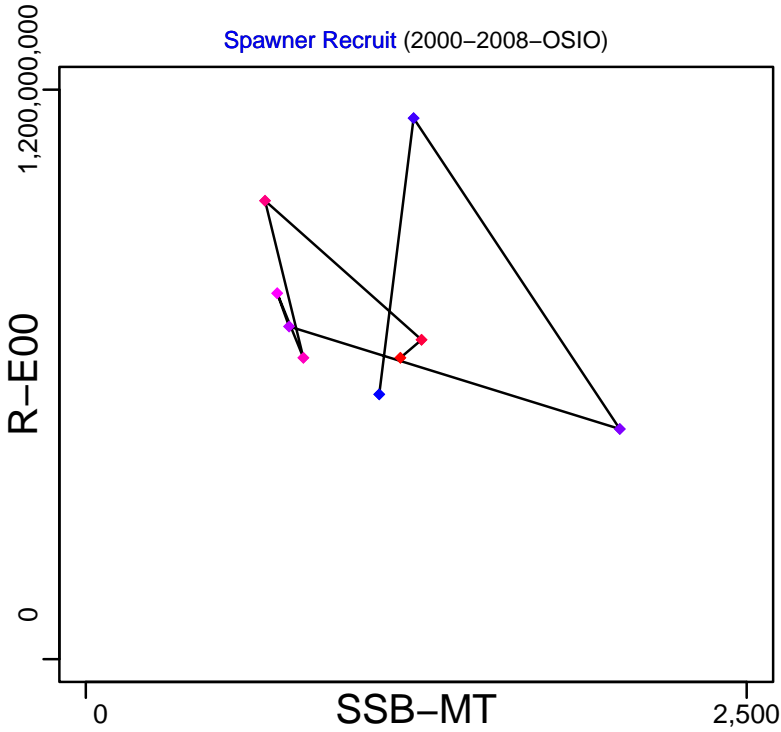
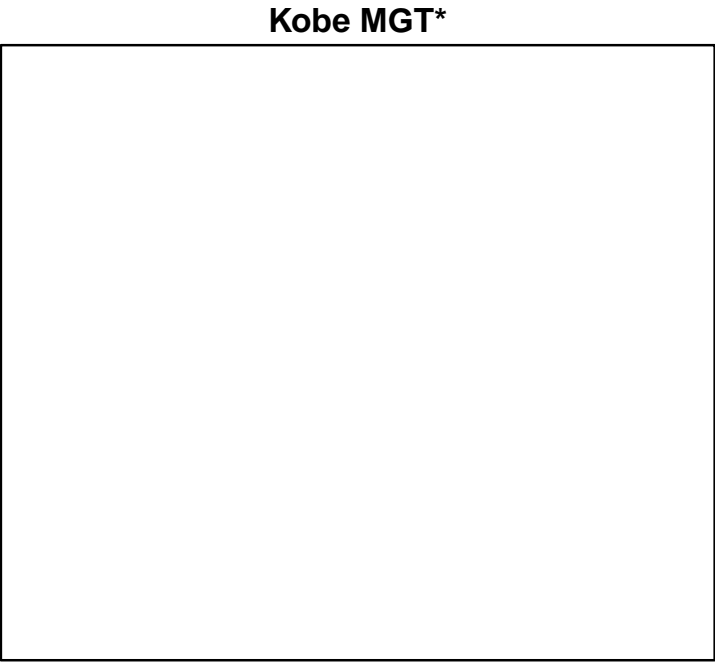
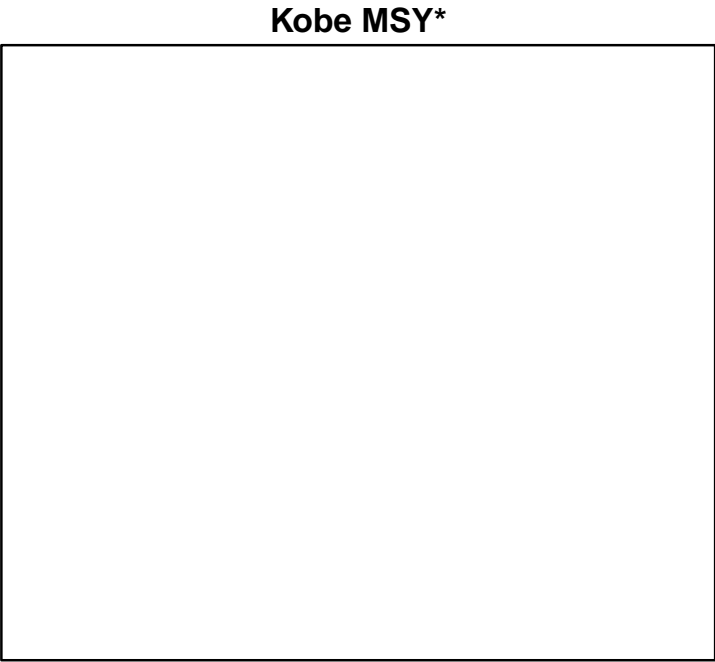
## Anchovy Eastern Ionian Sea [ANCHMEDGSA20]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | STECF-ANCHMEDGSA20-2000-2008-OSIO   |
| <b>Area</b>                 | Eastern Ionian Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2008  |

| Reference Points |    |           |       |
|------------------|----|-----------|-------|
| Type             | ID | Asmt Year | Value |
| TBmsy            | -  | -         | -     |
| SSBmsy           | -  | -         | -     |
| Fmsy             | -  | -         | -     |
| ERmsy            | -  | -         | -     |
| TBmgt            | -  | -         | -     |
| SSBmgt           | -  | -         | -     |
| Fmgt             | -  | -         | -     |
| ERmgt            | -  | -         | -     |
| TB0              | -  | -         | -     |
| SSB0             | -  | -         | -     |
| MSY              | -  | -         | -     |
| M                | -  | -         | -     |
| TBlim            | -  | -         | -     |
| SSBlim           | -  | -         | -     |
| Flim             | -  | -         | -     |
| ERlim            | -  | -         | -     |

| Time Series |        |           |                    |     |     |
|-------------|--------|-----------|--------------------|-----|-----|
| Type        | ID     | Asmt Year | Curr Value         | Sex | Age |
| TB          | -      | -         | -                  | -   | -   |
| SSB         | SSB-MT | 2008      | 1190               | -   | -   |
| TN          | -      | -         | -                  | -   | -   |
| R           | R-E00  | 2008      | $6.35 \times 10^8$ | -   | -   |
| F           | F-1/yr | 2008      | 0.814              | -   | -   |
| ER          | -      | -         | -                  | -   | -   |
| TC          | TC-MT  | 2008      | 1310               |     |     |
| TL          | -      | -         | -                  |     |     |
| TB/TBmsy    | -      | -         | -                  |     |     |
| SSB/SSBmsy  | -      | -         | -                  |     |     |
| F/Fmsy      | -      | -         | -                  |     |     |
| ER/ERmsy    | -      | -         | -                  |     |     |
| TB/TBmgt    | -      | -         | -                  |     |     |
| SSB/SSBmgt  | -      | -         | -                  |     |     |
| F/Fmgt      | -      | -         | -                  |     |     |
| ER/ERmgt    | -      | -         | -                  |     |     |





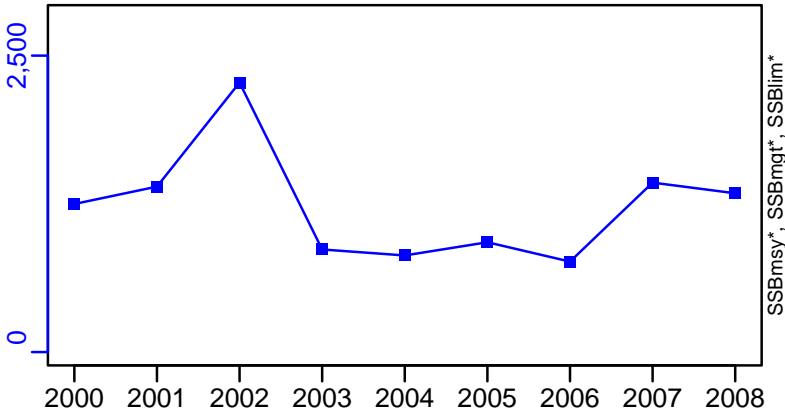
◆ Start Year ◆ End Year \* No Data

Anchovy Eastern Ionian Sea [ANCHMEDGSA20]

TB\*



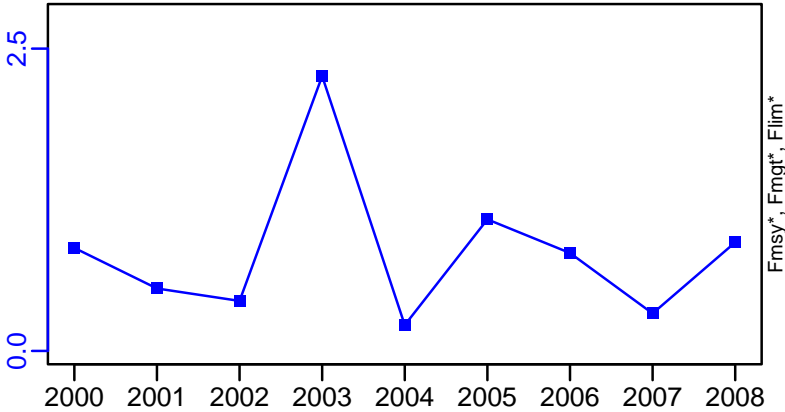
SSB-MT (2000–2008–OSIO)



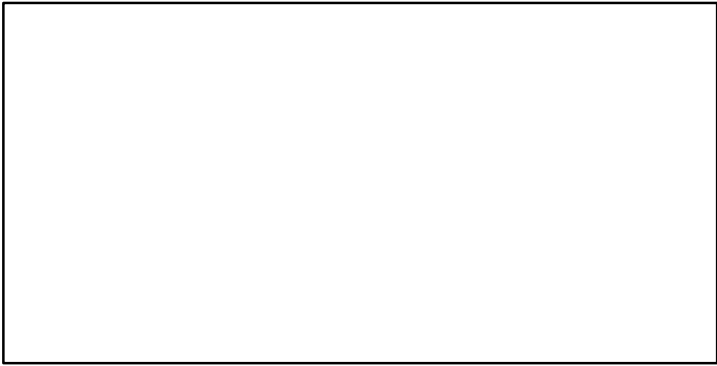
TN \*



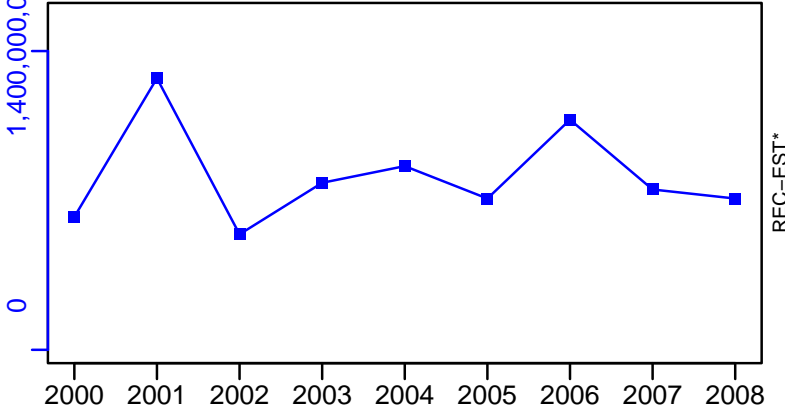
F-1/yr (2000–2008–OSIO)



ER\*

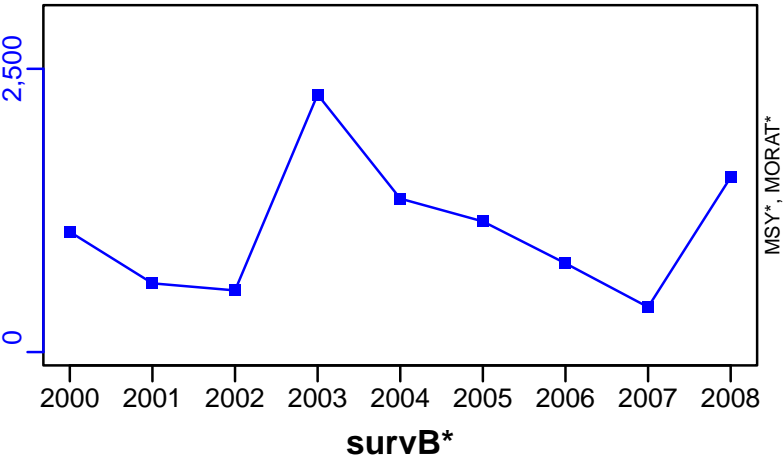


R-E00 (2000–2008–OSIO)



Anchovy Eastern Ionian Sea [ANCHMEDGSA20]

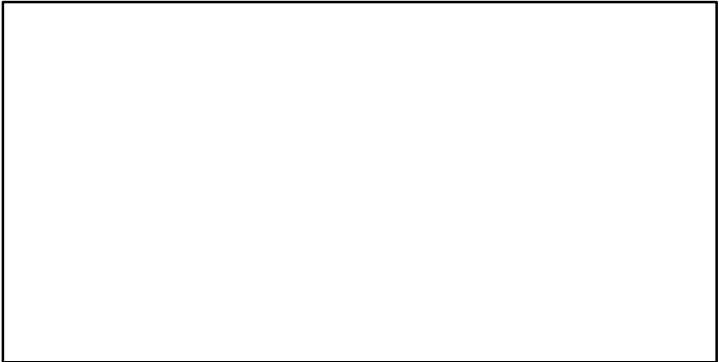
TC-MT, TL\*, RecC\* (2000–2008–OSIO)



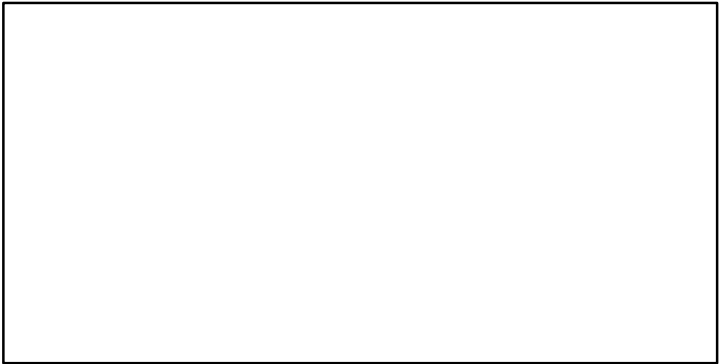
TAC\*, Cpair\*, Cadv\*



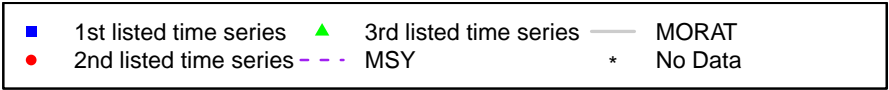
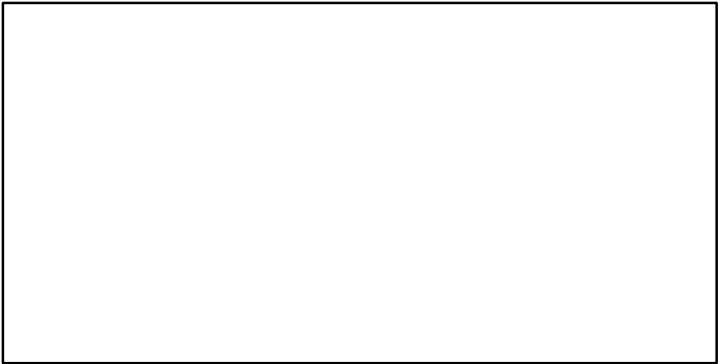
CPUE\*



EFFORT\*



CdivMSY\*



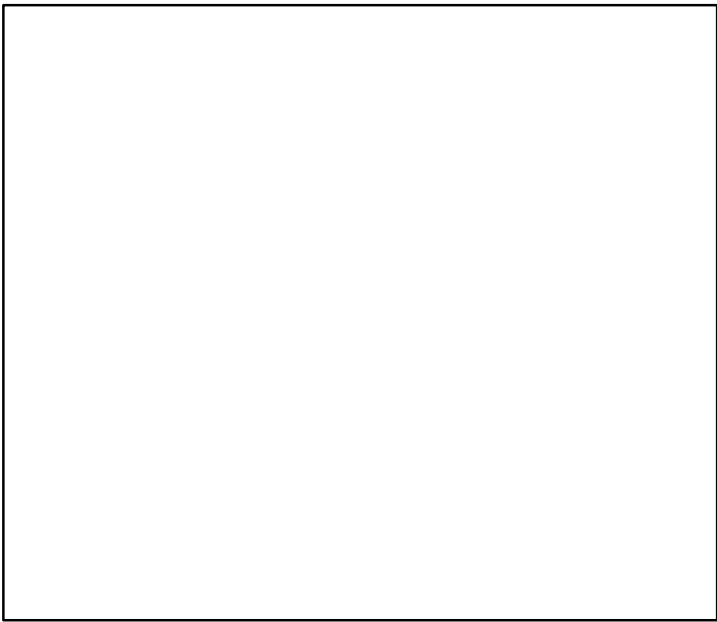
## Anchovy Aegean Sea and Crete Island (GSA 22,23) [ANCHMEDGSA22-23]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | STECF-ANCHMEDGSA22-23-2000-2016-MEDIMP2021-2                                  |
| <b>Area</b>                 | Aegean Sea and Crete Island (GSA 22,23)                                       |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2016  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2016      | 0.47  |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2016      | 0.47  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |                |     |     |
|-------------------|------------------|-----------|----------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value     | Sex | Age |
| <b>TB</b>         | -                | -         | -              | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2016      | 74,802         | -   | -   |
| <b>TN</b>         | -                | -         | -              | -   | -   |
| <b>R</b>          | R-E00            | 2016      | 26,458,735,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2016      | 0.464          | -   | -   |
| <b>ER</b>         | -                | -         | -              | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 10,610         |     |     |
| <b>TL</b>         | -                | -         | -              |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -              |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -              |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2016      | 0.986          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -              |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -              |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -              |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2016      | 0.986          |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -              |     |     |

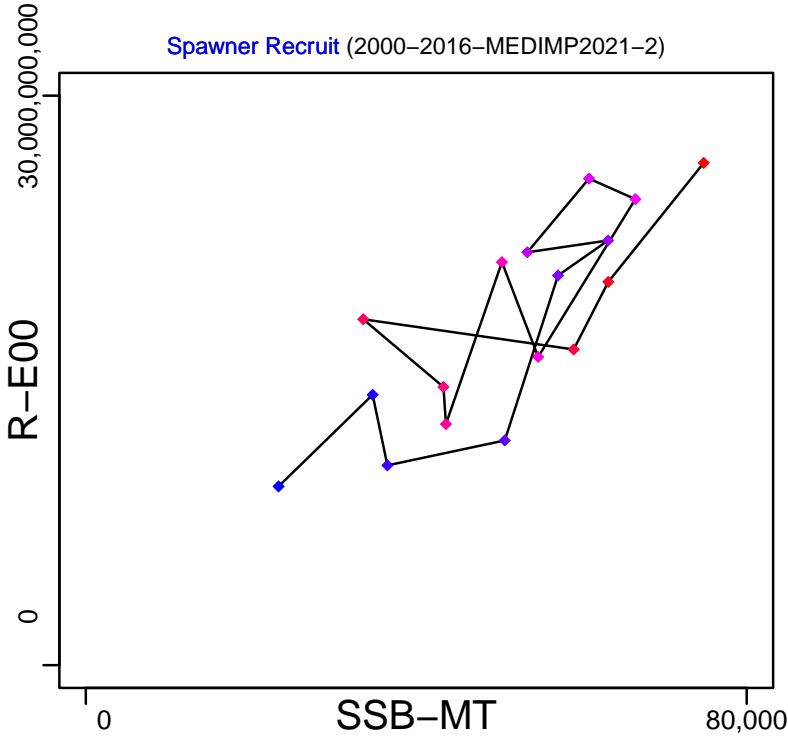
Kobe MSY\*



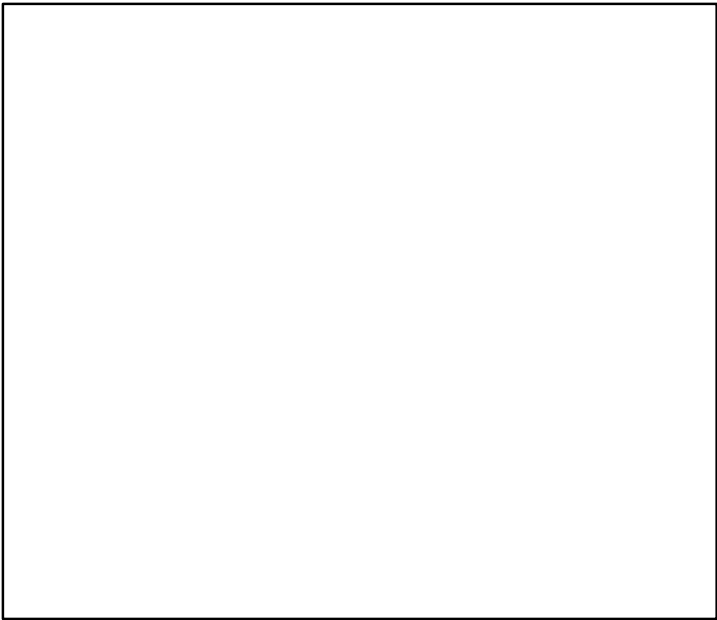
Kobe MGT\*



Spawner Recruit (2000-2016-MEDIMP2021-2)



Production\*



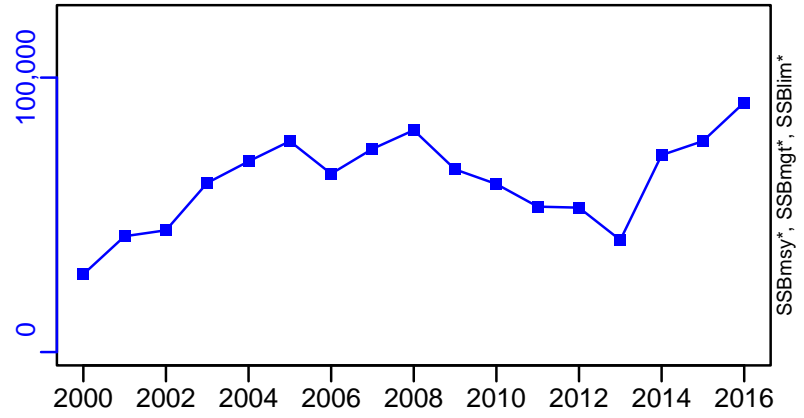
◆ Start Year ◆ End Year \* No Data

# Anchovy Aegean Sea and Crete Island (GSA 22,23) [ANCHMEDGSA22-23]

TB\*



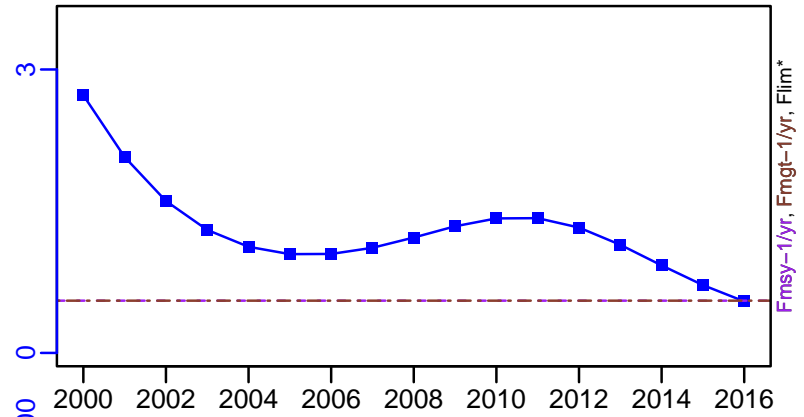
SSB-MT (2000-2016-MEDIMP2021-2)



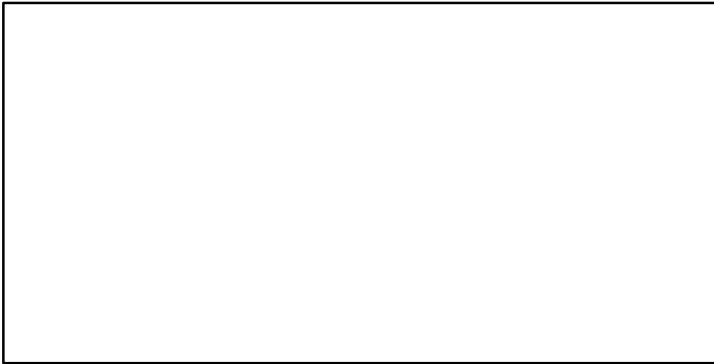
TN \*



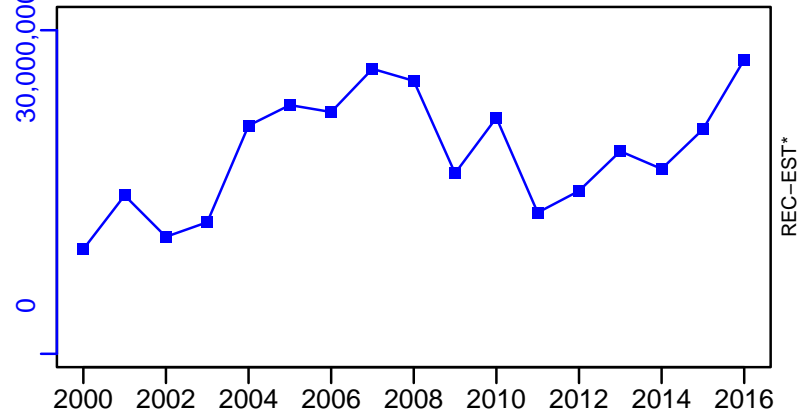
F-1/yr (2000-2016-MEDIMP2021-2)



ER\*

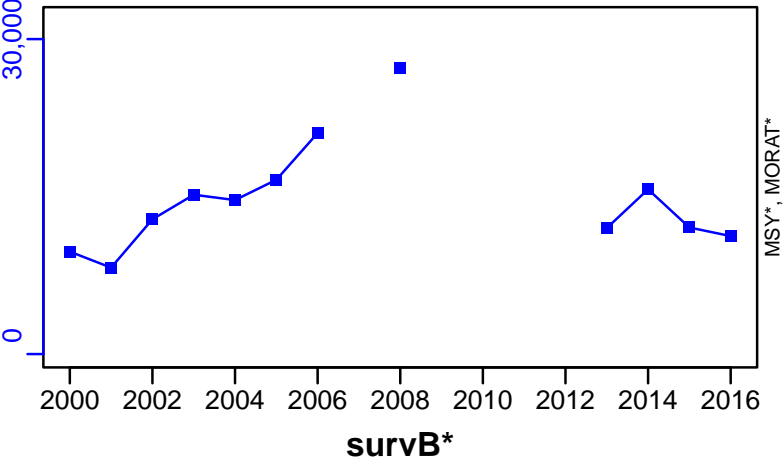


R-E00 (2000-2016-MEDIMP2021-2)

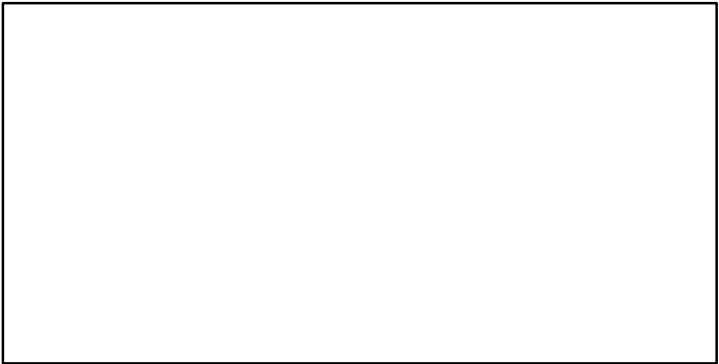


Anchovy Aegean Sea and Crete Island (GSA 22,23) [ANCHMEDGSA22-23]

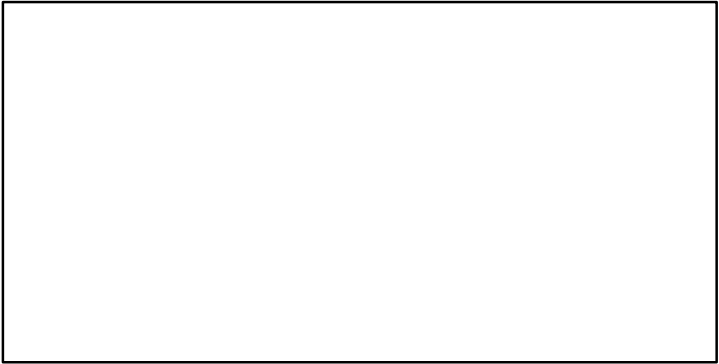
TC-MT, TL\*, RecC\* (2000-2016-MEDIMP2021-2)



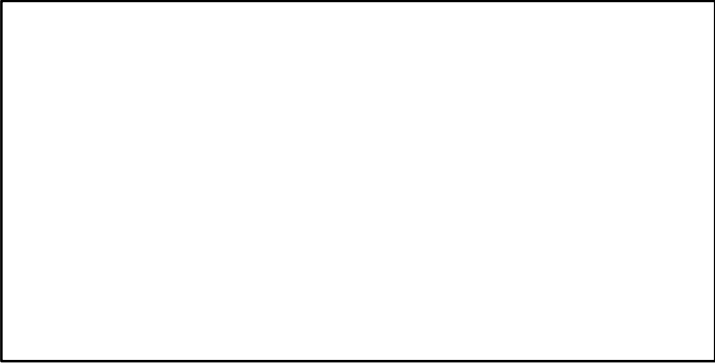
TAC\*, Cpair\*, Cadv\*



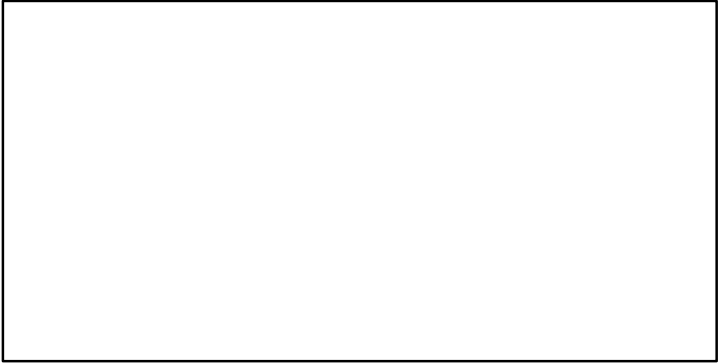
CPUE\*



EFFORT\*



CdivMSY\*



## Anchovy Black Sea [ANCHMEDGSA29]

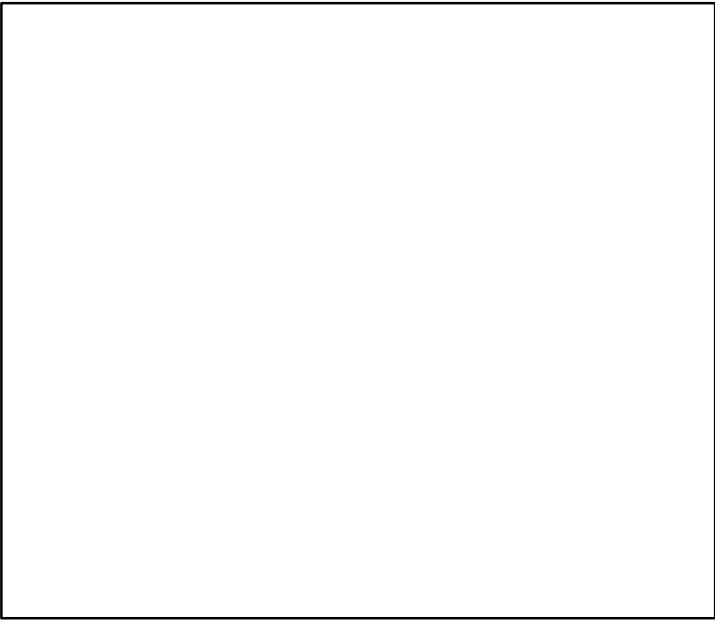
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | SGSABS-ANCHMEDGSA29-1986-2021-HIVELY  |
| <b>Area</b>                 | Black Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Subregional Group on Stock Assessment for the Black Sea                       |
| <b>Asmts in RAM</b>         | 2021, 2014, 2016  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2016      | 0.49  |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2016      | 0.49  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

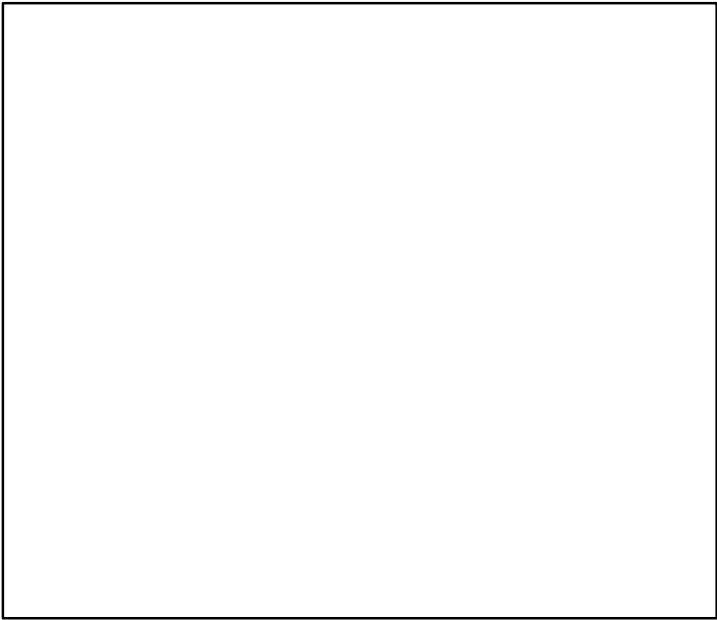
| Time Series       |                  |           |                       |     |     |
|-------------------|------------------|-----------|-----------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value            | Sex | Age |
| <b>TB</b>         | -                | -         | -                     | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2021      | 431,067               | -   | -   |
| <b>TN</b>         | -                | -         | -                     | -   | -   |
| <b>R</b>          | R-E00            | 2021      | $5.38 \times 10^{11}$ | -   | 2   |
| <b>F</b>          | F-1/yr           | 2021      | 1.39                  | -   | -   |
| <b>ER</b>         | -                | -         | -                     | -   | -   |
| <b>TC</b>         | TC-MT            | 2021      | 196,066               |     |     |
| <b>TL</b>         | TL-MT            | 2021      | 196,066               |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -                     |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                     |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2016      | 1.289                 |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                     |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -                     |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                     |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2016      | 1.289                 |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                     |     |     |



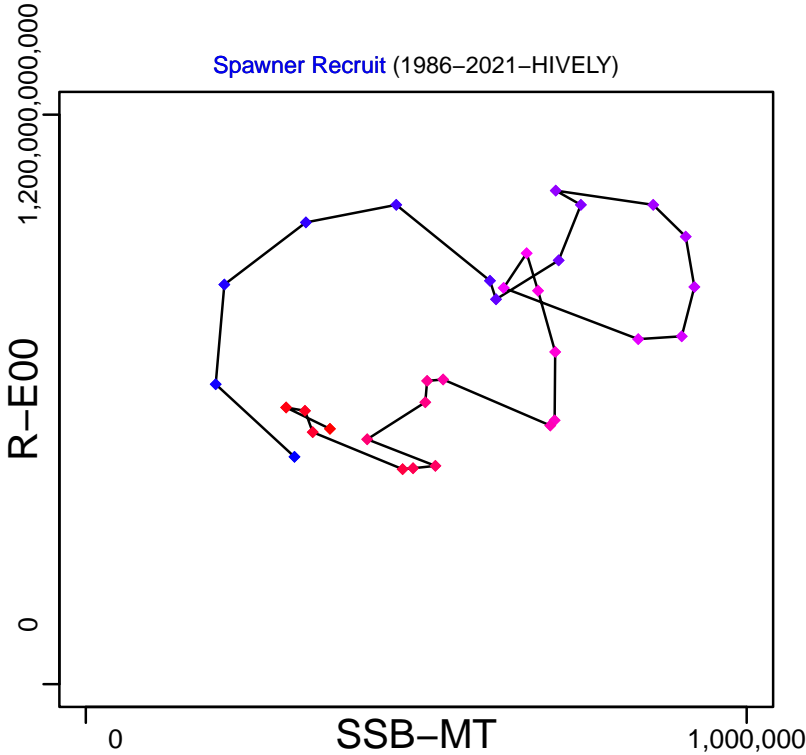
Kobe MSY\*



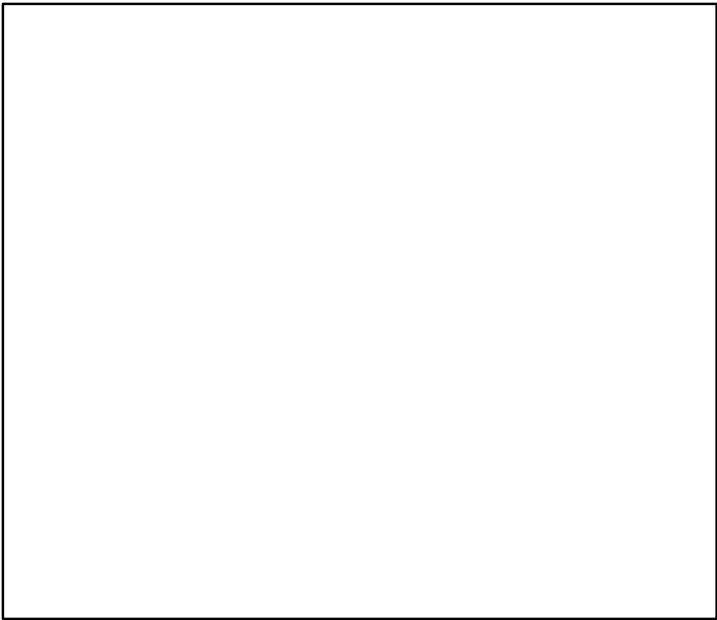
Kobe MGT\*



Spawner Recruit (1986–2021–HIVELY)



Production\*



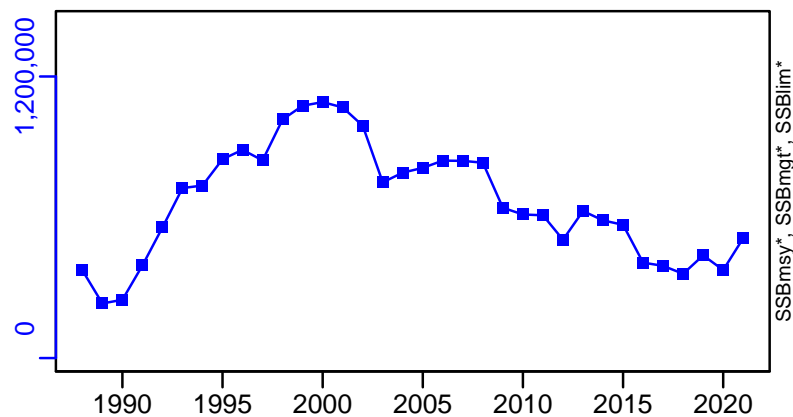
◆ Start Year ◆ End Year \* No Data

# Anchovy Black Sea [ANCHMEDGSA29]

TB\*



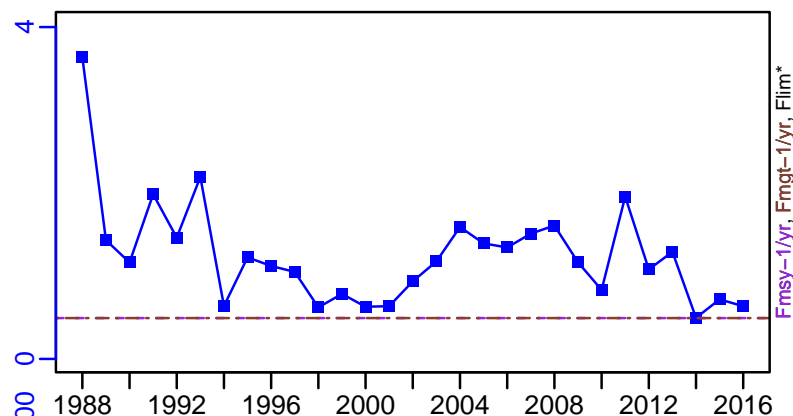
SSB-MT (1986-2021-HIVELY)



TN \*



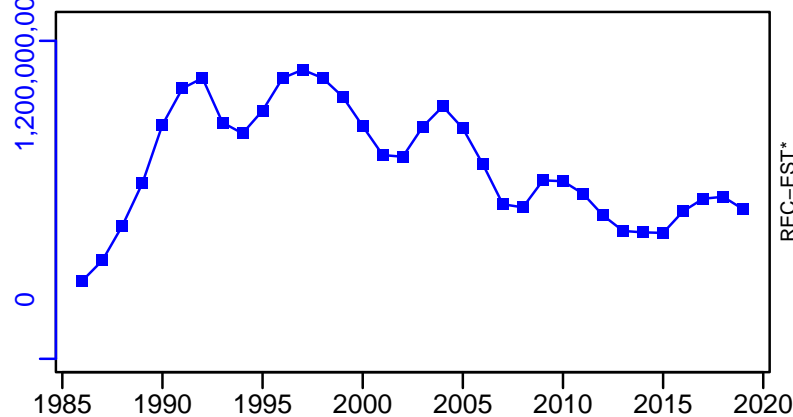
F-1/yr (1988-2016-MEDIMP2021-2)



ER\*

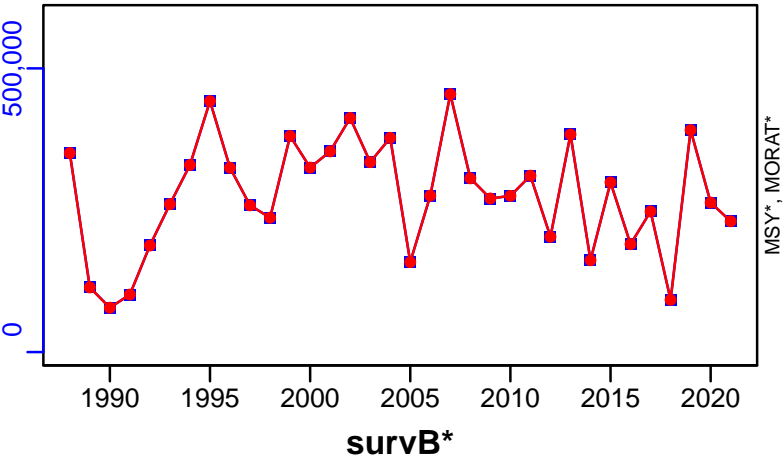


R-E00 (1986-2021-HIVELY)



Anchovy Black Sea [ANCHMEDGSA29]

TC-MT, TL-MT, RecC\* (1986-2021-HIVELY)



TAC\*, Cpair\*, Cadv\*



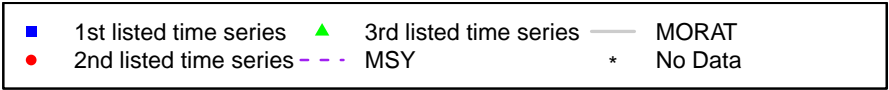
CPUE\*



EFFORT\*



CdivMSY\*



## Anchovy Northern Spain [ANCHMEDGSA6]

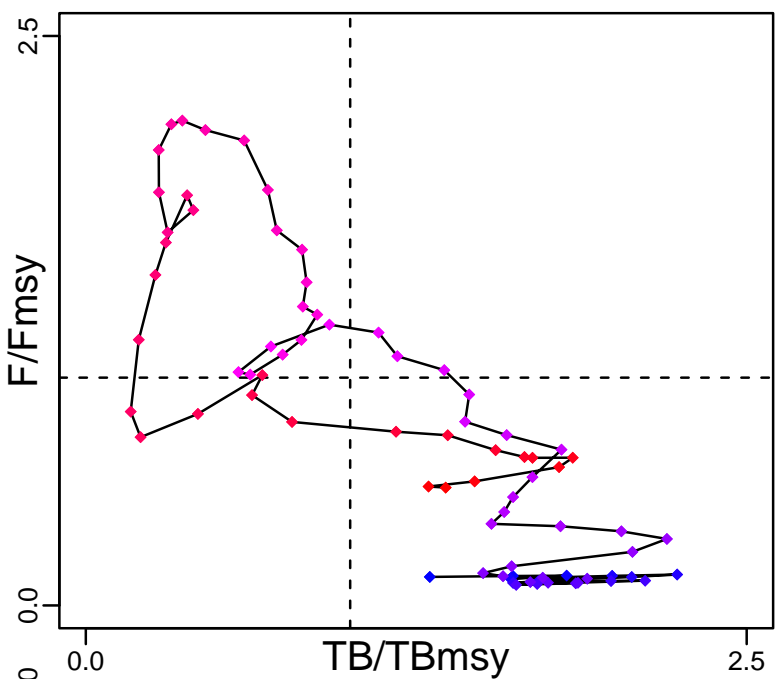
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | WGSASP-ANCHMEDGSA6-1945-2021-HIVELY   |
| <b>Area</b>                 | Northern Spain  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Small Pelagic species                    |
| <b>Asmts in RAM</b>         | 2015, 2016, 2009, 2021  |

| Reference Points |           |           |        |
|------------------|-----------|-----------|--------|
| Type             | ID        | Asmt Year | Value  |
| <b>TBmsy</b>     | TBmsy-MT  | 2021      | 48,346 |
| <b>SSBmsy</b>    | -         | -         | -      |
| <b>Fmsy</b>      | Fmsy-1/yr | 2021      | 0.331  |
| <b>ERmsy</b>     | -         | -         | -      |
| <b>TBmgt</b>     | TBmgt-MT  | 2021      | 48,346 |
| <b>SSBmgt</b>    | -         | -         | -      |
| <b>Fmgt</b>      | Fmgt-1/yr | 2021      | 0.331  |
| <b>ERmgt</b>     | -         | -         | -      |
| <b>TB0</b>       | -         | -         | -      |
| <b>SSB0</b>      | -         | -         | -      |
| <b>MSY</b>       | -         | -         | -      |
| <b>M</b>         | -         | -         | -      |
| <b>TBlim</b>     | -         | -         | -      |
| <b>SSBlim</b>    | -         | -         | -      |
| <b>Flim</b>      | -         | -         | -      |
| <b>ERlim</b>     | -         | -         | -      |

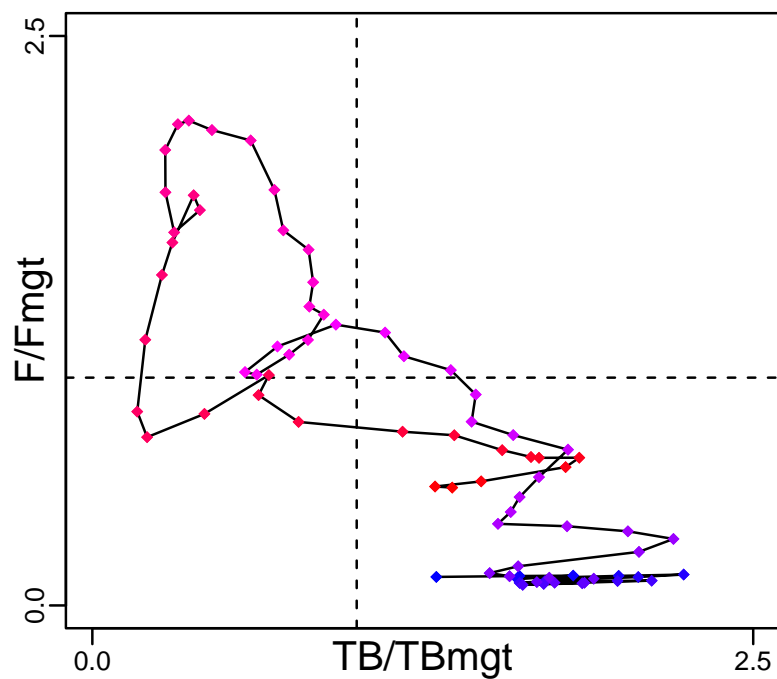
| Time Series       |                  |           |                    |     |     |
|-------------------|------------------|-----------|--------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value         | Sex | Age |
| <b>TB</b>         | TB-MT            | 2021      | 65,817             | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2009      | 26,500             | -   | -   |
| <b>TN</b>         | -                | -         | -                  | -   | -   |
| <b>R</b>          | R-E00            | 2009      | $1.38 \times 10^9$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2021      | 0.171              | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2021      | 0.166              | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 17,466             |     |     |
| <b>TL</b>         | TL-MT            | 2021      | 10,920             |     |     |
| <b>TB/TBmsy</b>   | TB-MT/TBmsy-MT   | 2021      | 1.361              |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                  |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2021      | 0.517              |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                  |     |     |
| <b>TB/TBmgt</b>   | TB-MT/TBmgt-MT   | 2021      | 1.361              |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                  |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2021      | 0.517              |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                  |     |     |

# Anchovy Northern Spain [ANCHMEDGSA6]

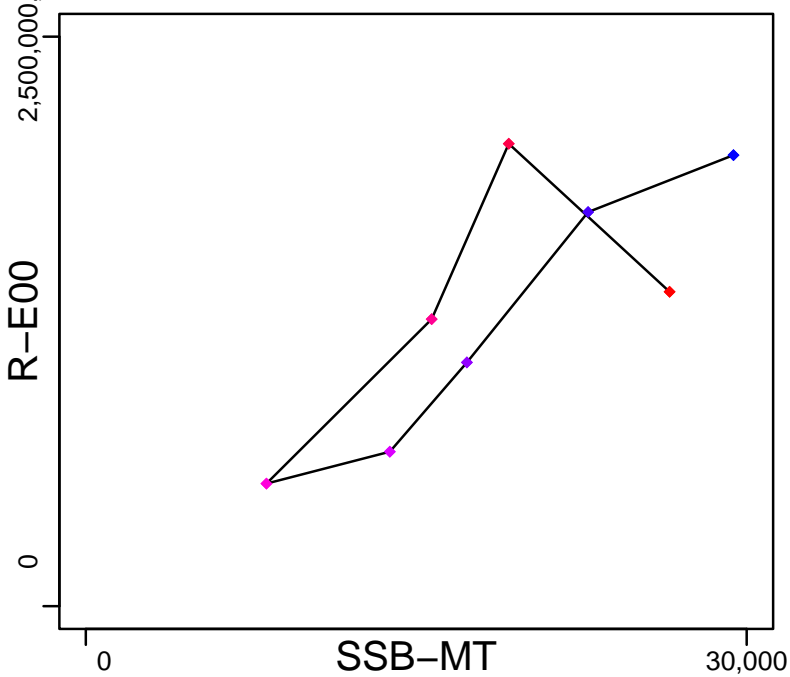
Kobe MSYpref (1945–2021–HIVELY)



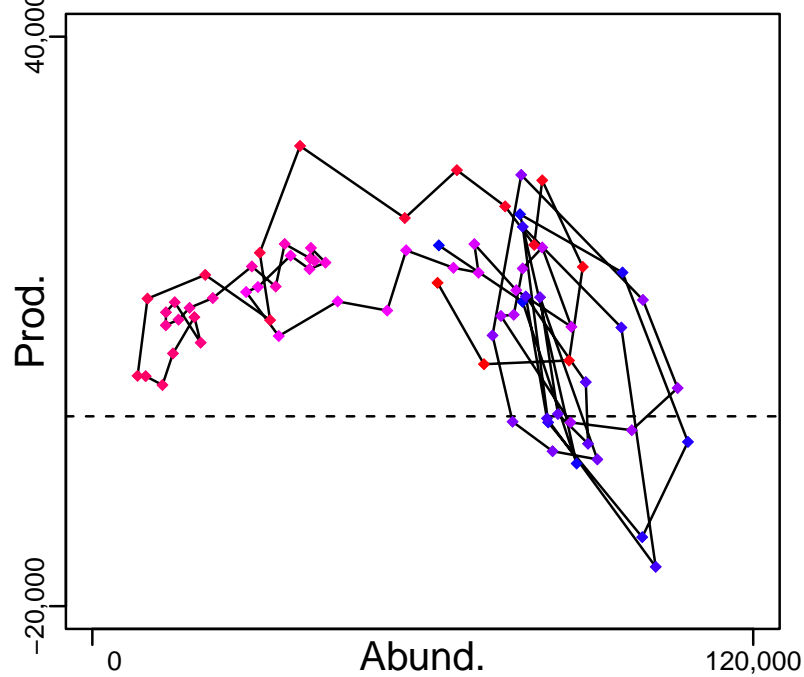
Kobe MGTpref (1945–2021–HIVELY)



Spawner Recruit (2002–2009–OSIO)

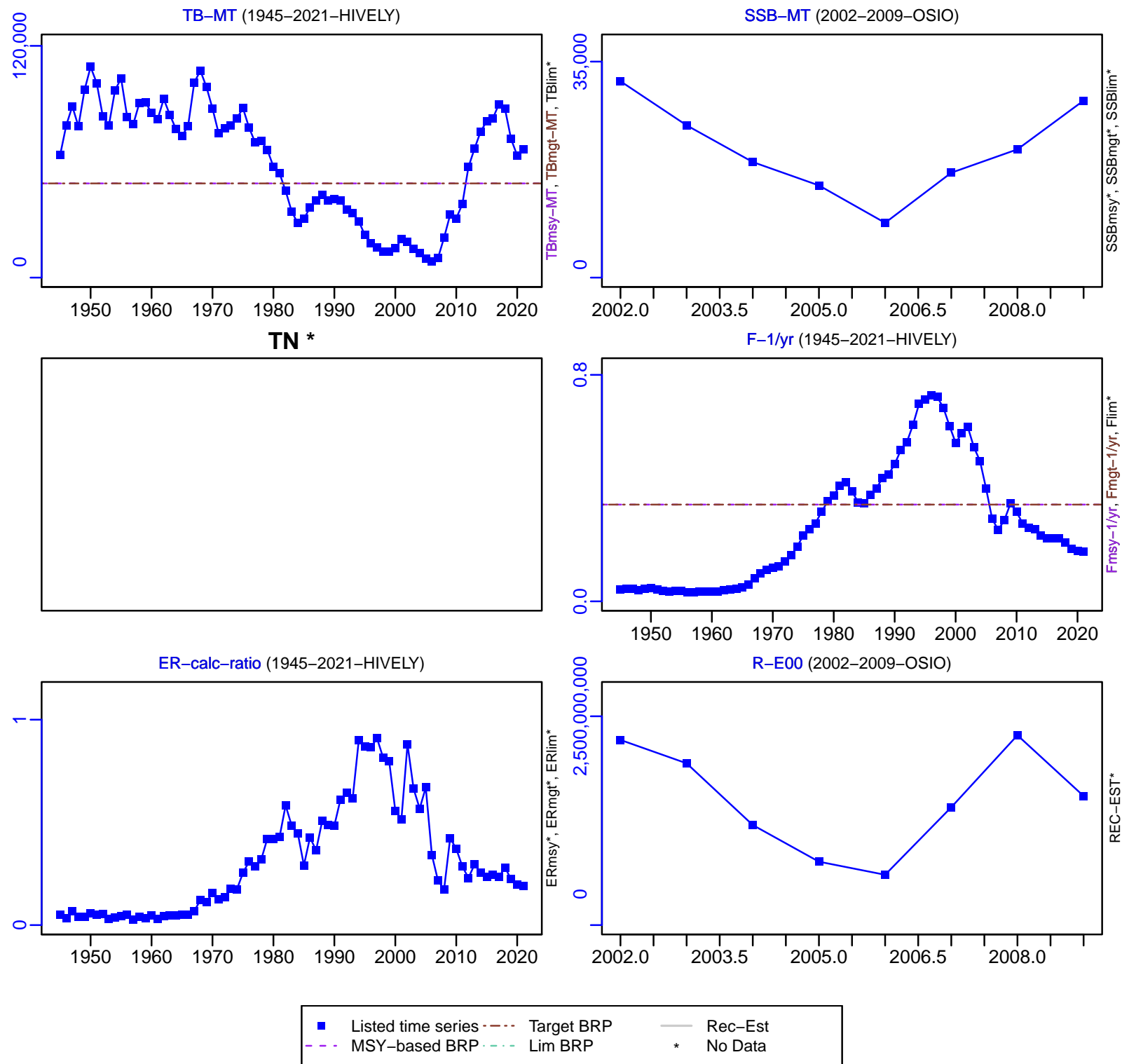


Production (1945–2021–HIVELY)



◆ Start Year ◆ End Year \* No Data

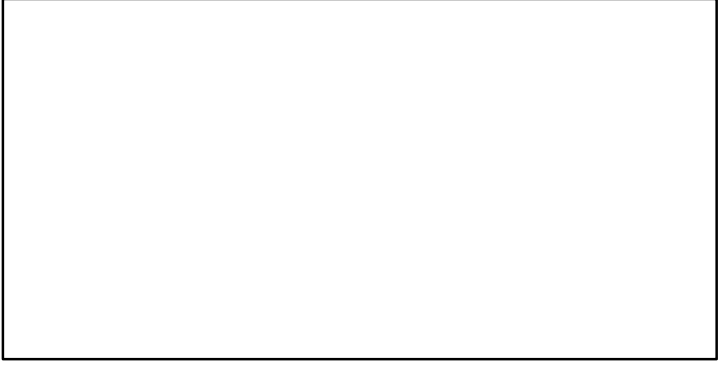
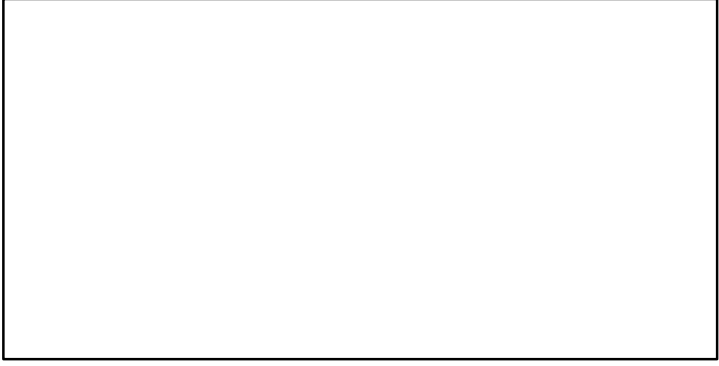
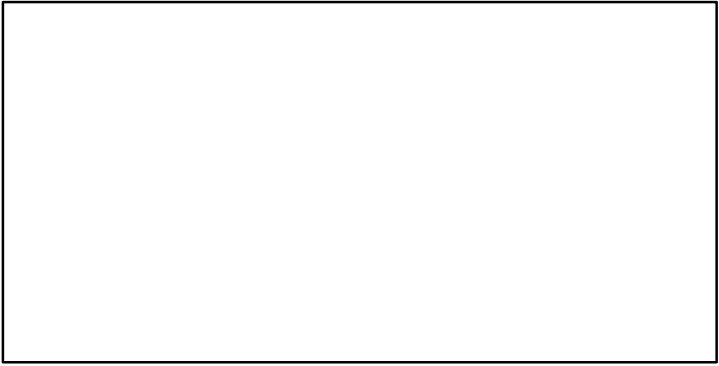
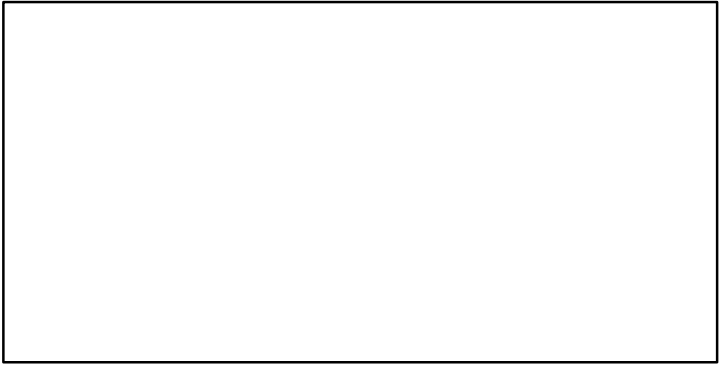
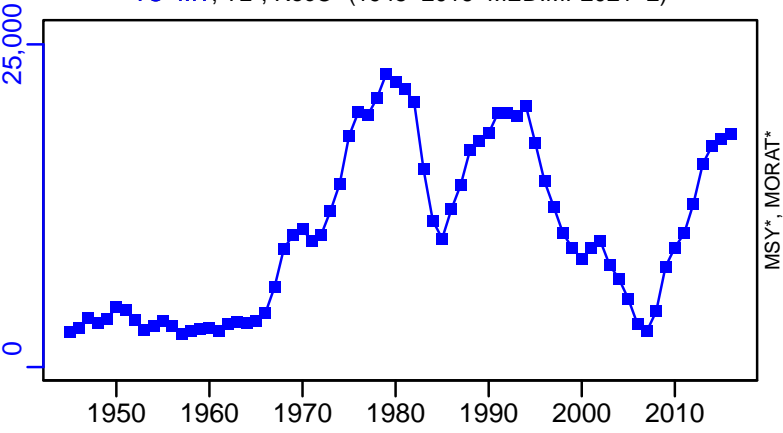
# Anchovy Northern Spain [ANCHMEDGSA6]



# Anchovy Northern Spain [ANCHMEDGSA6]

TC-MT, TL\*, RecC\* (1945-2016-MEDIMP2021-2)

TAC\*, Cpair\*, Cadv\*



## Anchovy Gulf of Lions [ANCHMEDGSA7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | WGSASP-ANCHMEDGSA7-1993-2021-HIVELY   |
| <b>Area</b>                 | Gulf of Lions   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Small Pelagic species                    |
| <b>Asmts in RAM</b>         | 2012, 2021  |

| Reference Points |           |           |        |
|------------------|-----------|-----------|--------|
| Type             | ID        | Asmt Year | Value  |
| <b>TBmsy</b>     | -         | -         | -      |
| <b>SSBmsy</b>    | -         | -         | -      |
| <b>Fmsy</b>      | Fmsy-1/yr | 2021      | 0.49   |
| <b>ERmsy</b>     | -         | -         | -      |
| <b>TBmgt</b>     | -         | -         | -      |
| <b>SSBmgt</b>    | -         | -         | -      |
| <b>Fmgt</b>      | Fmgt-1/yr | 2021      | 0.49   |
| <b>ERmgt</b>     | -         | -         | -      |
| <b>TB0</b>       | -         | -         | -      |
| <b>SSB0</b>      | -         | -         | -      |
| <b>MSY</b>       | -         | -         | -      |
| <b>M</b>         | -         | -         | -      |
| <b>TBlim</b>     | TBlim-MT  | 2021      | 22,889 |
| <b>SSBlim</b>    | -         | -         | -      |
| <b>Flim</b>      | -         | -         | -      |
| <b>ERlim</b>     | -         | -         | -      |

| Time Series       |                  |           |                |     |     |
|-------------------|------------------|-----------|----------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value     | Sex | Age |
| <b>TB</b>         | TB-MT            | 2021      | 42,811         | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2021      | 135,153        | -   | -   |
| <b>TN</b>         | -                | -         | -              | -   | -   |
| <b>R</b>          | R-E00            | 2021      | 38,688,921,000 | -   | 0   |
| <b>F</b>          | F-1/yr           | 2021      | 0.008          | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2021      | 0.038          | -   | -   |
| <b>TC</b>         | -                | -         | -              |     |     |
| <b>TL</b>         | TL-MT            | 2021      | 696            |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -              |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -              |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2021      | 0.016          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -              |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -              |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -              |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2021      | 0.016          |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -              |     |     |



# Anchovy Gulf of Lions [ANCHMEDGSA7]

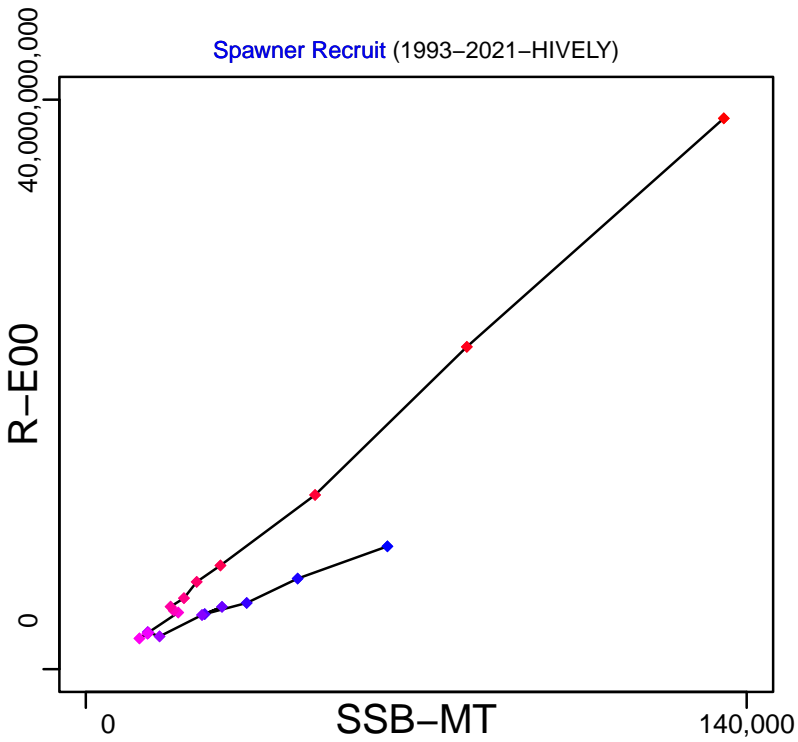
Kobe MSY\*



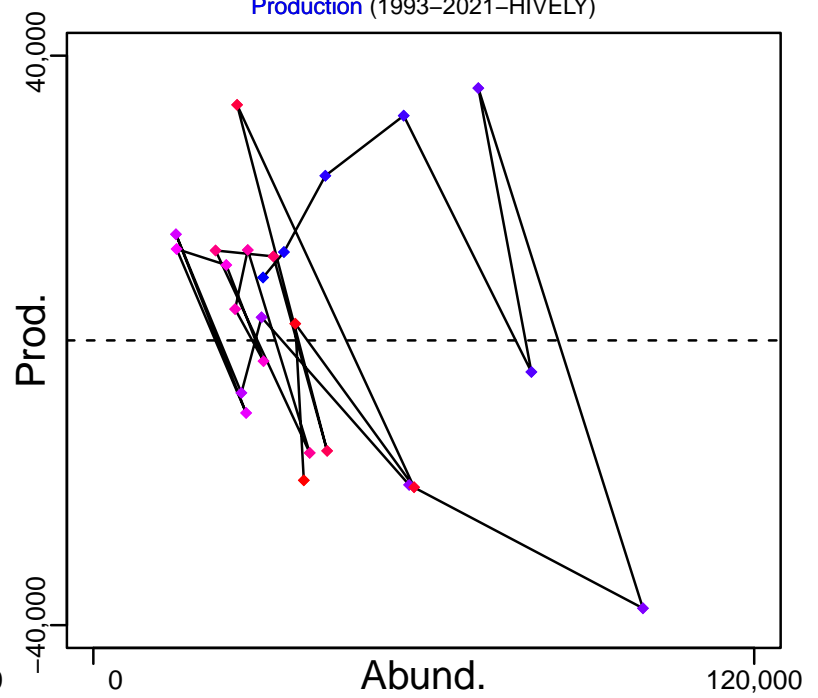
Kobe MGT\*



Spawner Recruit (1993–2021–HIVELY)

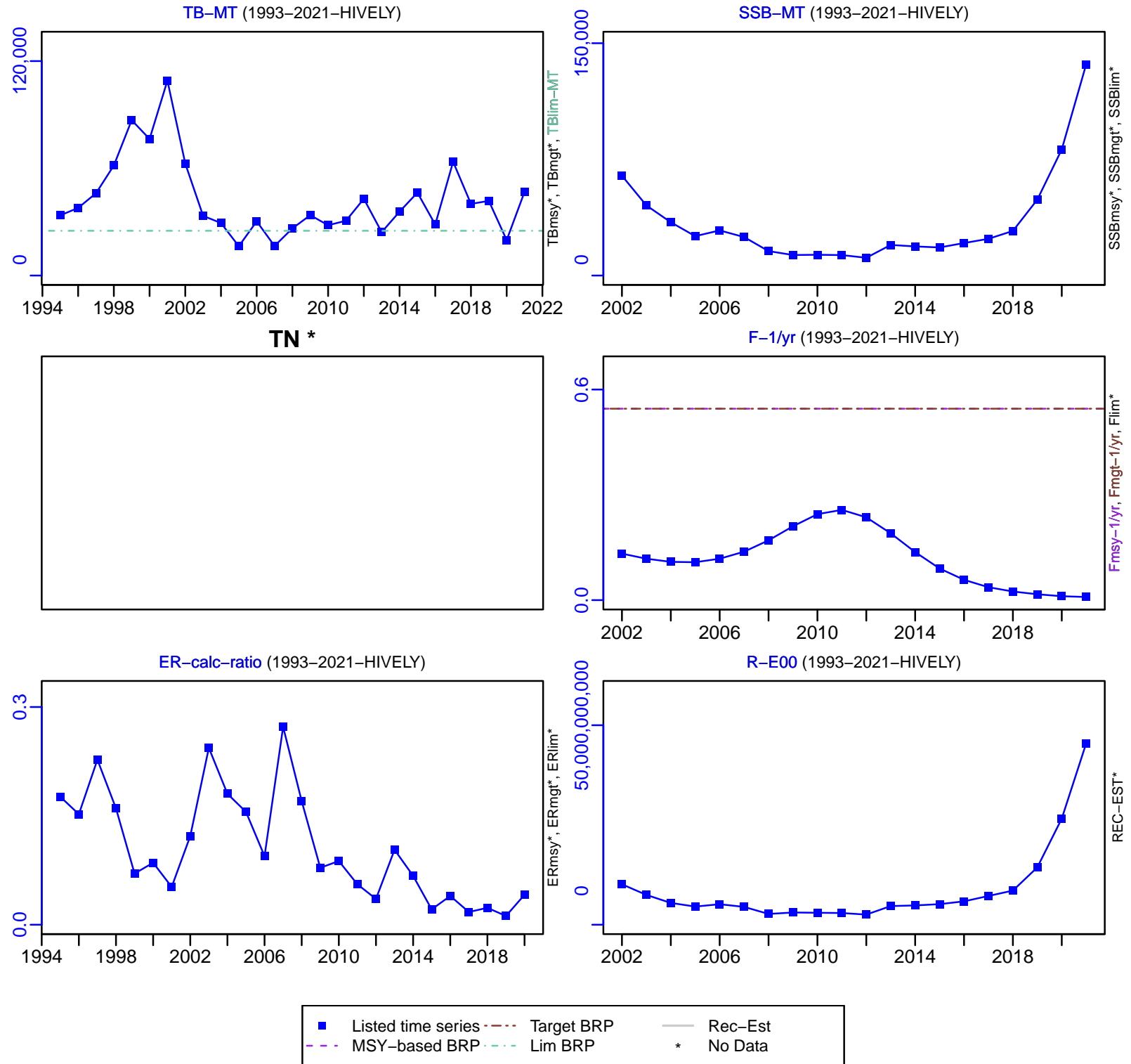


Production (1993–2021–HIVELY)



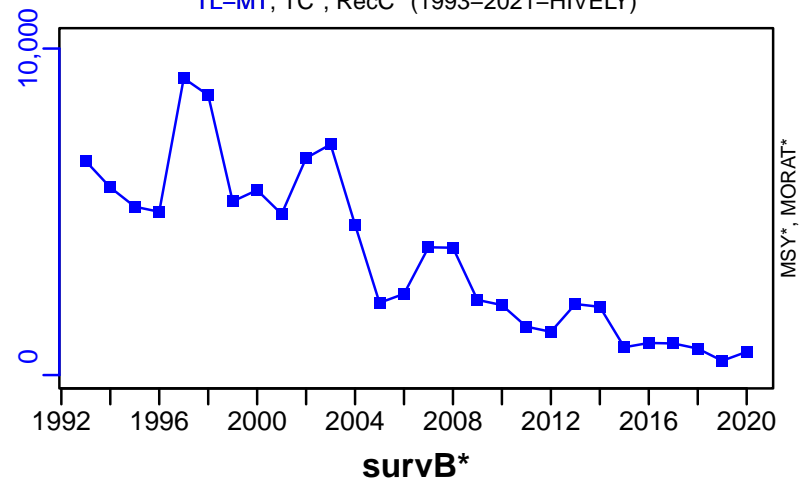
◆ Start Year ◆ End Year \* No Data

# Anchovy Gulf of Lions [ANCHMEDGSA7]



# Anchovy Gulf of Lions [ANCHMEDGSA7]

TL-MT, TC\*, RecC\* (1993–2021–HIVELY)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

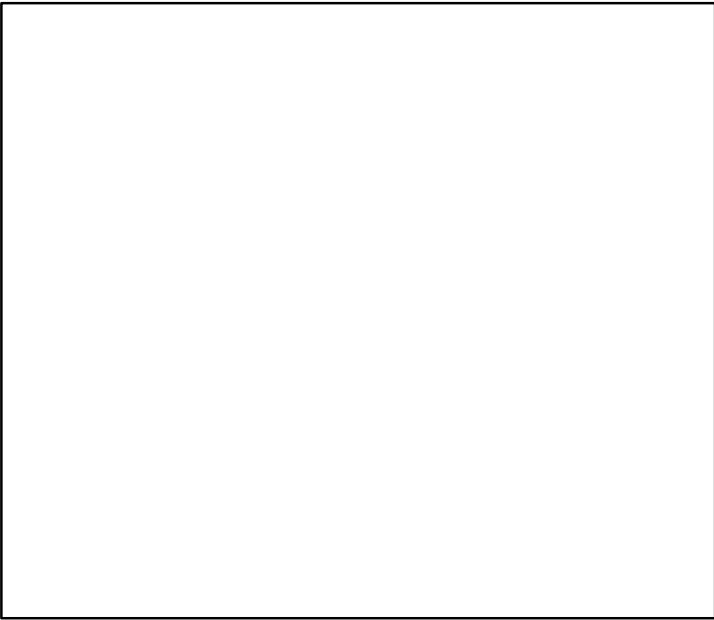
## Anchovy Geographical Sub-Areas 9-11 [ANCHMEDGSA9-11]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Engraulis encrasicolus  |
| <b>Current Assess ID</b>    | STECF-ANCHMEDGSA9-11-2009-2016-MEDIMP2021-2                                   |
| <b>Area</b>                 | Geographical Sub-Areas 9-11   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2016  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2016      | 0.22  |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2016      | 0.22  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |               |     |     |
|-------------------|------------------|-----------|---------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value    | Sex | Age |
| <b>TB</b>         | -                | -         | -             | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2016      | 39,011        | -   | -   |
| <b>TN</b>         | -                | -         | -             | -   | -   |
| <b>R</b>          | R-E00            | 2016      | 6,150,093,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2016      | 0.336         | -   | -   |
| <b>ER</b>         | -                | -         | -             | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 8931          |     |     |
| <b>TL</b>         | -                | -         | -             |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -             |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2016      | 1.527         |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -             |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -             |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2016      | 1.527         |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -             |     |     |

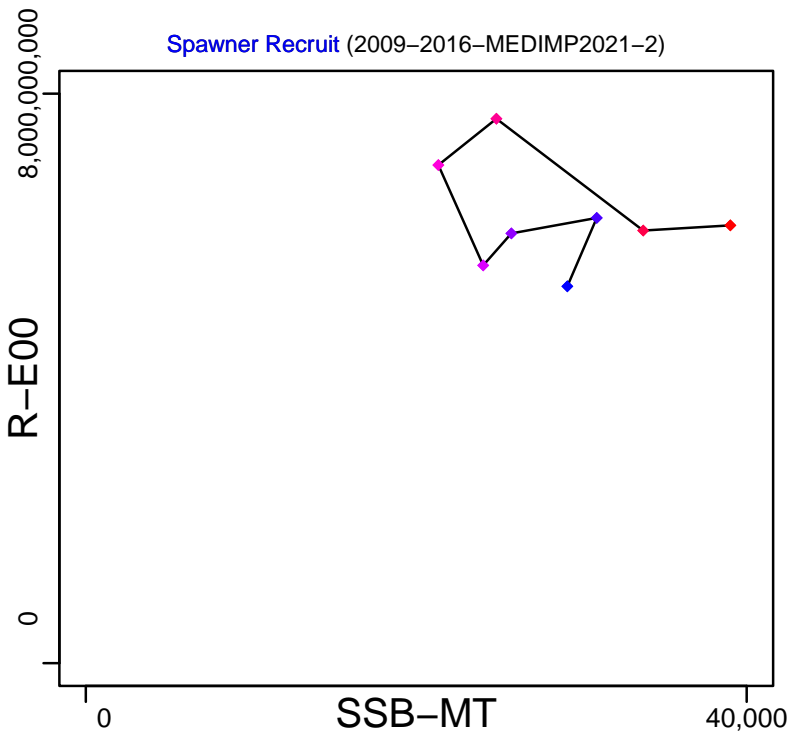
**Kobe MSY\***



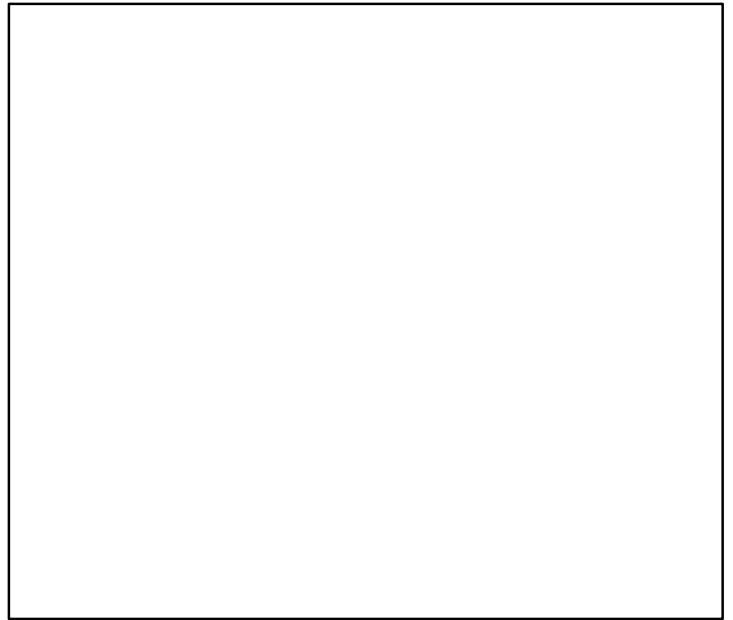
**Kobe MGT\***



**Spawner Recruit** (2009–2016–MEDIMP2021–2)



**Production\***



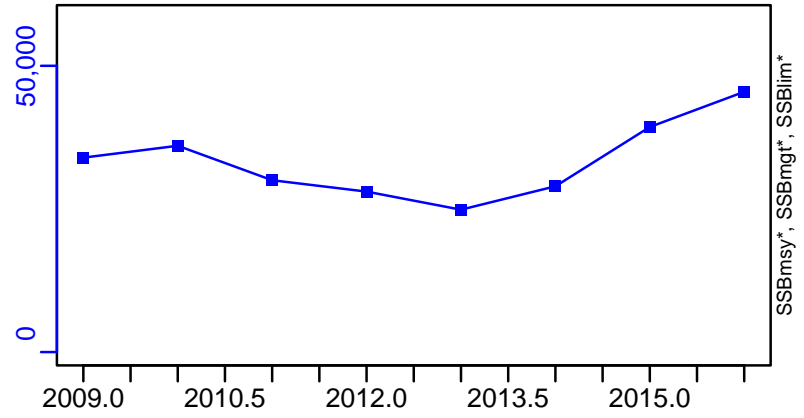
◆ Start Year ◆ End Year \* No Data

# Anchovy Geographical Sub-Areas 9-11 [ANCHMEDGSA9-11]

TB\*



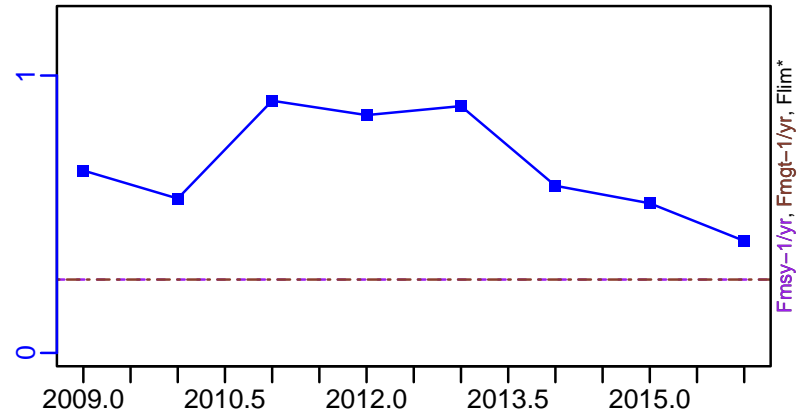
SSB-MT (2009-2016-MEDIMP2021-2)



TN \*



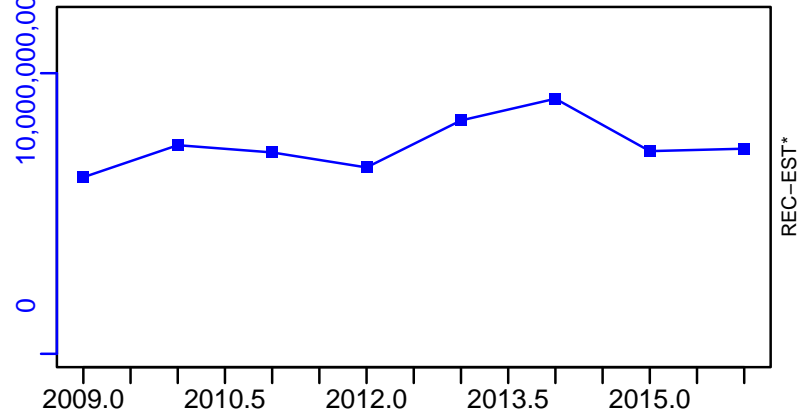
F-1/yr (2009-2016-MEDIMP2021-2)



ER\*

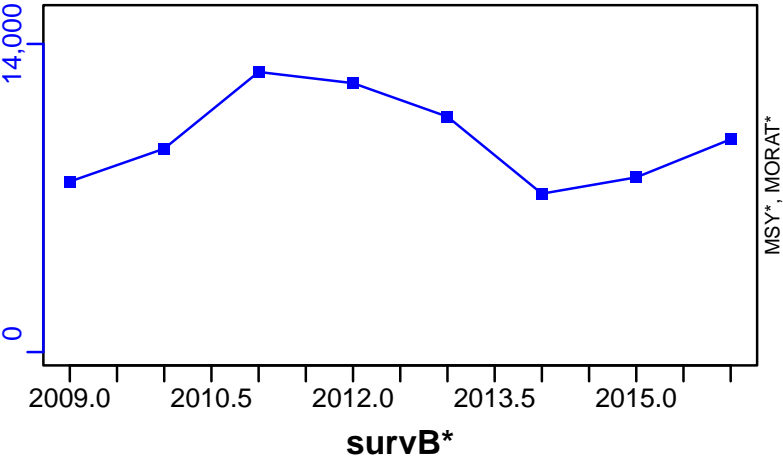


R-E00 (2009-2016-MEDIMP2021-2)



Anchovy Geographical Sub-Areas 9-11 [ANCHMEDGSA9-11]

TC-MT, TL\*, RecC\* (2009-2016-MEDIMP2021-2)



TAC\*, Cpair\*, Cadv\*



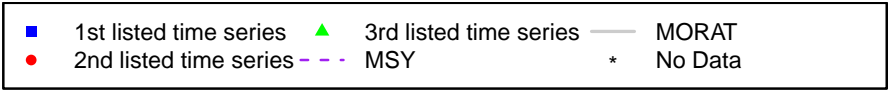
CPUE\*



EFFORT\*



CdivMSY\*



**Black bellied angler Malta Island and South of Sicily (GSA 15, 16)**  
**[ANGLMEDGSA15-16]**

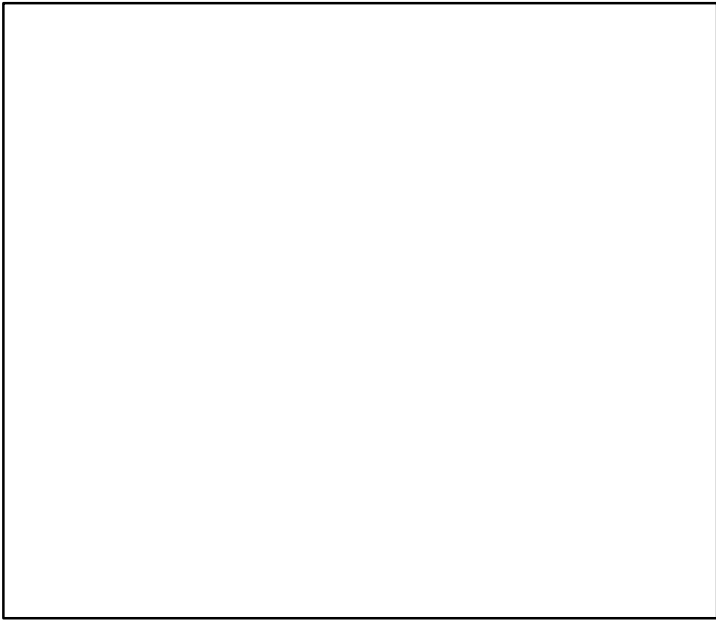
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Lophius budegassa   |
| <b>Current Assess ID</b>    | STECF-ANGLMEDGSA15-16-2006-2011-OSIO  |
| <b>Area</b>                 | Malta Island and South of Sicily (GSA 15, 16)                                 |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2010, 2011  |

| Reference Points |                |           |       |
|------------------|----------------|-----------|-------|
| Type             | ID             | Asmt Year | Value |
| <b>TBmsy</b>     | -              | -         | -     |
| <b>SSBmsy</b>    | -              | -         | -     |
| <b>Fmsy</b>      | Fmsy-extr-1/yr | 2010      | 0.165 |
| <b>ERmsy</b>     | -              | -         | -     |
| <b>TBmgt</b>     | -              | -         | -     |
| <b>SSBmgt</b>    | -              | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr      | 2011      | 0.16  |
| <b>ERmgt</b>     | -              | -         | -     |
| <b>TB0</b>       | -              | -         | -     |
| <b>SSB0</b>      | -              | -         | -     |
| <b>MSY</b>       | -              | -         | -     |
| <b>M</b>         | M-1/yr         | 2010      | 0.2   |
| <b>TBlim</b>     | -              | -         | -     |
| <b>SSBlim</b>    | -              | -         | -     |
| <b>Flim</b>      | -              | -         | -     |
| <b>ERlim</b>     | -              | -         | -     |

| Time Series       |                        |           |            |     |     |
|-------------------|------------------------|-----------|------------|-----|-----|
| Type              | ID                     | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                      | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT                 | 2011      | 536        | -   | -   |
| <b>TN</b>         | -                      | -         | -          | -   | -   |
| <b>R</b>          | R-E00                  | 2011      | 1,100,000  | -   | -   |
| <b>F</b>          | F-1/yr                 | 2011      | 0.351      | -   | -   |
| <b>ER</b>         | -                      | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT                  | 2011      | 279        |     |     |
| <b>TL</b>         | -                      | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                      | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                      | -         | -          |     |     |
| <b>F/Fmsy</b>     | FdivFmsy-dimensionless | 2010      | 2.07       |     |     |
| <b>ER/ERmsy</b>   | -                      | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                      | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                      | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr       | 2011      | 2.194      |     |     |
| <b>ER/ERmgt</b>   | -                      | -         | -          |     |     |



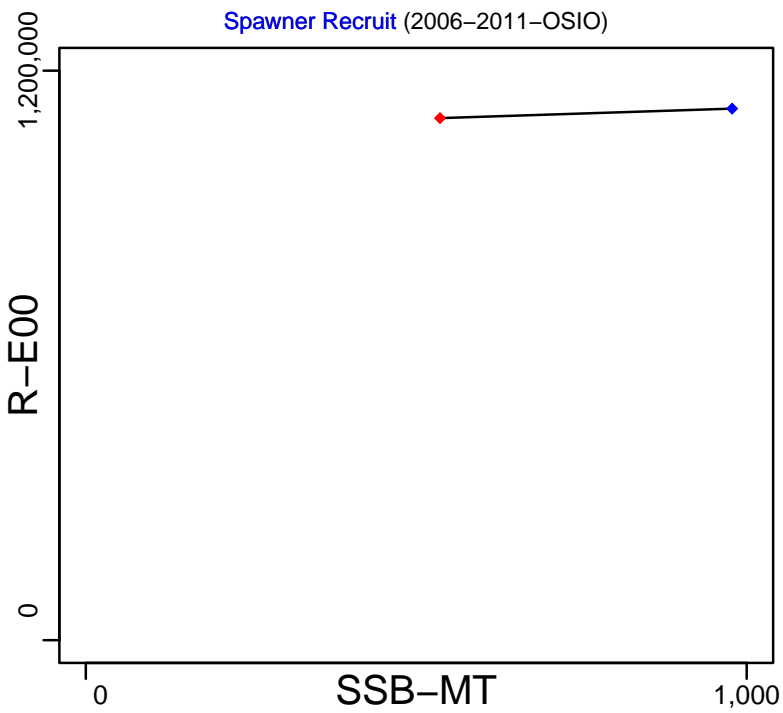
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2006-2011-OSIO)



Production\*



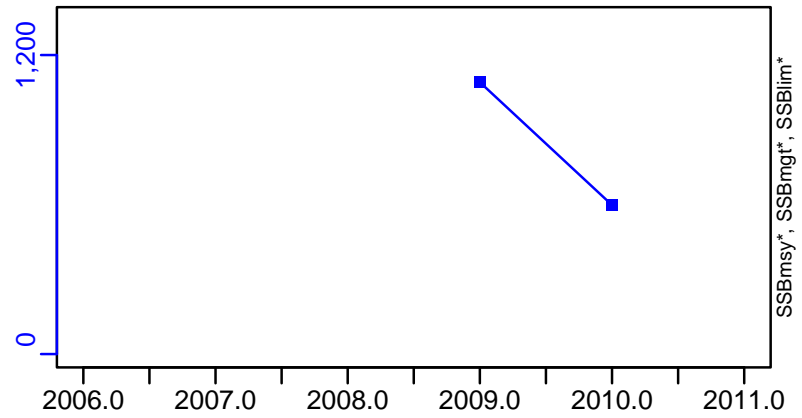
◆ Start Year ◆ End Year \* No Data

Black bellied angler Malta Island and South of Sicily (GSA 15, 16) [ANGLMEDGSA15-16]

TB\*



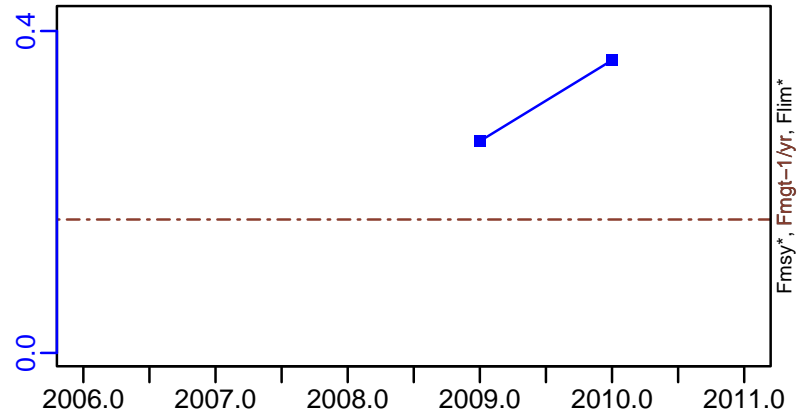
SSB-MT (2006-2011-OSIO)



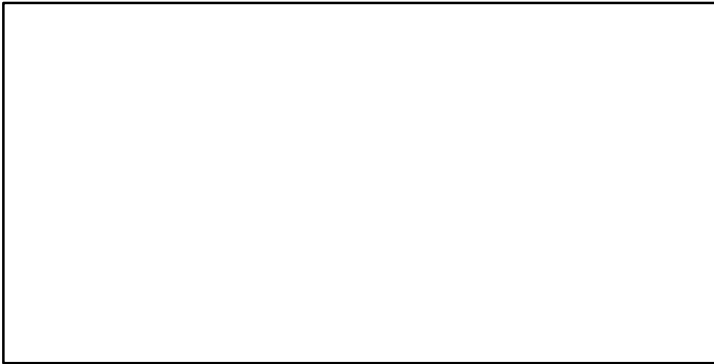
TN \*



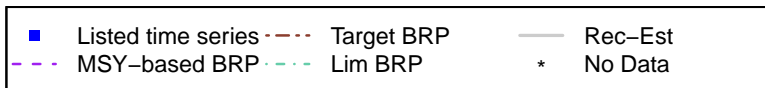
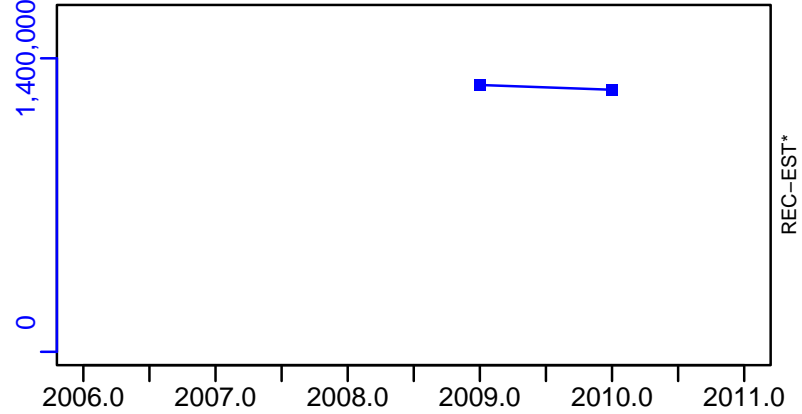
F-1/yr (2006-2011-OSIO)



ER\*



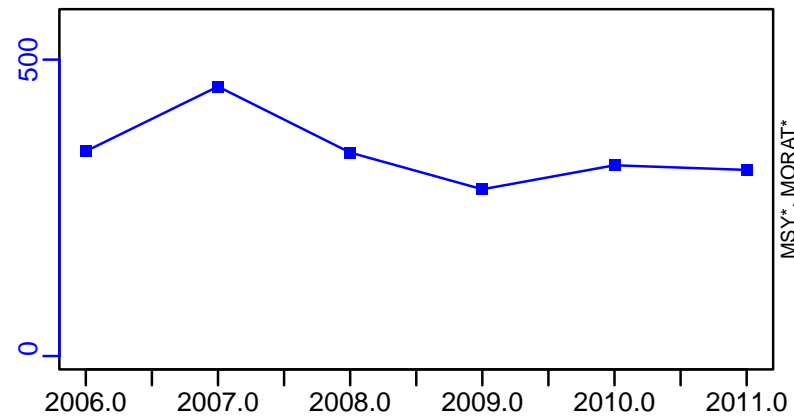
R-E00 (2006-2011-OSIO)



# Black bellied angler Malta Island and South of Sicily (GSA 15, 16) [ANGLMEDGSA15-16]

TC-MT, TL\*, RecC\* (2006-2011-OSIO)

TAC\*, Cpair\*, Cadv\*



survB\*

CPUE\*

EFFORT\*

CdivMSY\*

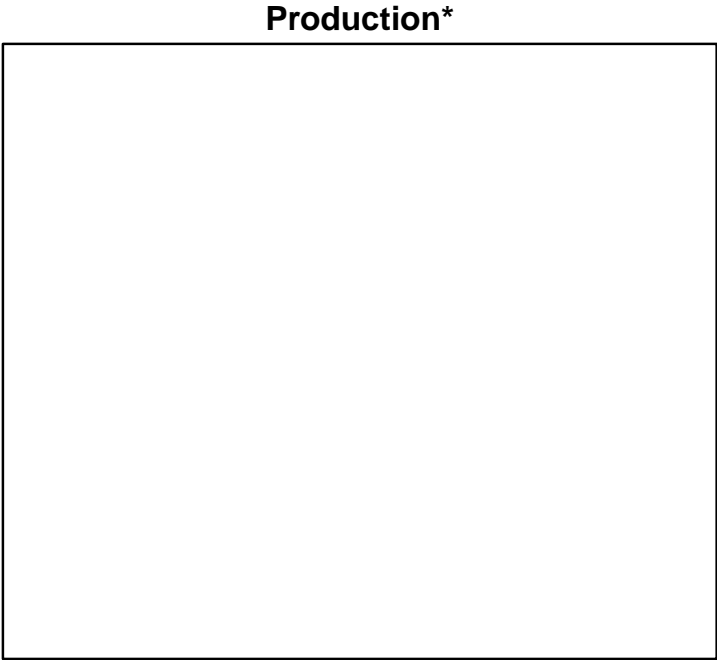
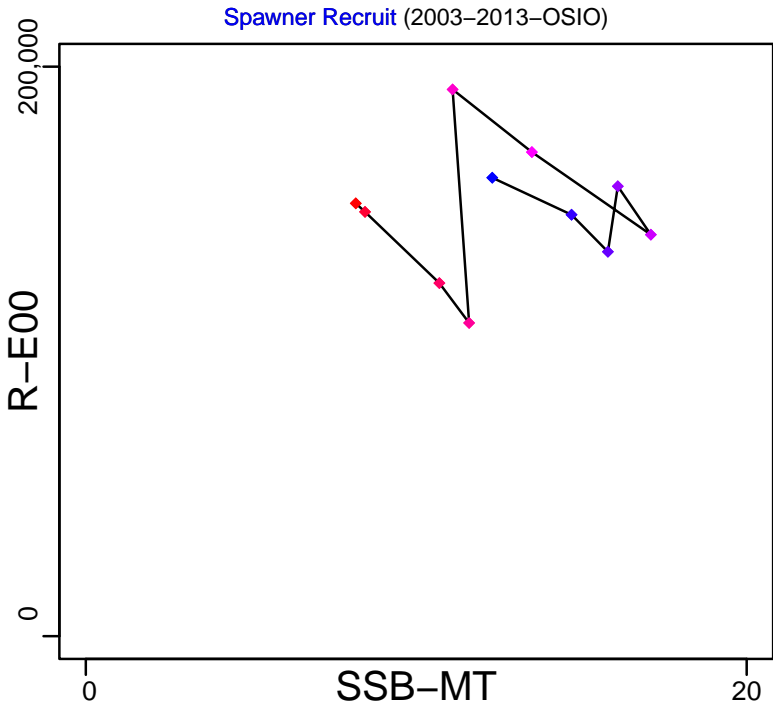
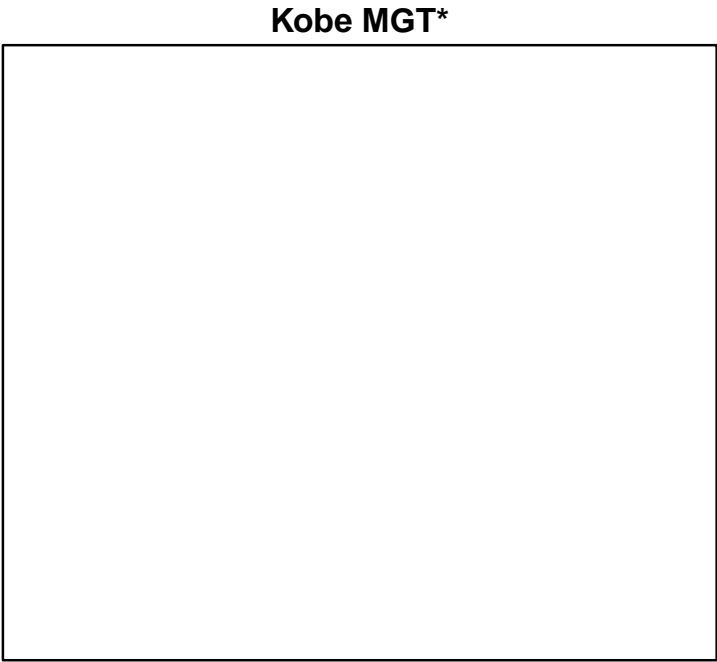
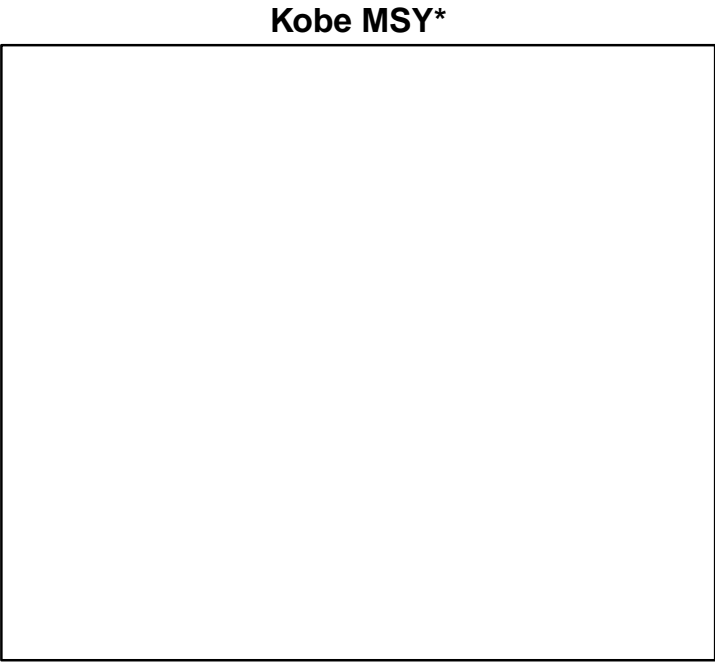
■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Black bellied angler Balearic Island [ANGLMEDGSA5]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Lophius budegassa   |
| <b>Current Assess ID</b>    | STECF-ANGLMEDGSA5-2003-2013-OSIO  |
| <b>Area</b>                 | Balearic Island   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2013  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2013      | 0.08  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2013      | 8          | -   | 5+  |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2013      | 152,000    | -   | -   |
| <b>F</b>          | F-1/yr           | 2013      | 0.611      | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2013      | 11         |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2013      | 7.638      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



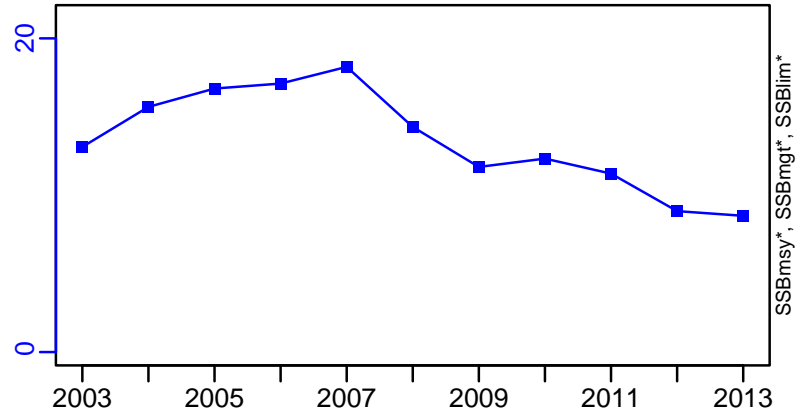
◆ Start Year ◆ End Year \* No Data

# Black bellied angler Balearic Island [ANGLMEDGSA5]

TB\*



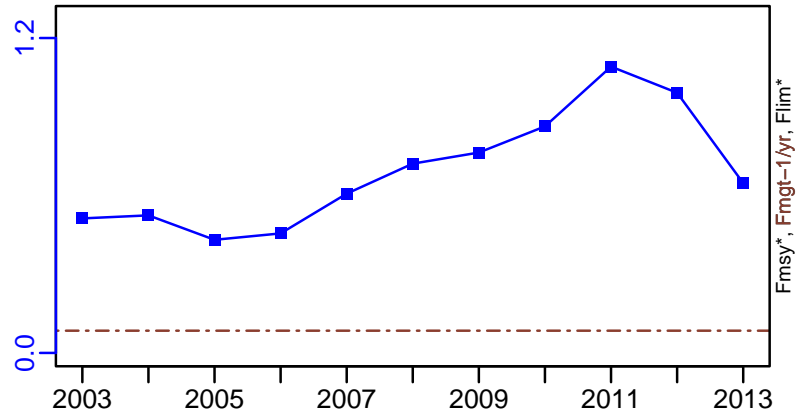
SSB-MT (2003–2013–OSIO)



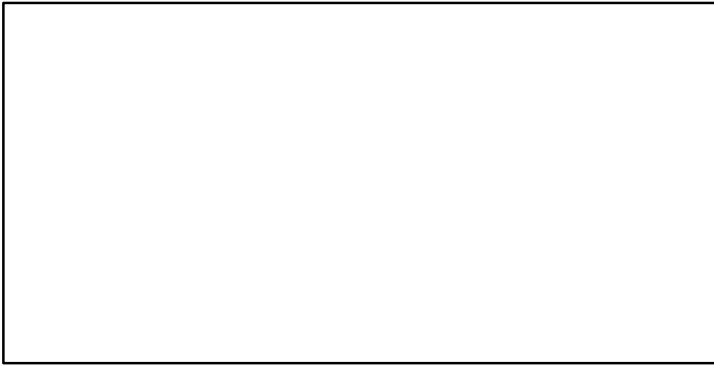
TN \*



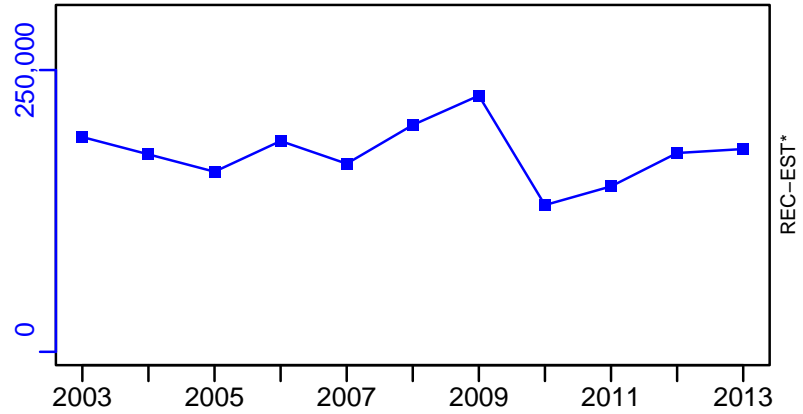
F-1/yr (2003–2013–OSIO)



ER\*

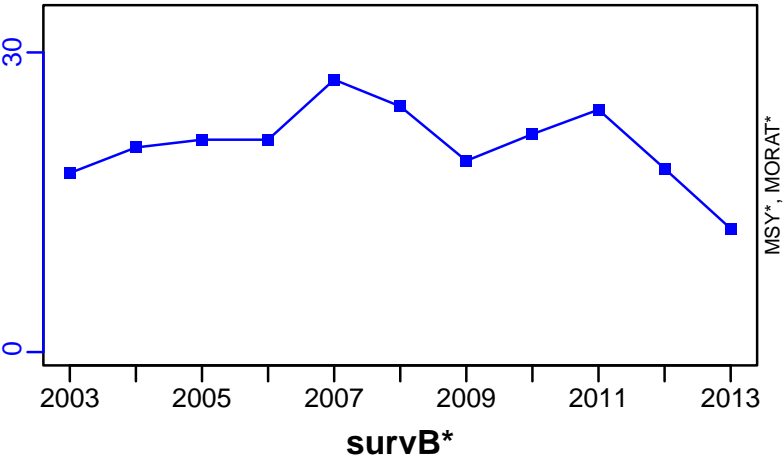


R-E00 (2003–2013–OSIO)



Black bellied angler Balearic Island [ANGLMEDGSA5]

TC-MT, TL\*, RecC\* (2003-2013-OSIO)



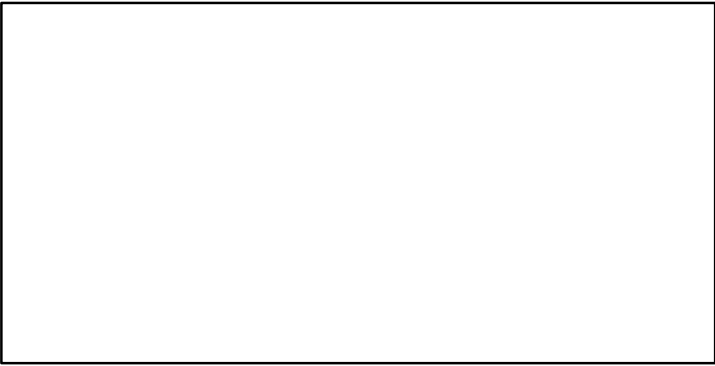
TAC\*, Cpair\*, Cadv\*



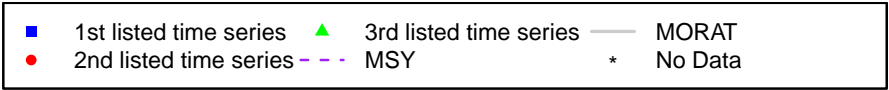
CPUE\*



EFFORT\*



CdivMSY\*



## Black bellied angler Northern Spain [ANGLMEDGSA6]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Lophius budegassa   |
| <b>Current Assess ID</b>    | STECF-ANGLMEDGSA6-2004-2013-OSIO  |
| <b>Area</b>                 | Northern Spain  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2013  |

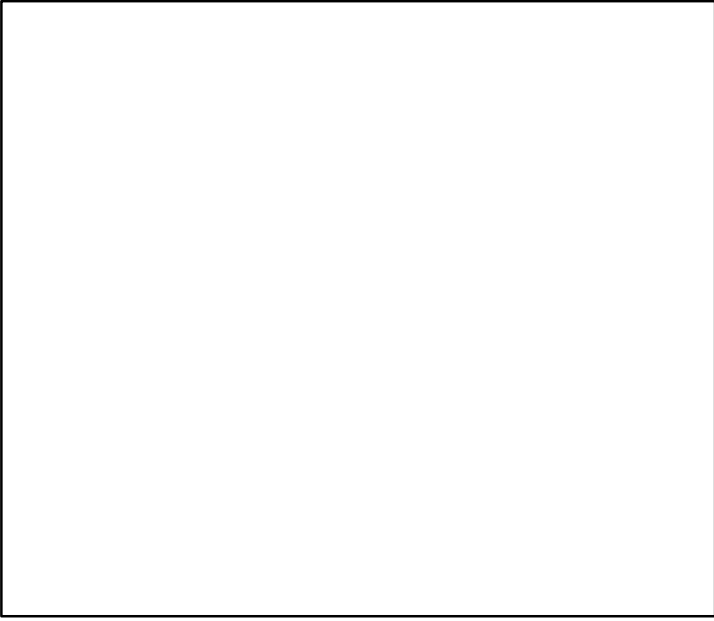
| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2013      | 0.14  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2013      | 488        | -   | 5+  |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2013      | 9,510,000  | -   | -   |
| <b>F</b>          | F-1/yr           | 2013      | 0.909      | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2013      | 1050       |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2013      | 6.493      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

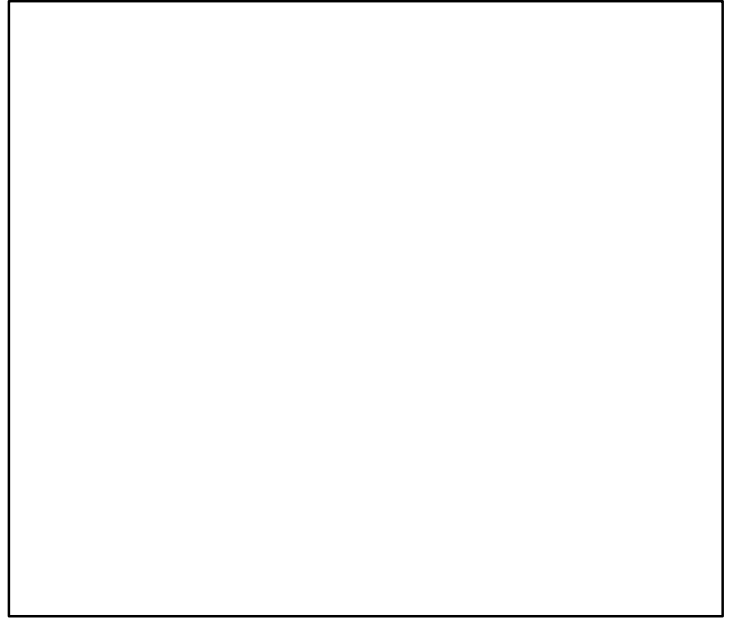


Black bellied angler Northern Spain [ANGLMEDGSA6]

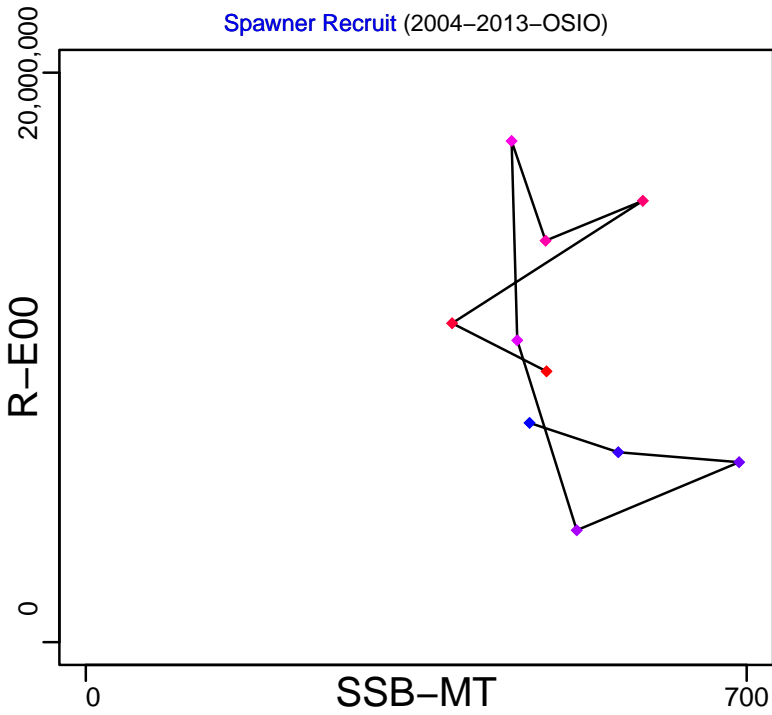
Kobe MSY\*



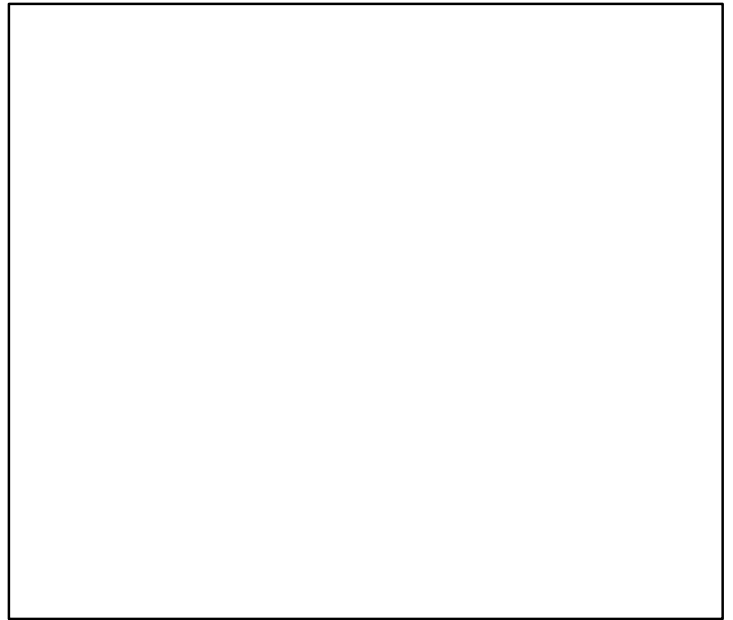
Kobe MGT\*



Spawner Recruit (2004–2013–OSIO)



Production\*



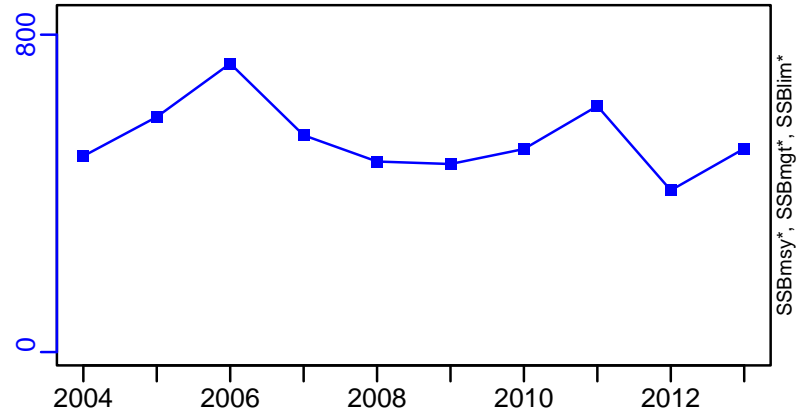
◆ Start Year ◆ End Year \* No Data

# Black bellied angler Northern Spain [ANGLMEDGSA6]

TB\*



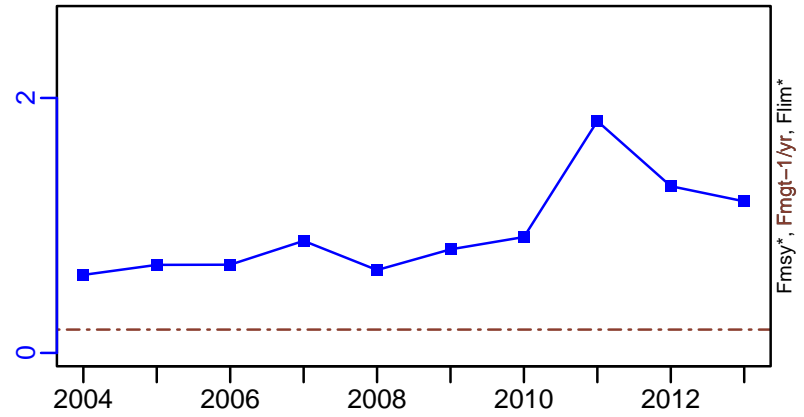
SSB-MT (2004–2013–OSIO)



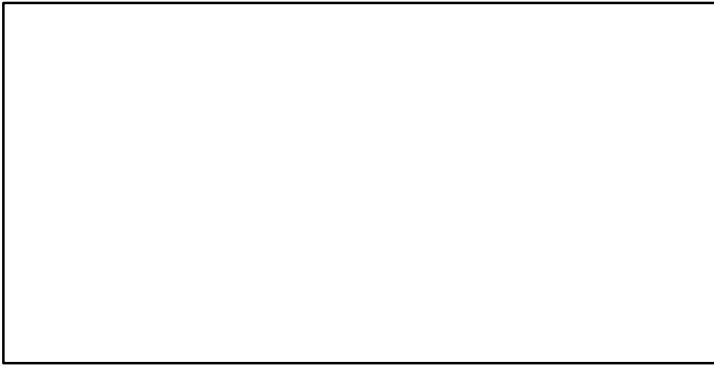
TN \*



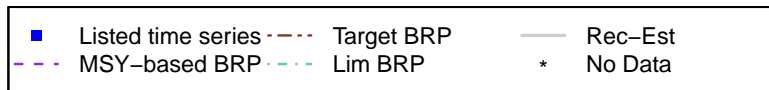
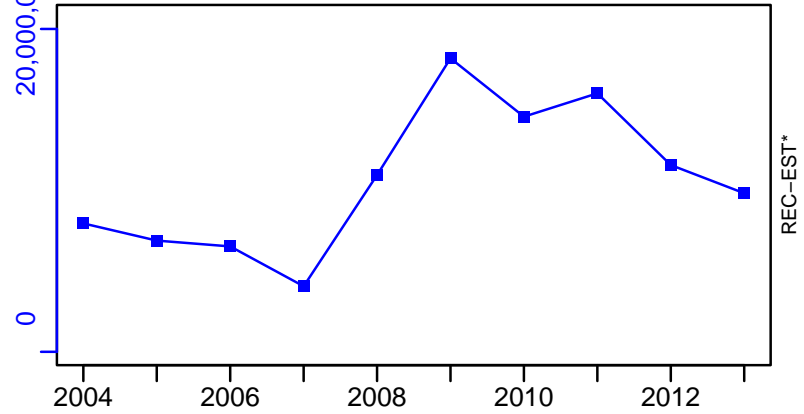
F-1/yr (2004–2013–OSIO)



ER\*

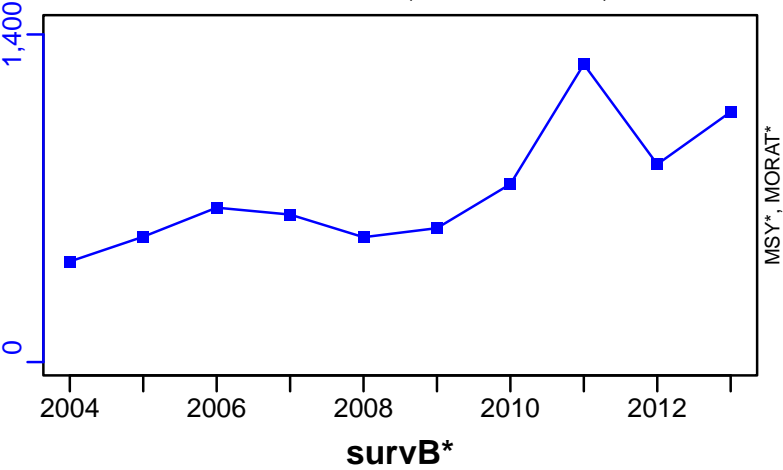


R-E00 (2004–2013–OSIO)



Black bellied angler Northern Spain [ANGLMEDGSA6]

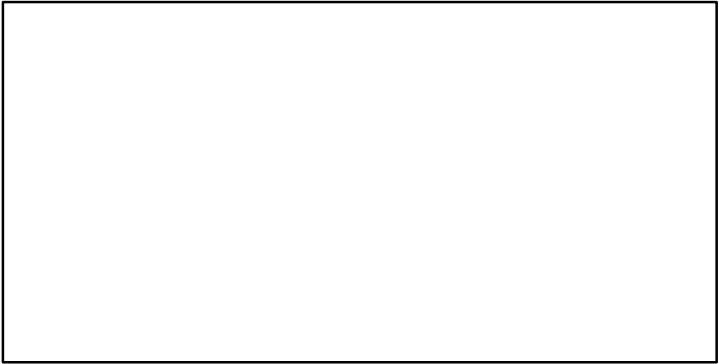
TC-MT, TL\*, RecC\* (2004-2013-OSIO)



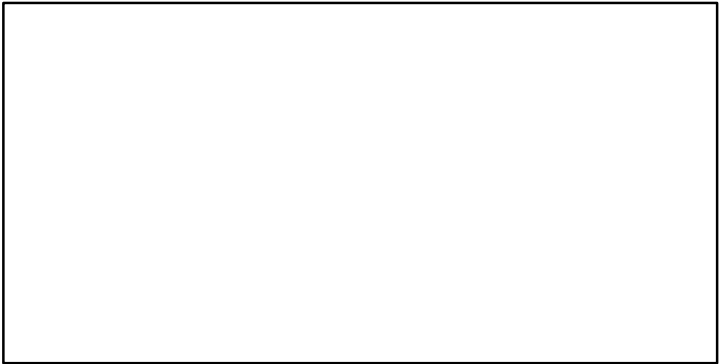
TAC\*, Cpair\*, Cadv\*



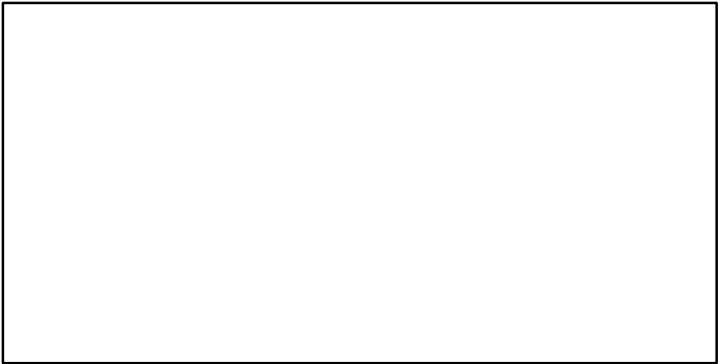
CPUE\*



EFFORT\*



CdivMSY\*



## Black bellied angler Gulf of Lions [ANGLMEDGSA7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Lophius budegassa   |
| <b>Current Assess ID</b>    | STECF-ANGLMEDGSA7-2005-2011-OSIO  |
| <b>Area</b>                 | Gulf of Lions   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2011      | 0.29  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |       |           |            |     |     |
|-------------|-------|-----------|------------|-----|-----|
| Type        | ID    | Asmt Year | Curr Value | Sex | Age |
| TB          | -     | -         | -          | -   | -   |
| SSB         | -     | -         | -          | -   | -   |
| TN          | -     | -         | -          | -   | -   |
| R           | -     | -         | -          | -   | -   |
| F           | -     | -         | -          | -   | -   |
| ER          | -     | -         | -          | -   | -   |
| TC          | TC-MT | 2011      | 355        |     |     |
| TL          | -     | -         | -          |     |     |
| TB/TBmsy    | -     | -         | -          |     |     |
| SSB/SSBmsy  | -     | -         | -          |     |     |
| F/Fmsy      | -     | -         | -          |     |     |
| ER/ERmsy    | -     | -         | -          |     |     |
| TB/TBmgt    | -     | -         | -          |     |     |
| SSB/SSBmgt  | -     | -         | -          |     |     |
| F/Fmgt      | -     | -         | -          |     |     |
| ER/ERmgt    | -     | -         | -          |     |     |

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Black bellied angler Gulf of Lions [ANGLMEDGSA7]

TB\*



SSB\*



TN \*



F\*



ER\*

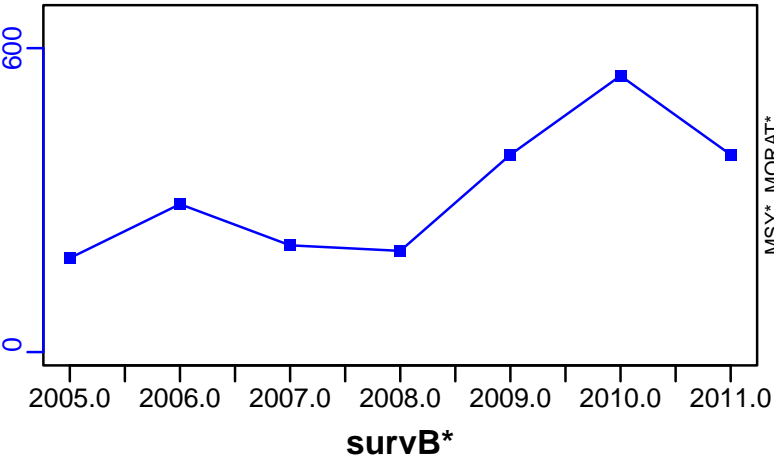


Recruits\*



Black bellied angler Gulf of Lions [ANGLMEDGSA7]

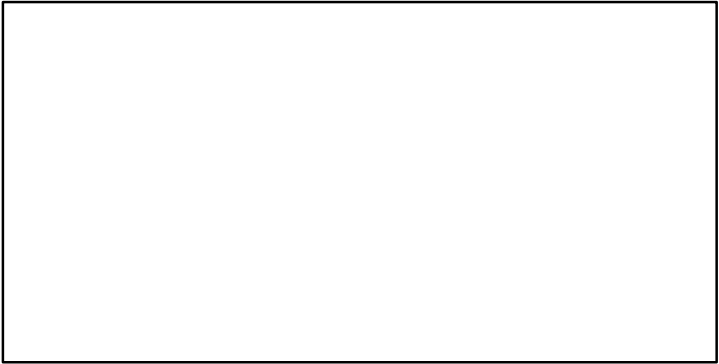
TC-MT, TL\*, RecC\* (2005-2011-OSIO)



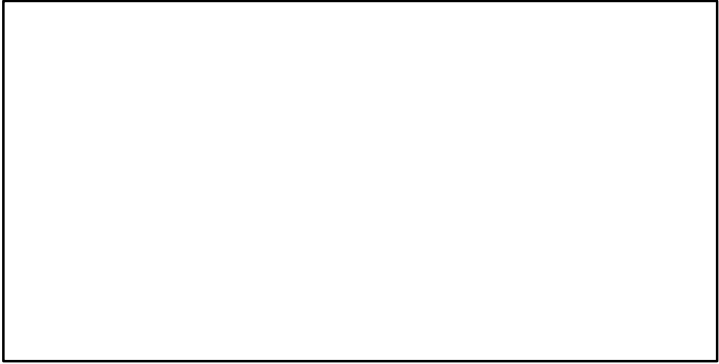
TAC\*, Cpair\*, Cadv\*



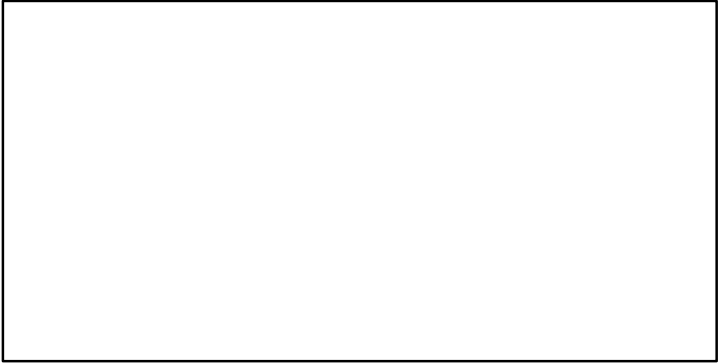
CPUE\*



EFFORT\*



CdivMSY\*



## Blue whiting Northern Alboran Sea [BWHITMEDGSA1]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Micromesistius poutassou  |
| <b>Current Assess ID</b>    | STECF-BWHITMEDGSA1-2002-2011-OSIO   |
| <b>Area</b>                 | Northern Alboran Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2011      | 0.4   |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2011      | 428        | -   | 2+  |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2011      | 30,300,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2011      | 1.4        | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2011      | 644        |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2011      | 3.5        |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



Blue whiting Northern Alboran Sea [BWHITMEDGSA1]

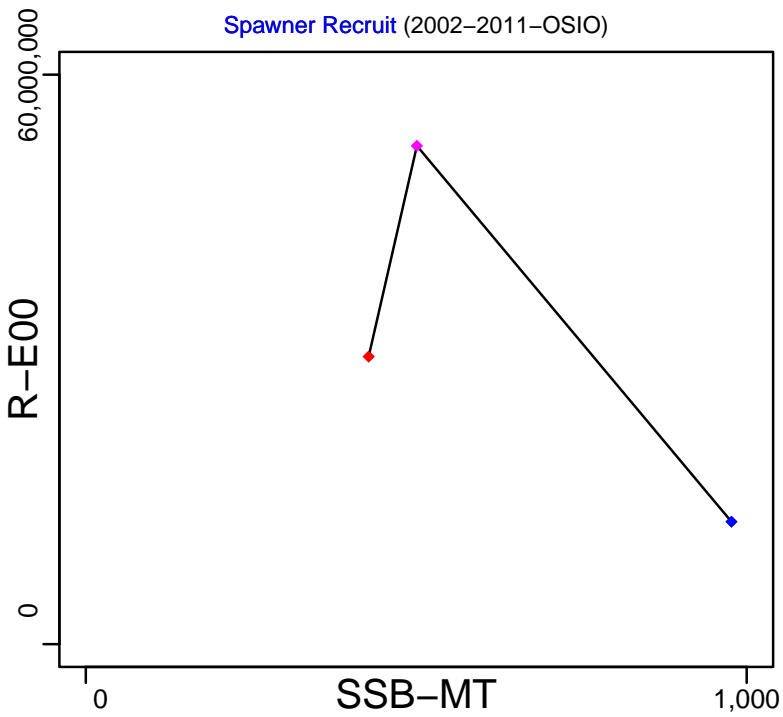
Kobe MSY\*



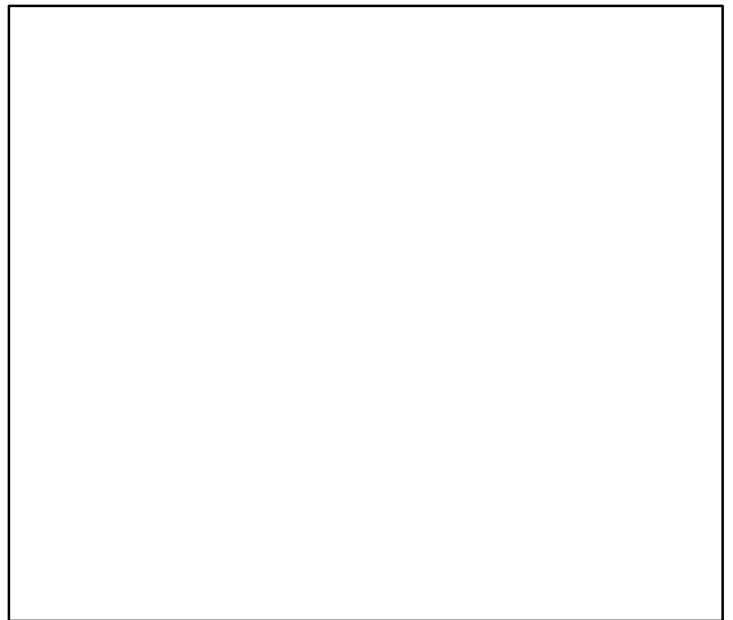
Kobe MGT\*



Spawner Recruit (2002–2011–OSIO)



Production\*



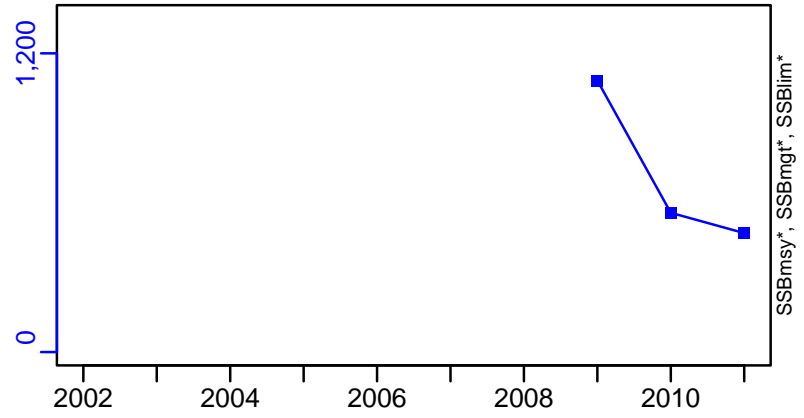
◆ Start Year ◆ End Year \* No Data

# Blue whiting Northern Alboran Sea [BWHITMEDGSA1]

TB\*



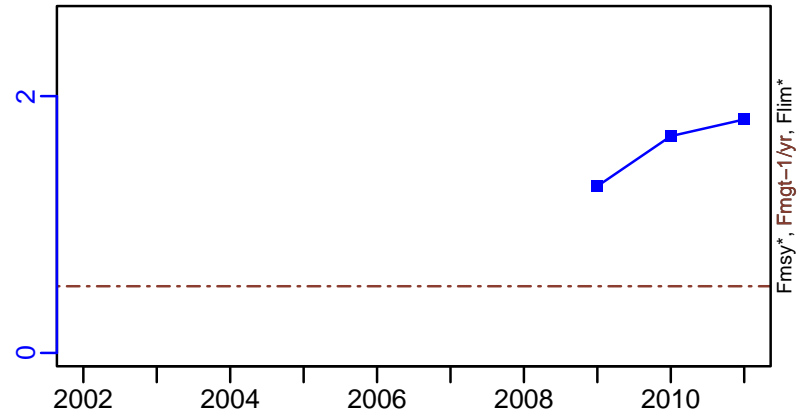
SSB-MT (2002–2011–OSIO)



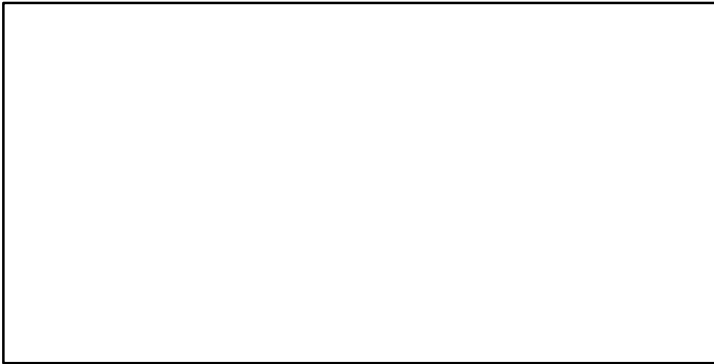
TN \*



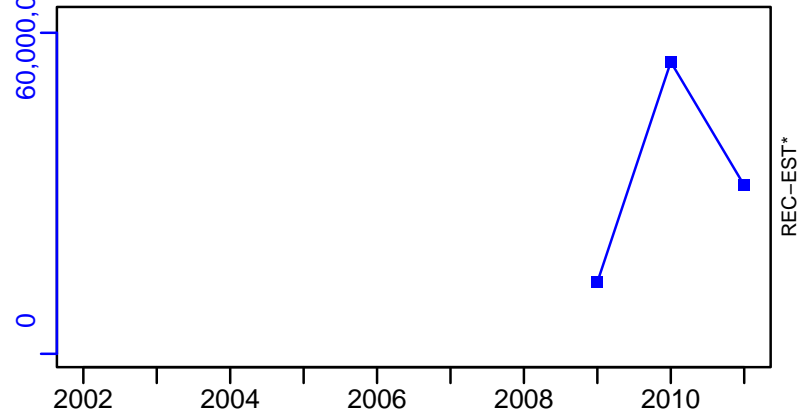
F-1/yr (2002–2011–OSIO)



ER\*



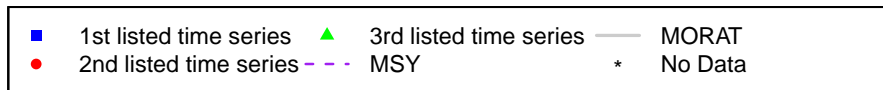
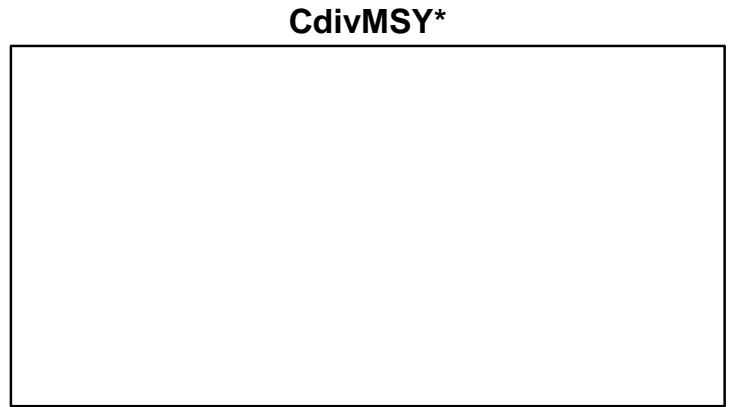
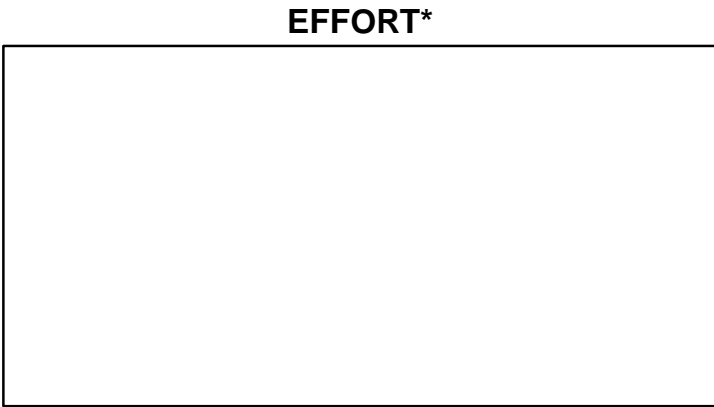
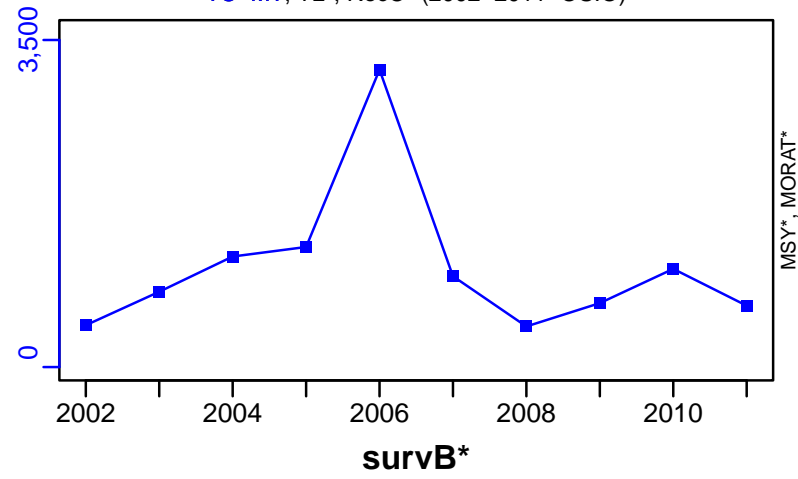
R-E00 (2002–2011–OSIO)



# Blue whiting Northern Alboran Sea [BWHITMEDGSA1]

TC-MT, TL\*, RecC\* (2002-2011-OSIO)

TAC\*, Cpair\*, Cadv\*

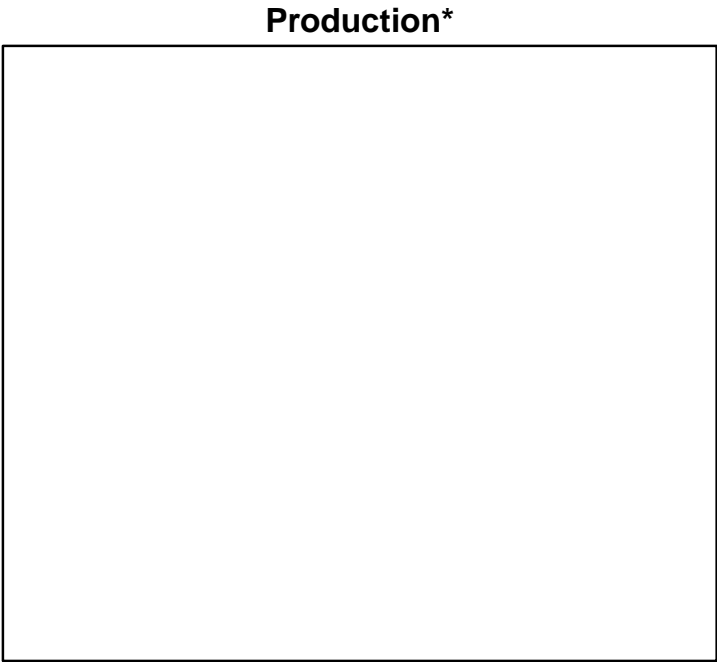
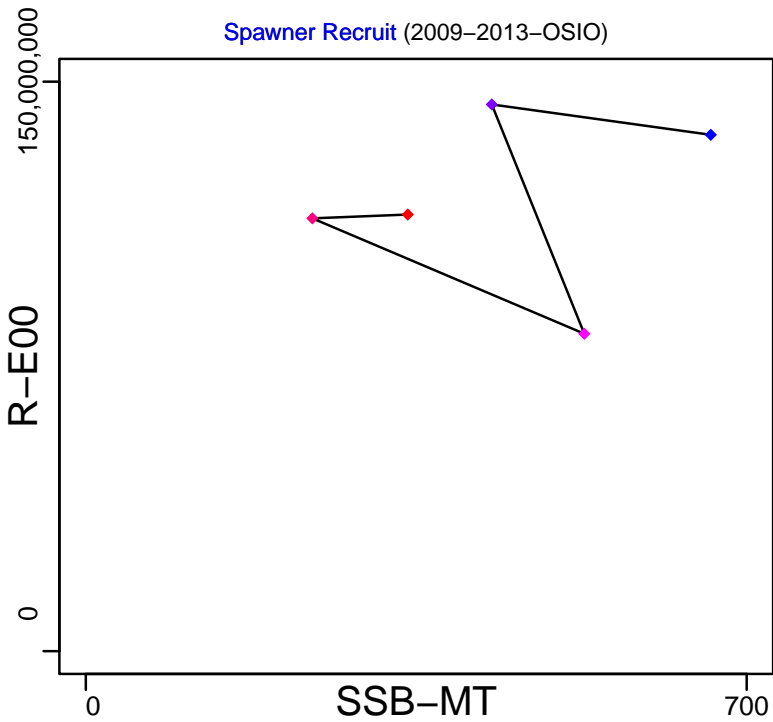
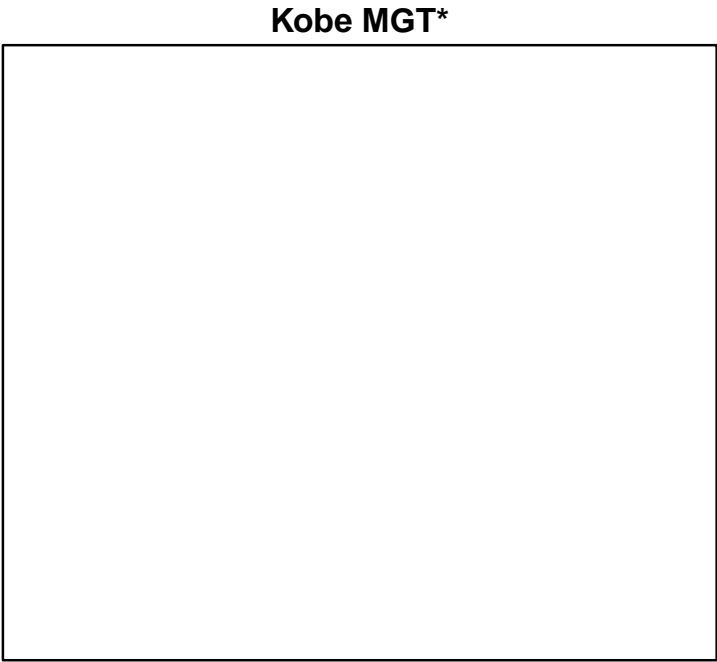
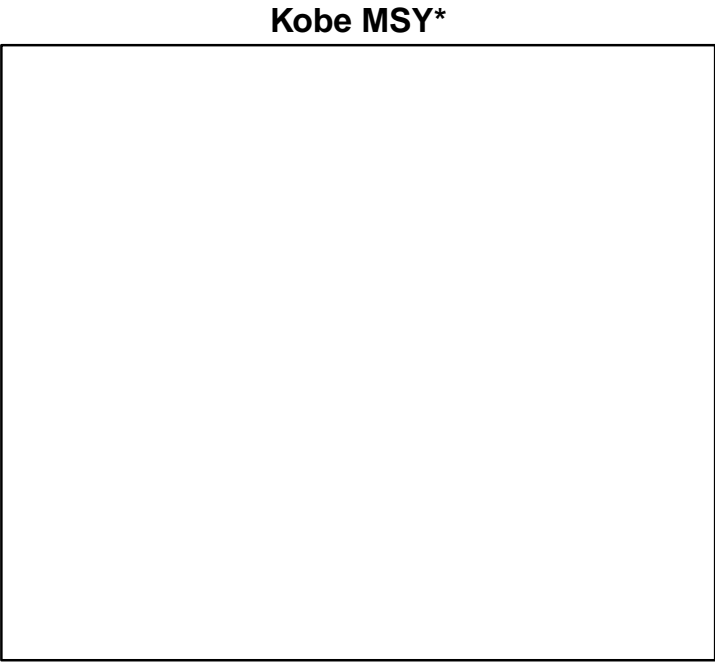


## Blue whiting Northern Spain [BWHITMEDGSA6]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Micromesistius poutassou  |
| <b>Current Assess ID</b>    | STECF-BWHITMEDGSA6-2009-2013-OSIO   |
| <b>Area</b>                 | Northern Spain  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2013  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2013      | 0.159 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |                    |     |     |
|-------------------|------------------|-----------|--------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value         | Sex | Age |
| <b>TB</b>         | -                | -         | -                  | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2013      | 341                | -   | 2+  |
| <b>TN</b>         | -                | -         | -                  | -   | -   |
| <b>R</b>          | R-E00            | 2013      | $1.15 \times 10^8$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2013      | 1.26               | -   | -   |
| <b>ER</b>         | -                | -         | -                  | -   | -   |
| <b>TC</b>         | TC-MT            | 2013      | 1020               |     |     |
| <b>TL</b>         | -                | -         | -                  |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                  |     |     |
| <b>F/Fmsy</b>     | -                | -         | -                  |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                  |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                  |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2013      | 7.903              |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                  |     |     |



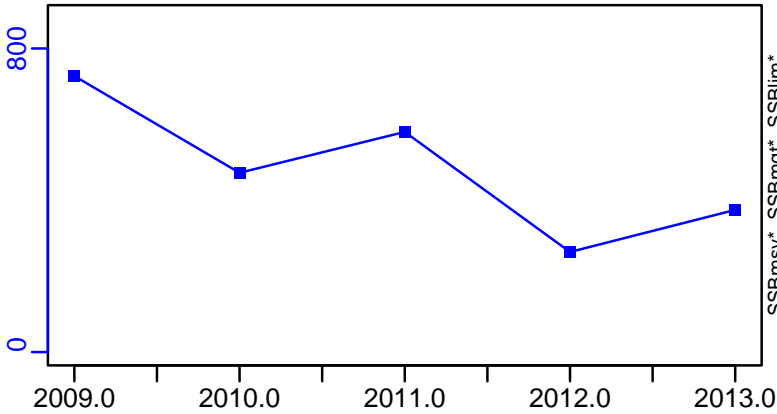
◆ Start Year ◆ End Year \* No Data

Blue whiting Northern Spain [BWHITMEDGSA6]

TB\*



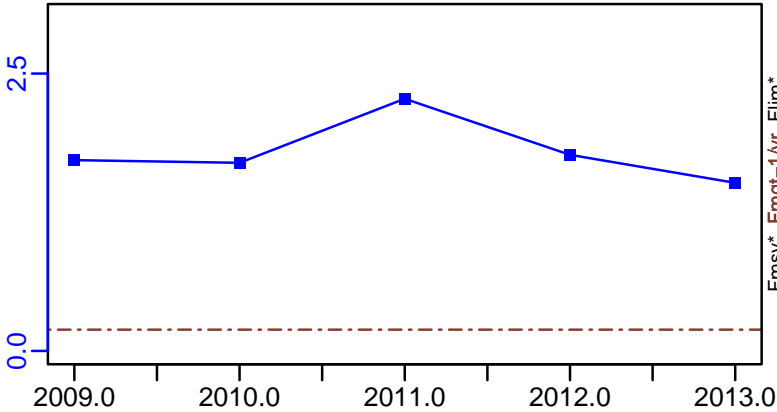
SSB-MT (2009–2013–OSIO)



TN \*



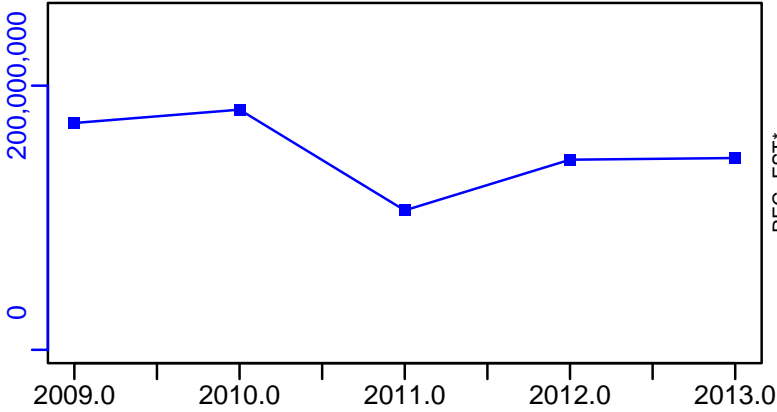
F-1/yr (2009–2013–OSIO)



ER\*

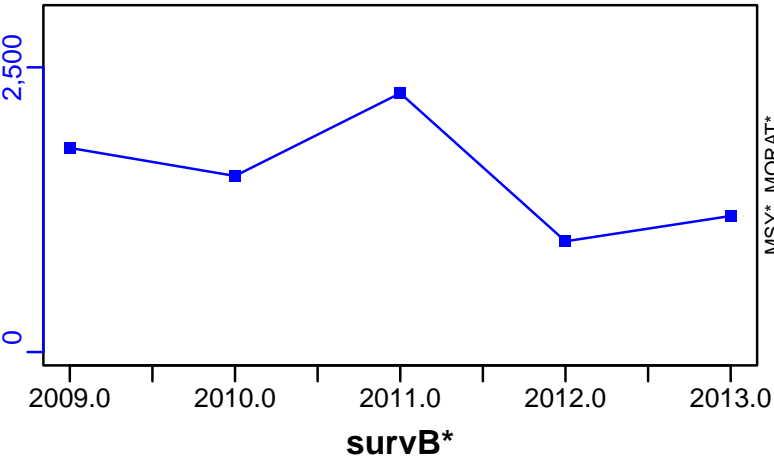


R-E00 (2009–2013–OSIO)



Blue whiting Northern Spain [BWHITMEDGSA6]

TC-MT, TL\*, RecC\* (2009-2013-OSIO)



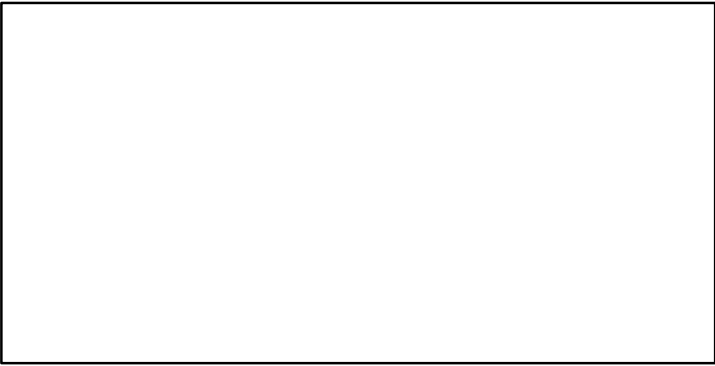
TAC\*, Cpair\*, Cadv\*



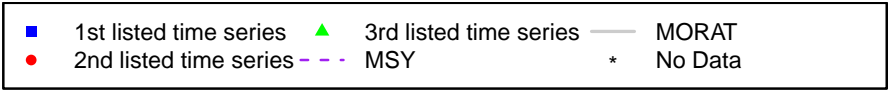
CPUE\*



EFFORT\*



CdivMSY\*



## Blue whiting Ligurian and North Tyrrhenian Sea [BWHITMEDGSA9]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Micromesistius poutassou  |
| <b>Current Assess ID</b>    | STECF-BWHITMEDGSA9-2009-2013-OSIO   |
| <b>Area</b>                 | Ligurian and North Tyrrhenian Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2013  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2013      | 0.328 |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |            |     |     |
|-------------|------------------|-----------|------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value | Sex | Age |
| TB          | -                | -         | -          | -   | -   |
| SSB         | SSB-MT           | 2013      | 281        | -   | 2+  |
| TN          | -                | -         | -          | -   | -   |
| R           | R-E00            | 2013      | 6,880,000  | -   | -   |
| F           | F-1/yr           | 2013      | 0.378      | -   | -   |
| ER          | -                | -         | -          | -   | -   |
| TC          | TC-MT            | 2013      | 102        |     |     |
| TL          | -                | -         | -          |     |     |
| TB/TBmsy    | -                | -         | -          |     |     |
| SSB/SSBmsy  | -                | -         | -          |     |     |
| F/Fmsy      | -                | -         | -          |     |     |
| ER/ERmsy    | -                | -         | -          |     |     |
| TB/TBmgt    | -                | -         | -          |     |     |
| SSB/SSBmgt  | -                | -         | -          |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2013      | 1.151      |     |     |
| ER/ERmgt    | -                | -         | -          |     |     |



Blue whiting Ligurian and North Tyrrhenian Sea [BWHITMEDGSA9]

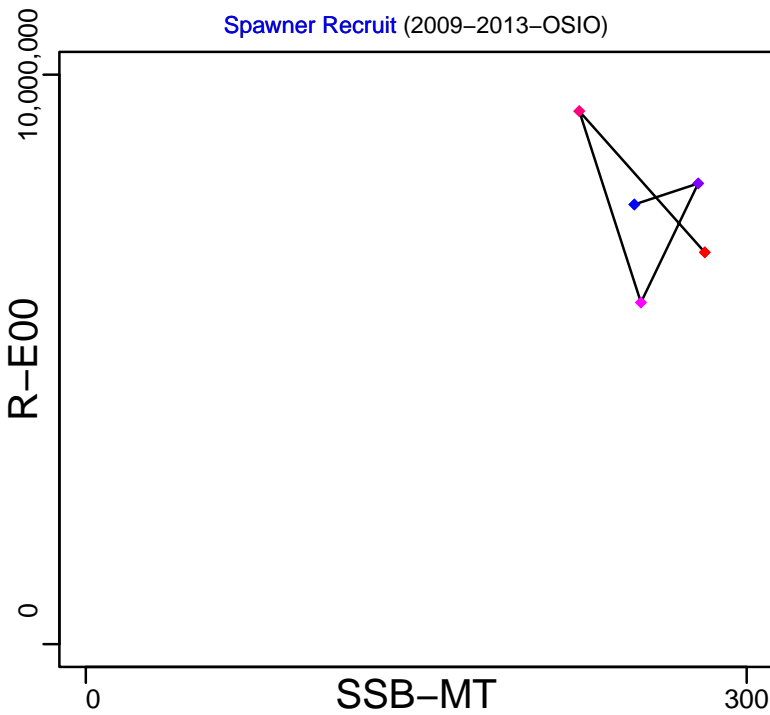
Kobe MSY\*



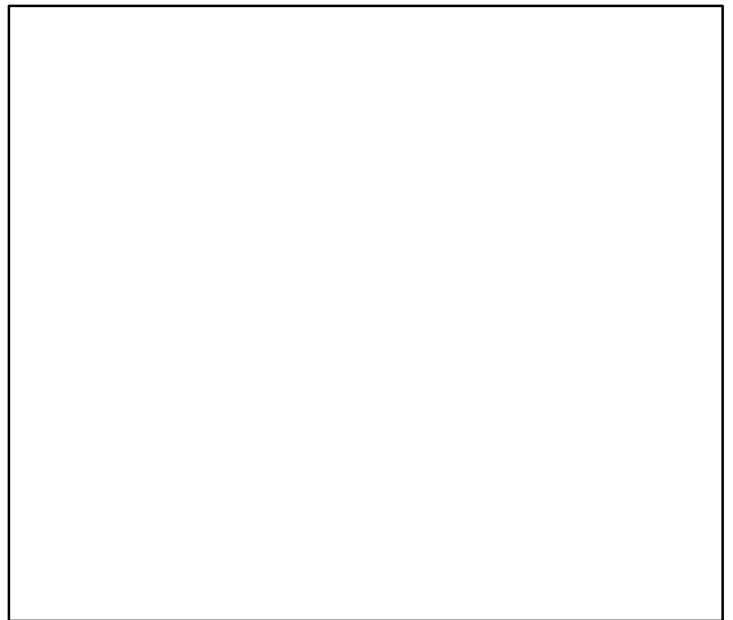
Kobe MGT\*



Spawner Recruit (2009–2013–OSIO)



Production\*



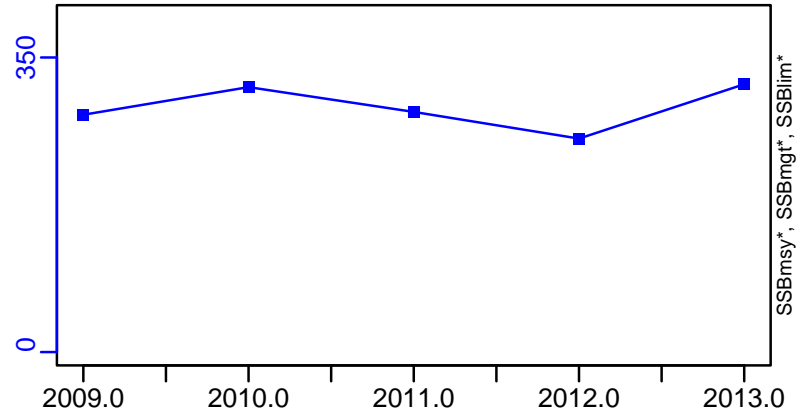
◆ Start Year ◆ End Year \* No Data

Blue whiting Ligurian and North Tyrrhenian Sea [BWHITMEDGSA9]

TB\*



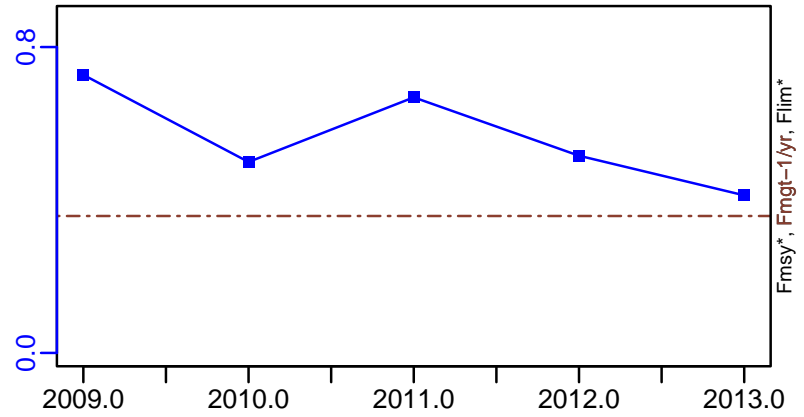
SSB-MT (2009–2013–OSIO)



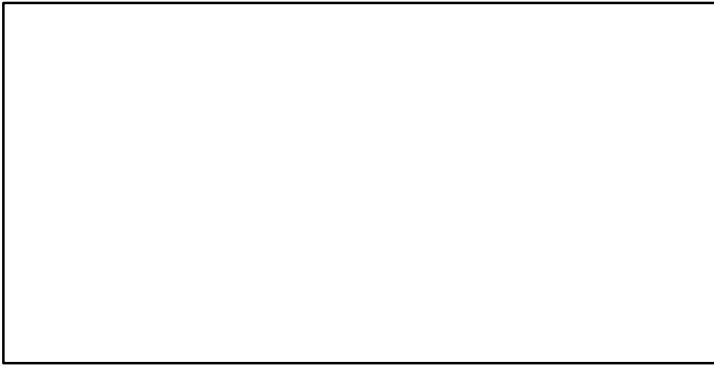
TN \*



F-1/yr (2009–2013–OSIO)



ER\*



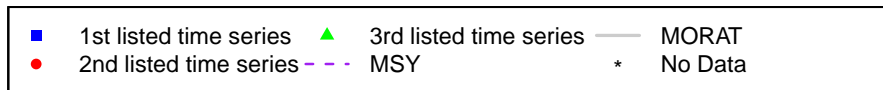
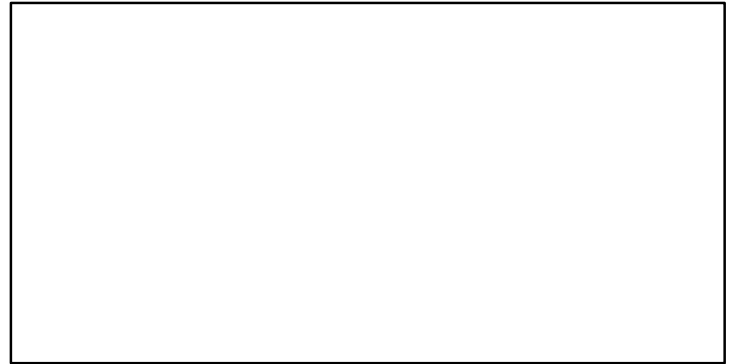
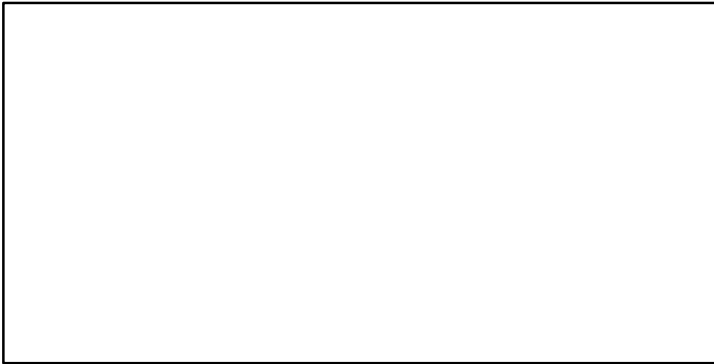
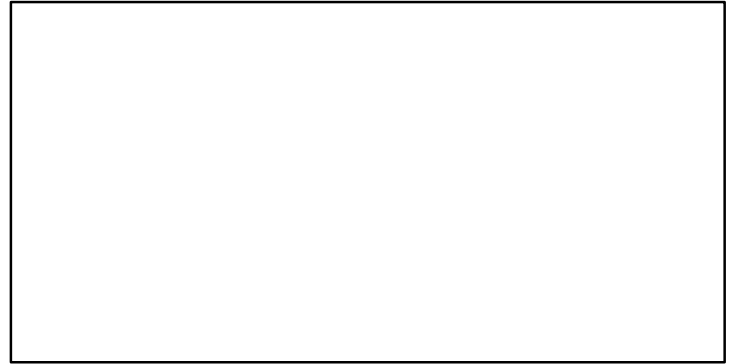
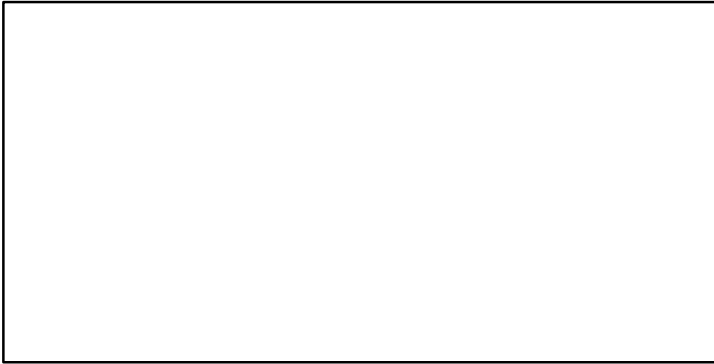
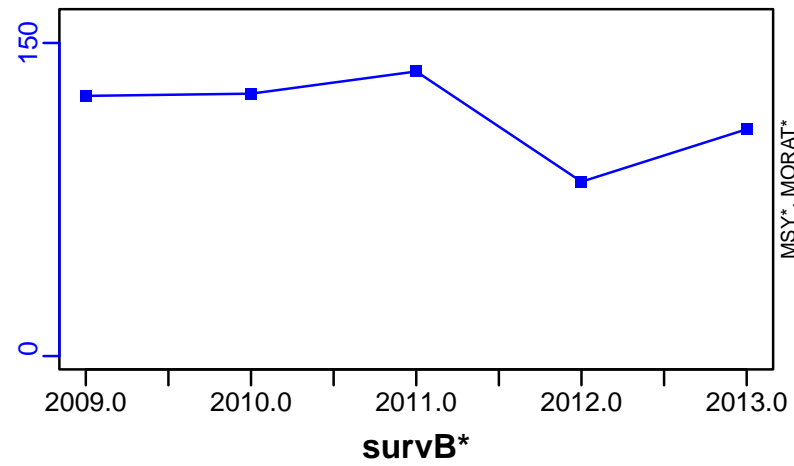
R-E00 (2009–2013–OSIO)



# Blue whiting Ligurian and North Tyrrhenian Sea [BWHITMEDGSA9]

TC-MT, TL\*, RecC\* (2009–2013–OSIO)

TAC\*, Cpair\*, Cadv\*



**Common pandora Malta Island and South of Sicily (GSA 15, 16)**  
**[CPANDMEDGSA15-16]**

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Pagellus erythrinus   |
| <b>Current Assess ID</b>    | STECF-CPANDMEDGSA15-16-2006-2011-OSIO   |
| <b>Area</b>                 | Malta Island and South of Sicily (GSA 15, 16)                                 |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2011      | 0.3   |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |            |     |     |
|-------------|------------------|-----------|------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value | Sex | Age |
| TB          | -                | -         | -          | -   | -   |
| SSB         | SSB-MT           | 2011      | 549        | -   | 2+  |
| TN          | -                | -         | -          | -   | -   |
| R           | R-E00            | 2011      | 4,850,000  | -   | -   |
| F           | F-1/yr           | 2011      | 0.72       | -   | -   |
| ER          | -                | -         | -          | -   | -   |
| TC          | TC-MT            | 2011      | 273        |     |     |
| TL          | -                | -         | -          |     |     |
| TB/TBmsy    | -                | -         | -          |     |     |
| SSB/SSBmsy  | -                | -         | -          |     |     |
| F/Fmsy      | -                | -         | -          |     |     |
| ER/ERmsy    | -                | -         | -          |     |     |
| TB/TBmgt    | -                | -         | -          |     |     |
| SSB/SSBmgt  | -                | -         | -          |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2011      | 2.4        |     |     |
| ER/ERmgt    | -                | -         | -          |     |     |

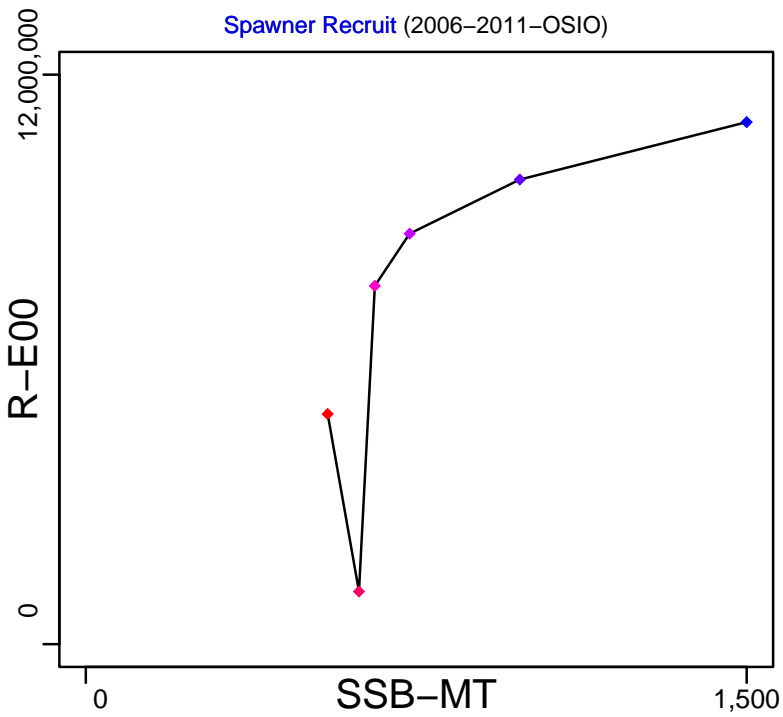
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit** (2006–2011–OSIO)



**Production\***



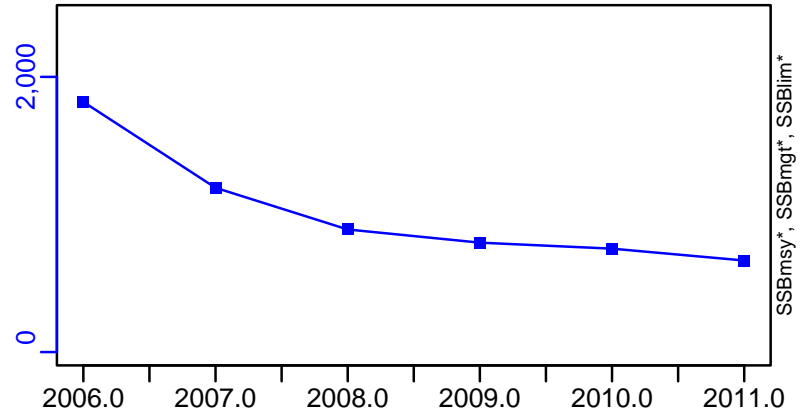
◆ Start Year ◆ End Year \* No Data

Common pandora Malta Island and South of Sicily (GSA 15, 16) [CPANDMEDGSA15-16]

TB\*



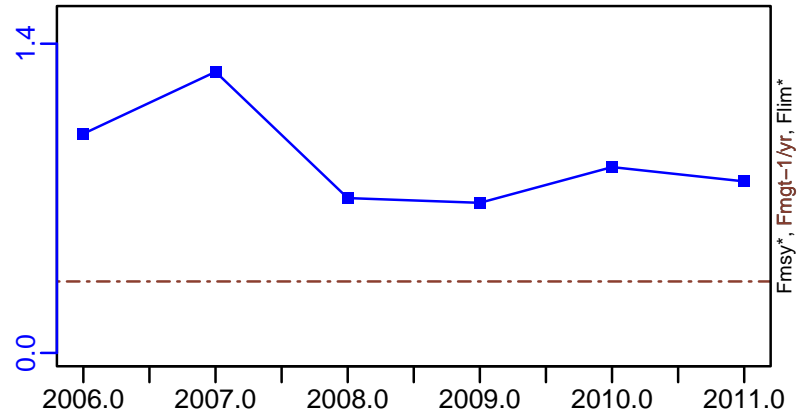
SSB-MT (2006-2011-OSIO)



TN \*



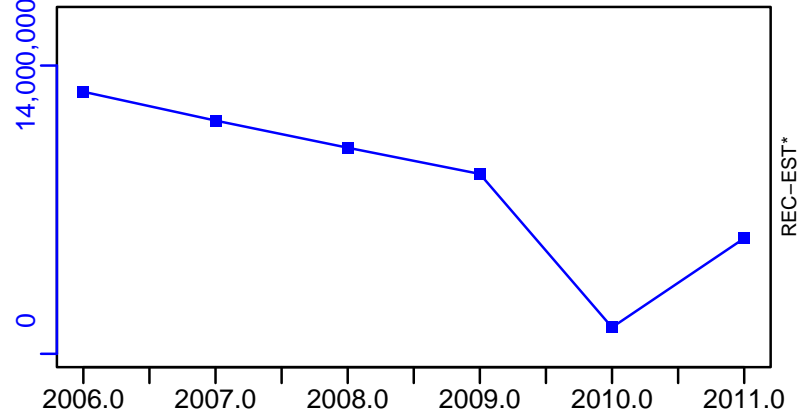
F-1/yr (2006-2011-OSIO)



ER\*



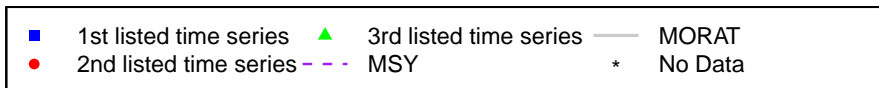
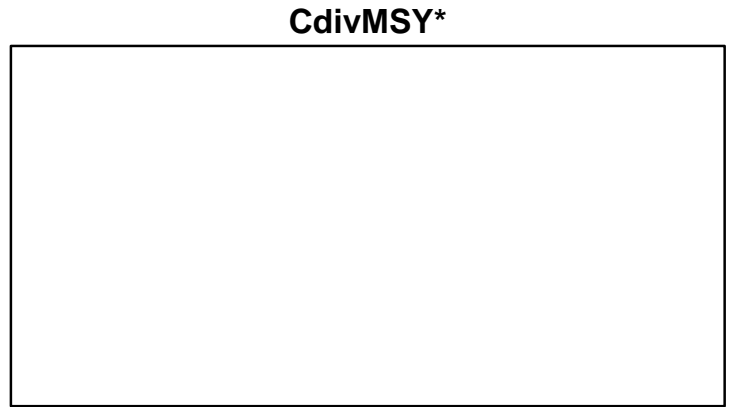
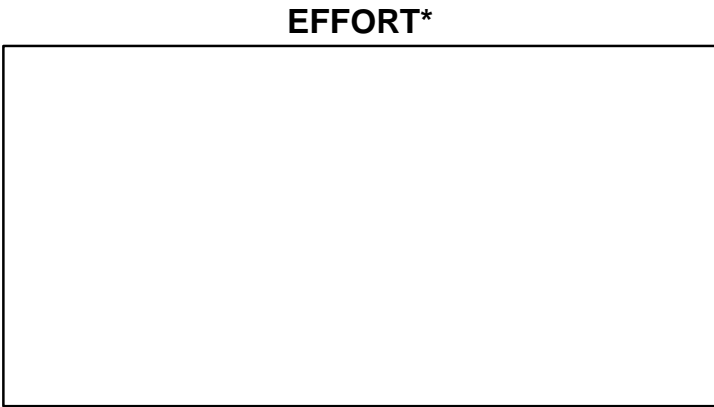
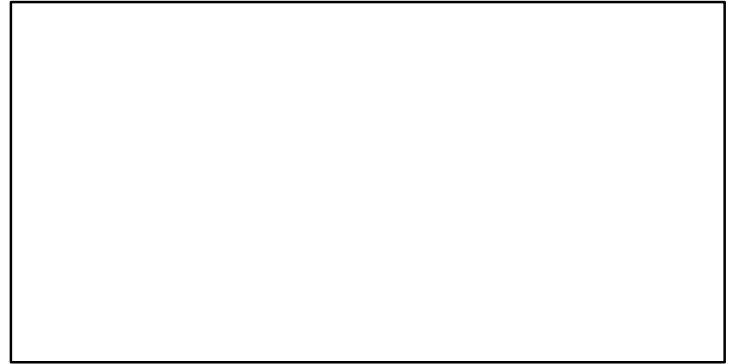
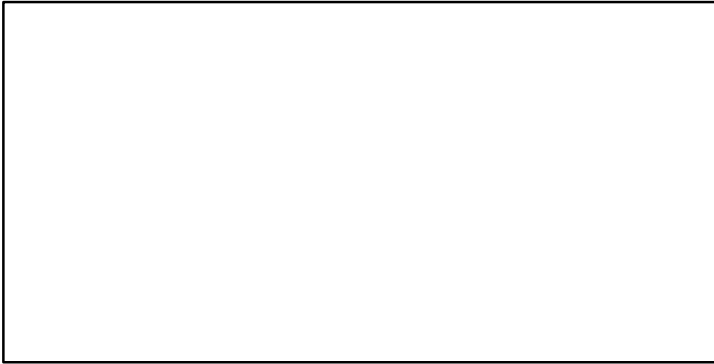
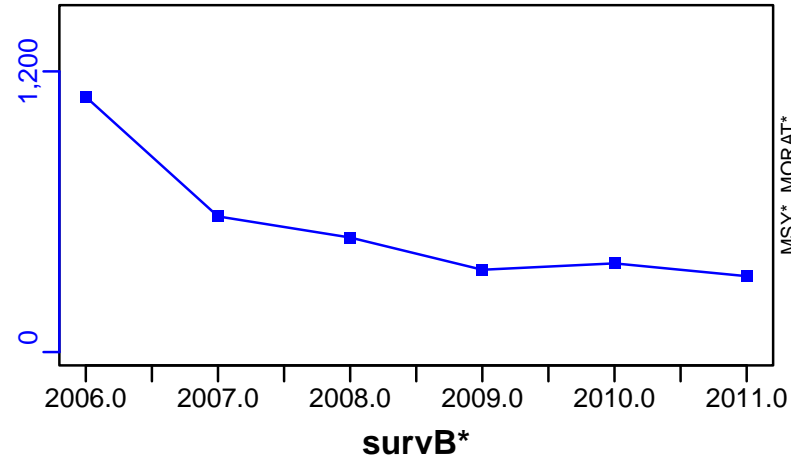
R-E00 (2006-2011-OSIO)



Common pandora Malta Island and South of Sicily (GSA 15, 16) [CPANDMEDGSA15-16]

TC-MT, TL\*, RecC\* (2006-2011-OSIO)

TAC\*, Cpair\*, Cadv\*



## Common pandora Ligurian and North Tyrrhenian Sea [CPANDMEDGSA9]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Pagellus erythrinus   |
| <b>Current Assess ID</b>    | STECF-CPANDMEDGSA9-2006-2010-OSIO   |
| <b>Area</b>                 | Ligurian and North Tyrrhenian Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2010  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2010      | 0.48  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |       |           |            |     |     |
|-------------|-------|-----------|------------|-----|-----|
| Type        | ID    | Asmt Year | Curr Value | Sex | Age |
| TB          | -     | -         | -          | -   | -   |
| SSB         | -     | -         | -          | -   | -   |
| TN          | -     | -         | -          | -   | -   |
| R           | -     | -         | -          | -   | -   |
| F           | -     | -         | -          | -   | -   |
| ER          | -     | -         | -          | -   | -   |
| TC          | TC-MT | 2010      | 171        |     |     |
| TL          | -     | -         | -          |     |     |
| TB/TBmsy    | -     | -         | -          |     |     |
| SSB/SSBmsy  | -     | -         | -          |     |     |
| F/Fmsy      | -     | -         | -          |     |     |
| ER/ERmsy    | -     | -         | -          |     |     |
| TB/TBmgt    | -     | -         | -          |     |     |
| SSB/SSBmgt  | -     | -         | -          |     |     |
| F/Fmgt      | -     | -         | -          |     |     |
| ER/ERmgt    | -     | -         | -          |     |     |



**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



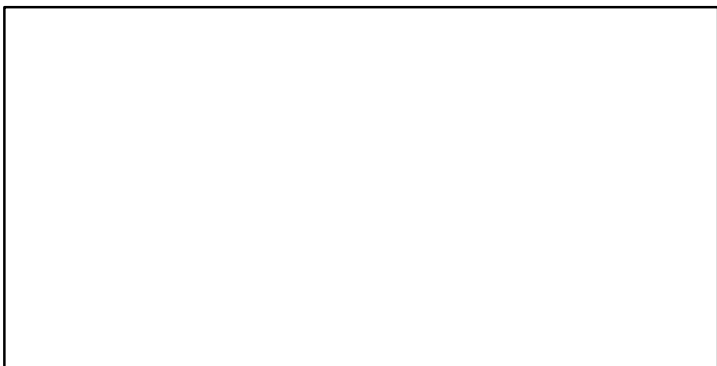
**Production\***



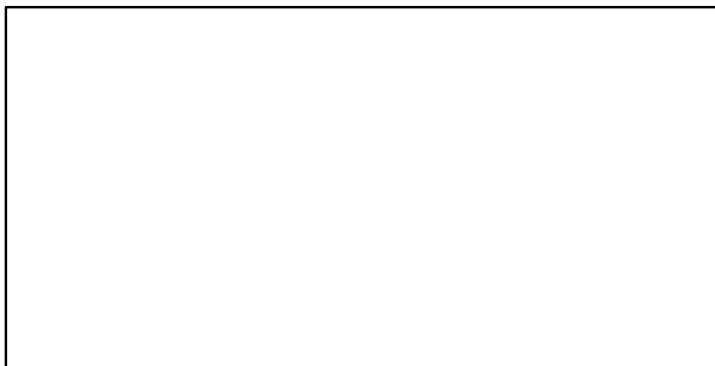
◆ Start Year ◆ End Year \* No Data

Common pandora Ligurian and North Tyrrhenian Sea [CPANDMEDGSA9]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



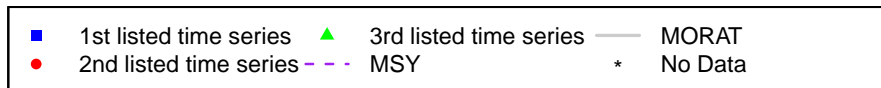
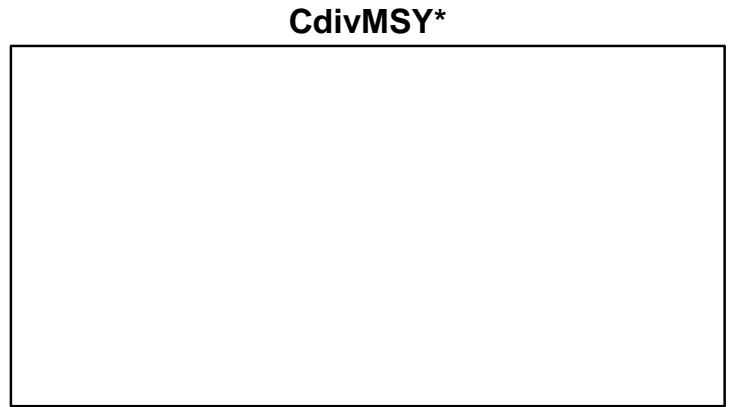
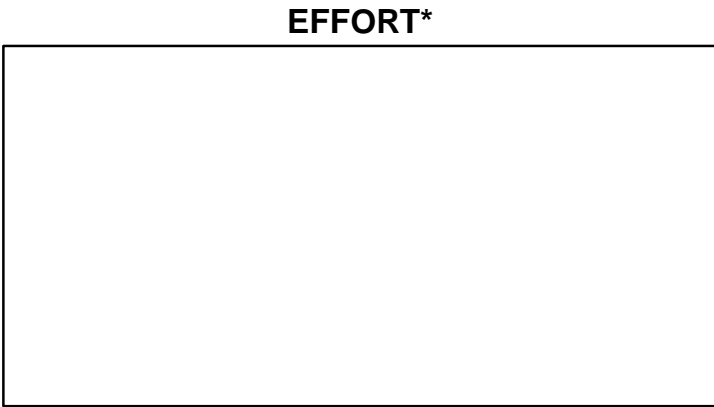
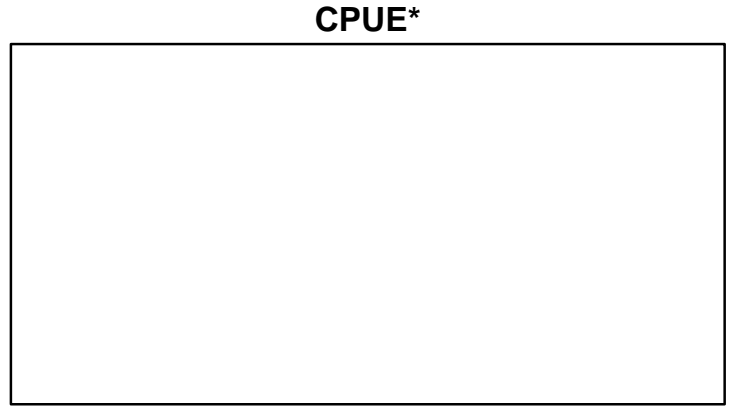
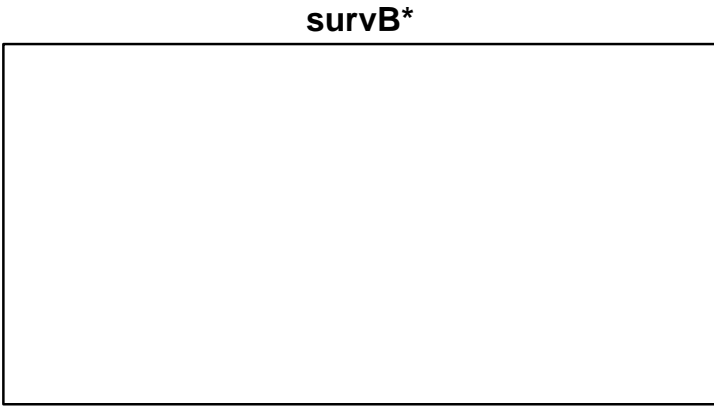
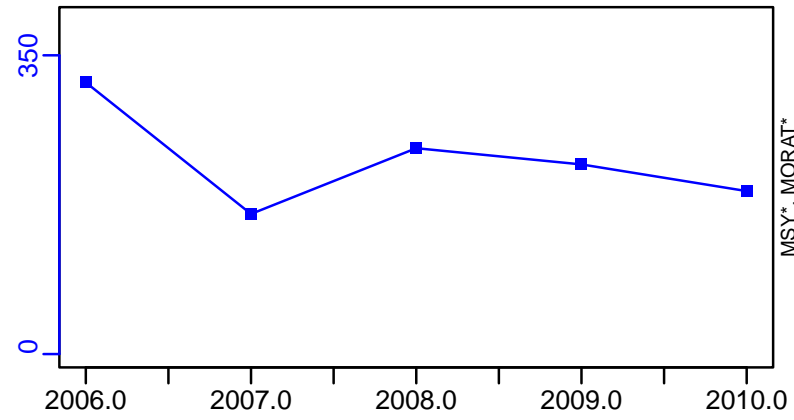
**Recruits\***



Common pandora Ligurian and North Tyrrhenian Sea [CPANDMEDGSA9]

TC-MT, TL\*, RecC\* (2006–2010–OSIO)

TAC\*, Cpair\*, Cadv\*

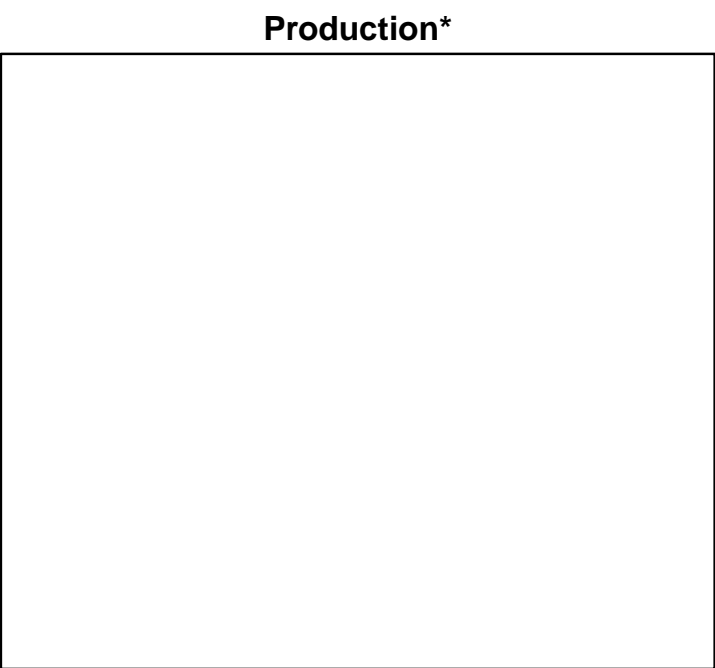
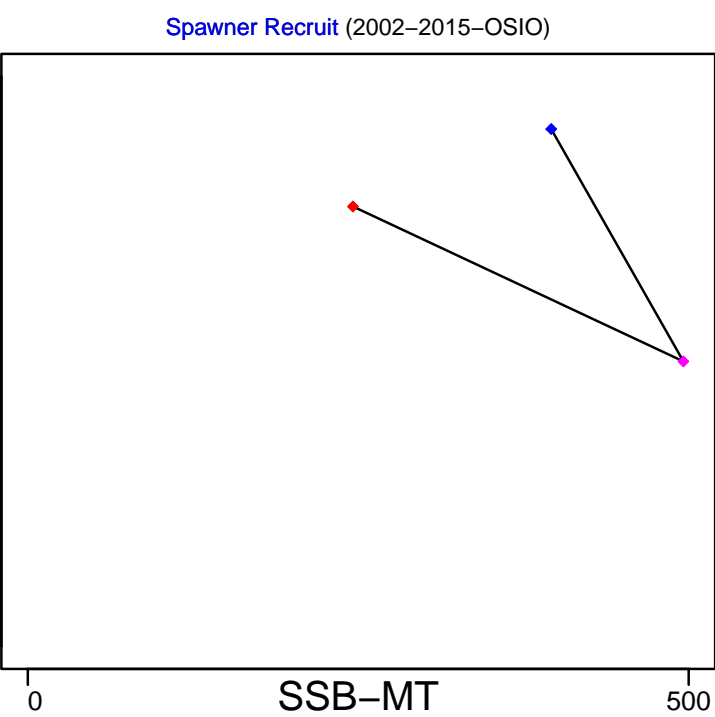
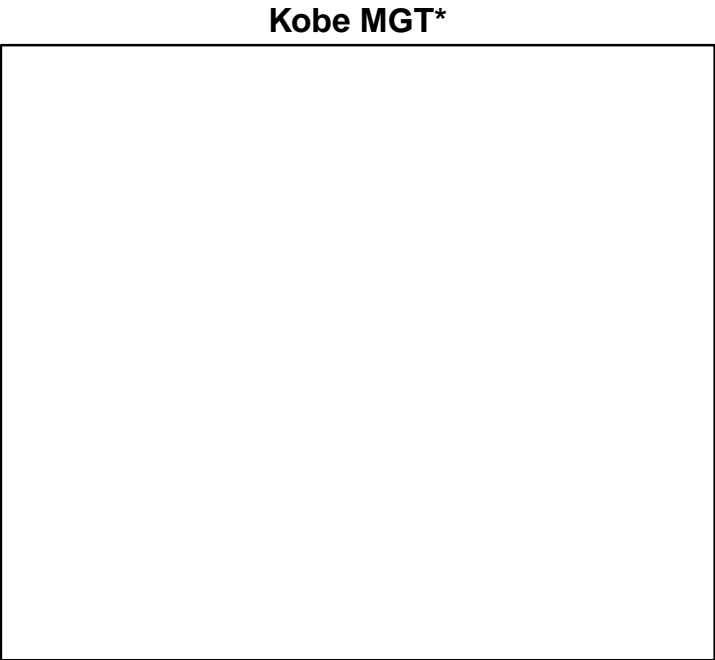
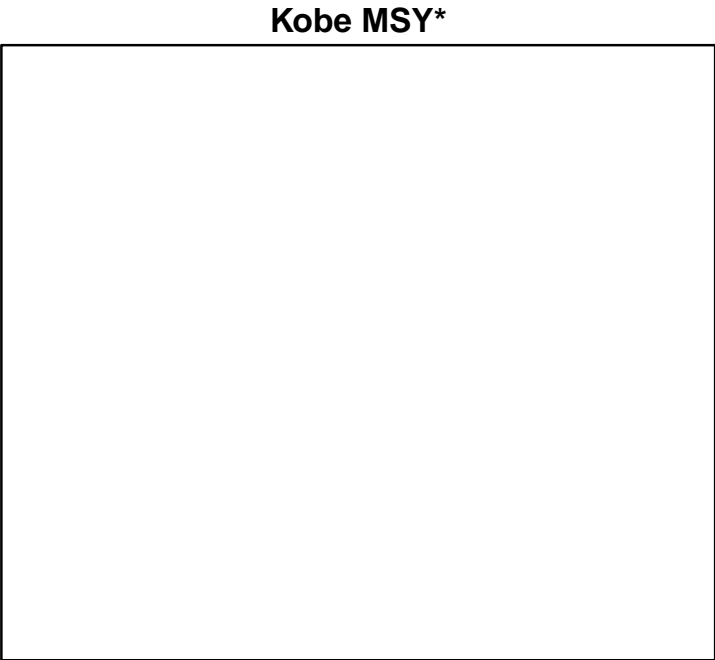


## European seabass Gulf of Lions [EBASSGSA7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Dicentrarchus labrax  |
| <b>Current Assess ID</b>    | STECF-EBASSGSA7-2002-2015-OSIO  |
| <b>Area</b>                 | Gulf of Lions   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2015  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2015      | 0.136 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |                    |     |     |
|-------------------|------------------|-----------|--------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value         | Sex | Age |
| <b>TB</b>         | -                | -         | -                  | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2015      | 246                | -   | -   |
| <b>TN</b>         | -                | -         | -                  | -   | -   |
| <b>R</b>          | R-E00            | 2015      | $3.86 \times 10^8$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2015      | 0.536              | -   | -   |
| <b>ER</b>         | -                | -         | -                  | -   | -   |
| <b>TC</b>         | -                | -         | -                  |     |     |
| <b>TL</b>         | TL-MT            | 2015      | 272                |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                  |     |     |
| <b>F/Fmsy</b>     | -                | -         | -                  |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                  |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                  |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2015      | 3.941              |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                  |     |     |



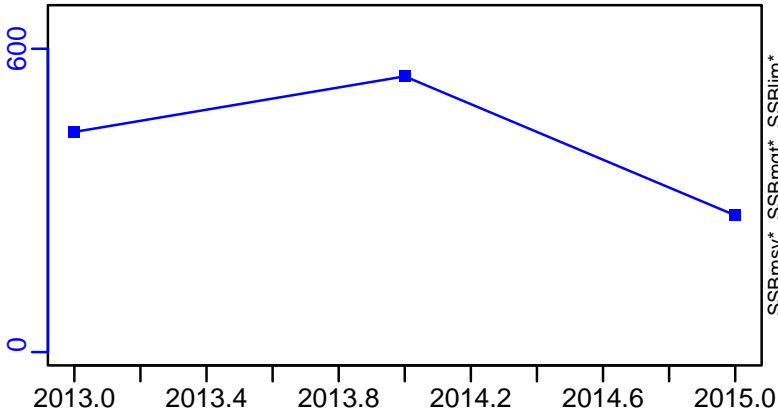
◆ Start Year ◆ End Year \* No Data

European seabass Gulf of Lions [EBASSGSA7]

TB\*



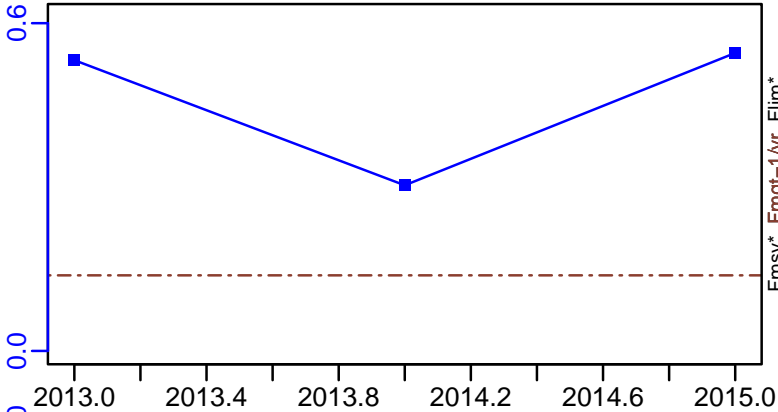
SSB-MT (2002–2015–OSIO)



TN \*



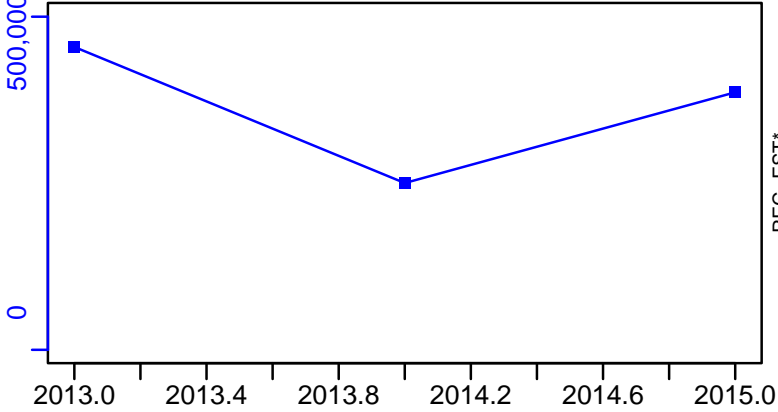
F-1/yr (2002–2015–OSIO)



ER\*

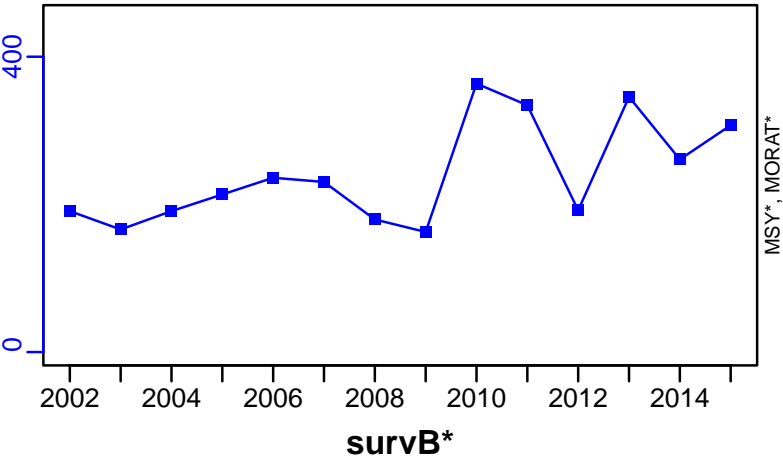


R-E00 (2002–2015–OSIO)



European seabass Gulf of Lions [EBASSGSA7]

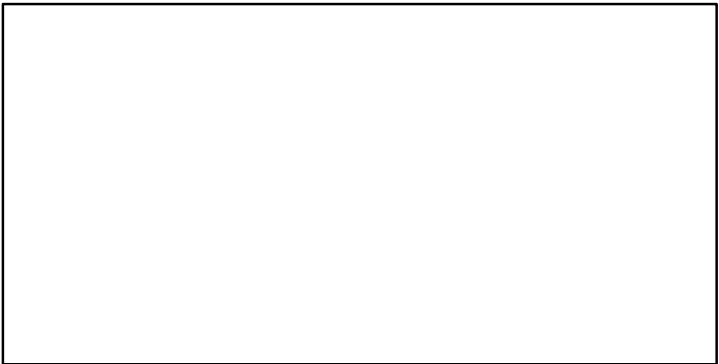
TL-MT, TC\*, RecC\* (2002-2015-OSIO)



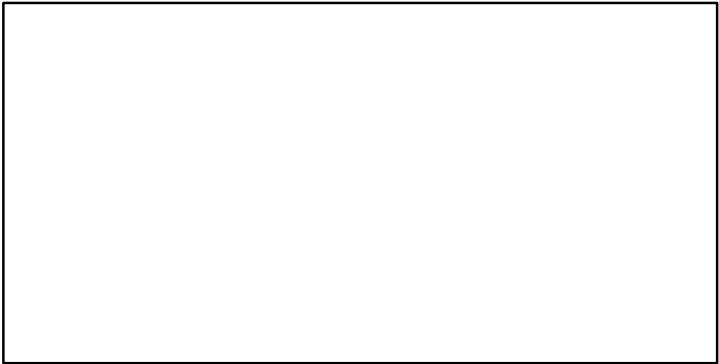
TAC\*, Cpair\*, Cadv\*



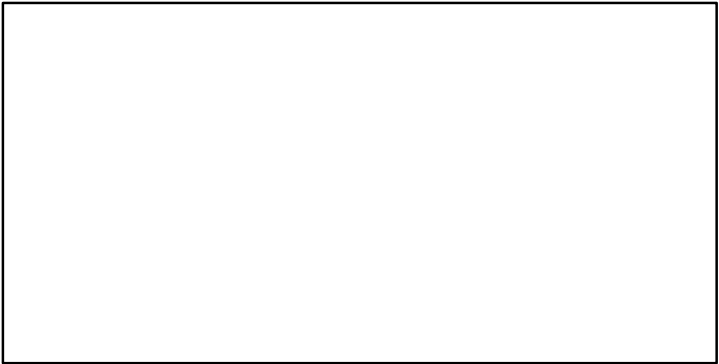
CPUE\*



EFFORT\*



CdivMSY\*



## Greater forkbeard Ligurian and North Tyrrhenian Sea [GFORKBMEDGSA9]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Phycis blennoides   |
| <b>Current Assess ID</b>    | STECF-GFORKBMEDGSA9-2007-2011-OSIO  |
| <b>Area</b>                 | Ligurian and North Tyrrhenian Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2011      | 0.32  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |       |           |            |     |     |
|-------------|-------|-----------|------------|-----|-----|
| Type        | ID    | Asmt Year | Curr Value | Sex | Age |
| TB          | -     | -         | -          | -   | -   |
| SSB         | -     | -         | -          | -   | -   |
| TN          | -     | -         | -          | -   | -   |
| R           | -     | -         | -          | -   | -   |
| F           | -     | -         | -          | -   | -   |
| ER          | -     | -         | -          | -   | -   |
| TC          | TC-MT | 2011      | 41         |     |     |
| TL          | -     | -         | -          |     |     |
| TB/TBmsy    | -     | -         | -          |     |     |
| SSB/SSBmsy  | -     | -         | -          |     |     |
| F/Fmsy      | -     | -         | -          |     |     |
| ER/ERmsy    | -     | -         | -          |     |     |
| TB/TBmgt    | -     | -         | -          |     |     |
| SSB/SSBmgt  | -     | -         | -          |     |     |
| F/Fmgt      | -     | -         | -          |     |     |
| ER/ERmgt    | -     | -         | -          |     |     |



Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



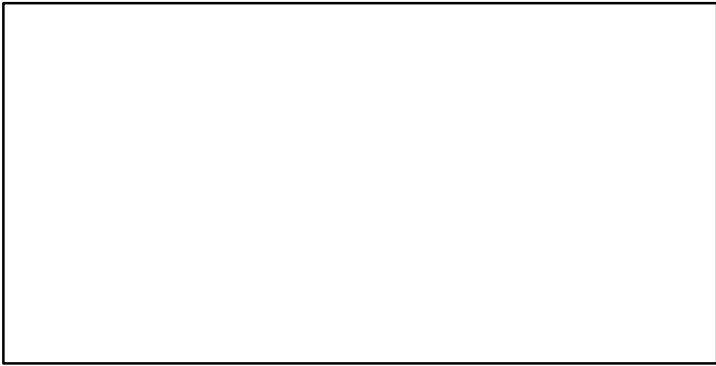
Production\*



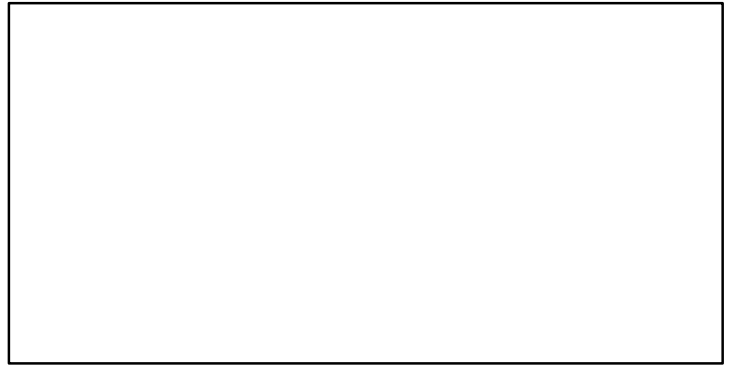
◆ Start Year    ◆ End Year    \* No Data

Greater forkbeard Ligurian and North Tyrrhenian Sea [GFORKBMEDGSA9]

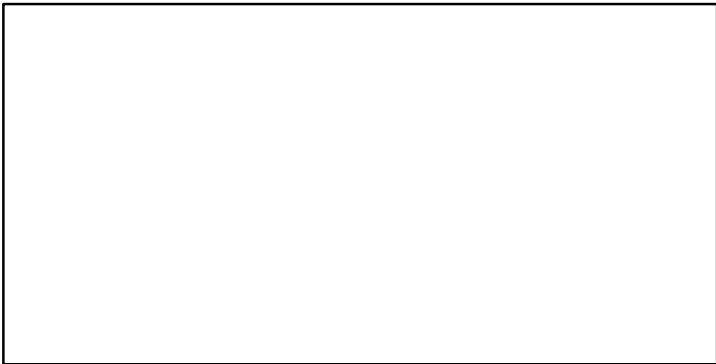
**TB\***



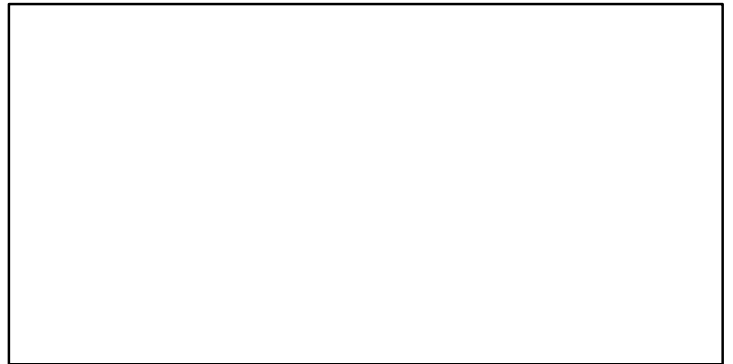
**SSB\***



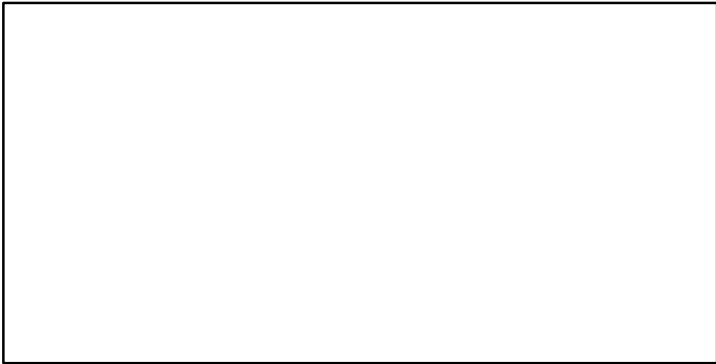
**TN \***



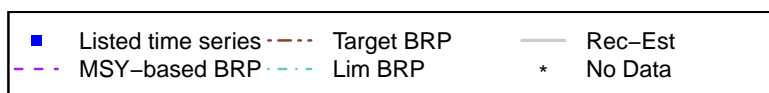
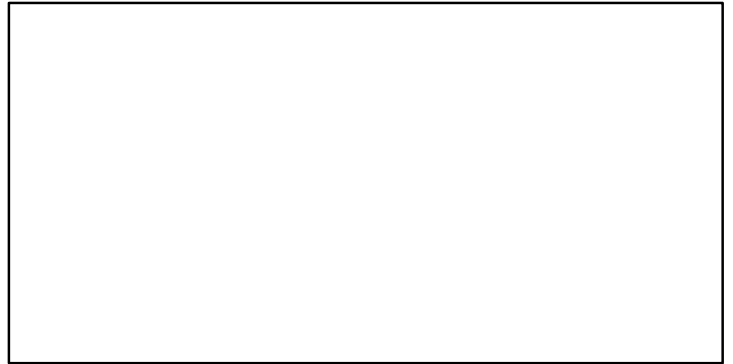
**F\***



**ER\***

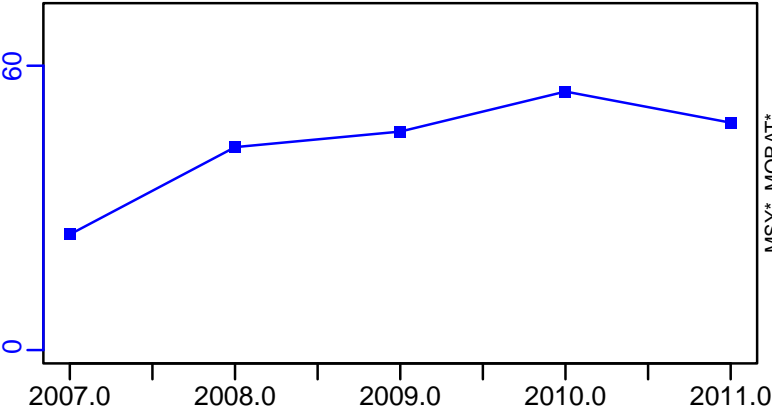


**Recruits\***

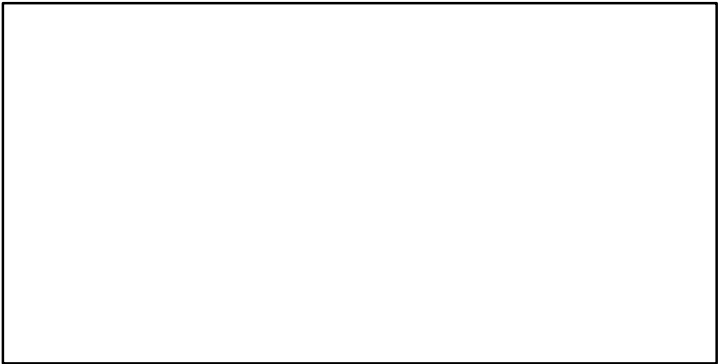


Greater forkbeard Ligurian and North Tyrrhenian Sea [GFORKBMEDGSA9]

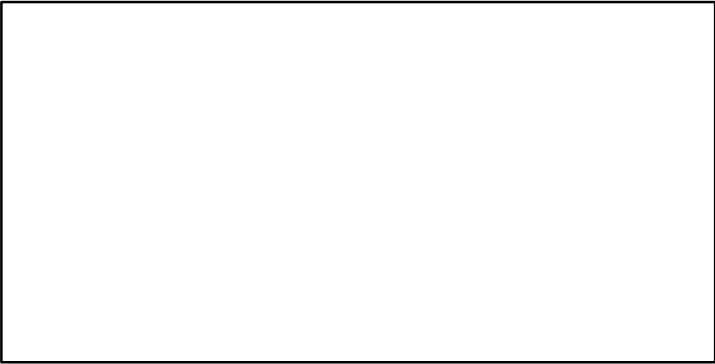
TC-MT, TL\*, RecC\* (2007–2011–OSIO)



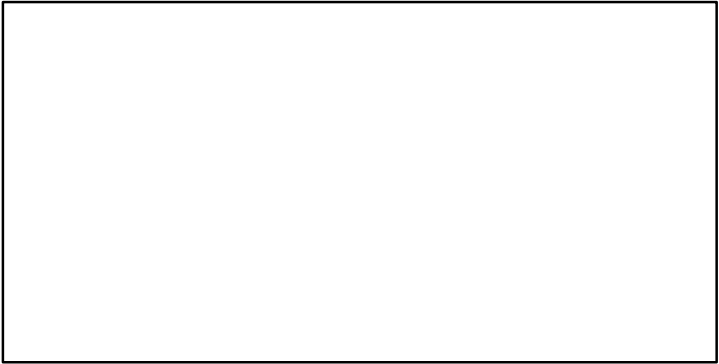
TAC\*, Cpair\*, Cadv\*



survB\*



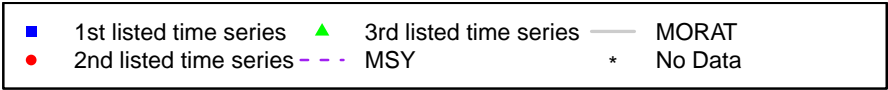
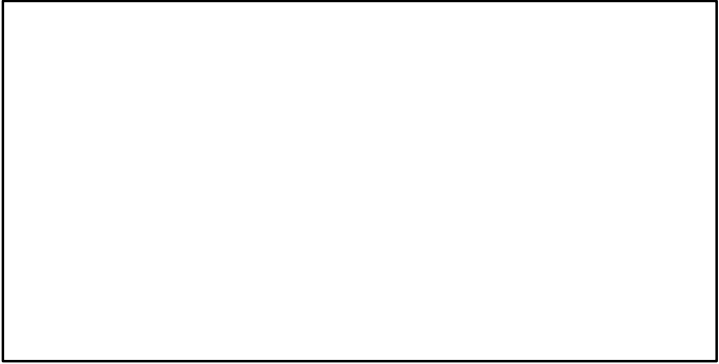
CPUE\*



EFFORT\*



CdivMSY\*

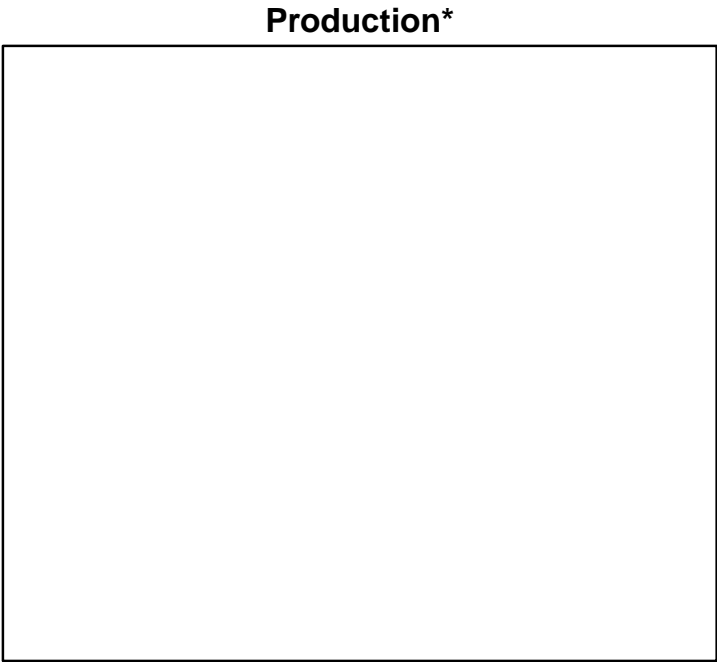
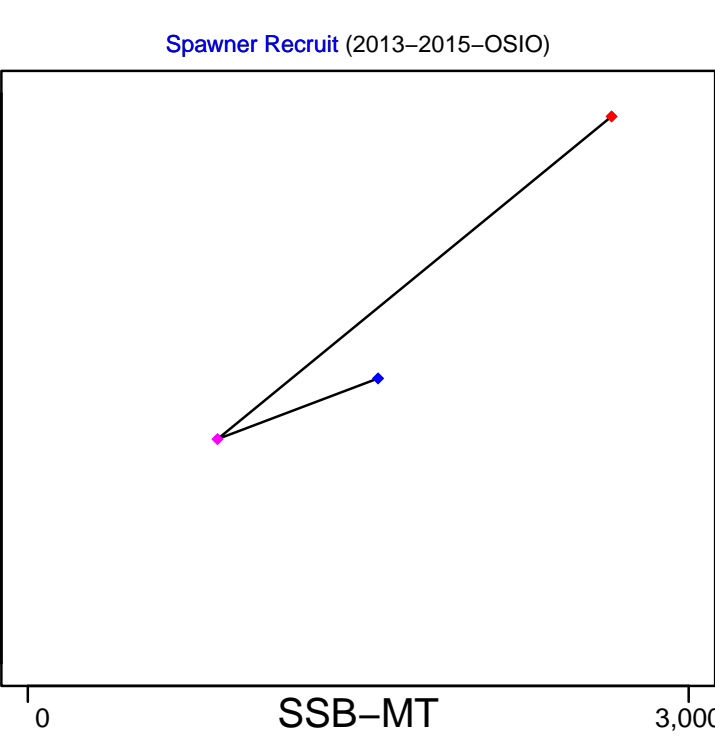
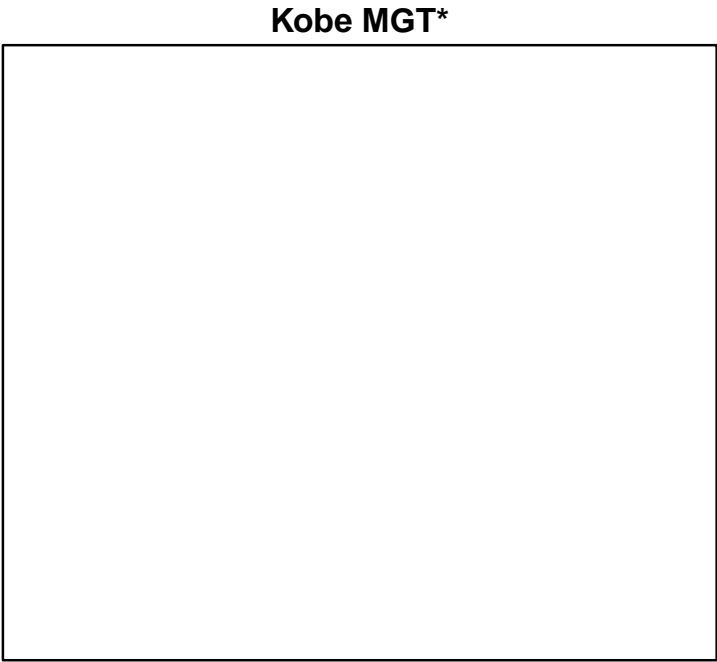
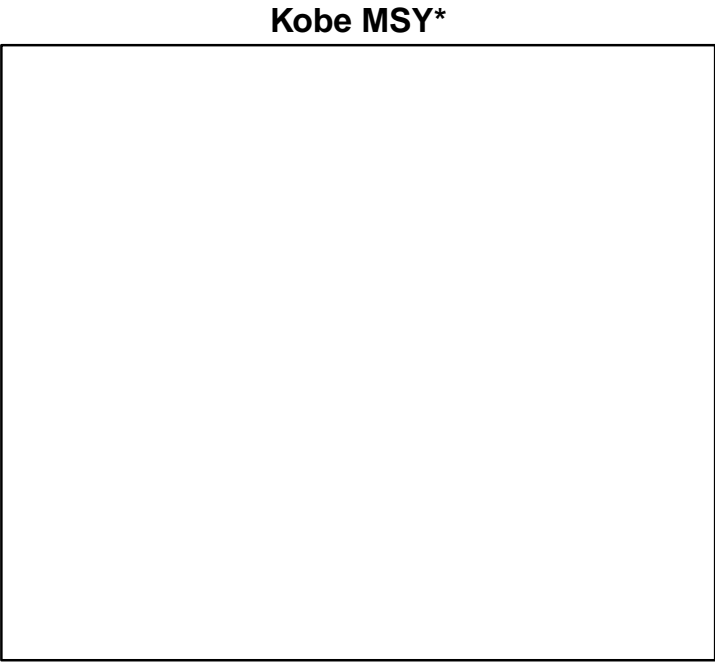


## Gilthead seabream Gulf of Lions [GHBRMGSA7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sparus aurata   |
| <b>Current Assess ID</b>    | STECF-GHBRMGSA7-2013-2015-OSIO  |
| <b>Area</b>                 | Gulf of Lions   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2015  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2015      | 0.19  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |                       |     |     |
|-------------------|------------------|-----------|-----------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value            | Sex | Age |
| <b>TB</b>         | -                | -         | -                     | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2015      | 2650                  | -   | -   |
| <b>TN</b>         | -                | -         | -                     | -   | -   |
| <b>R</b>          | R-E00            | 2015      | $5.76 \times 10^{10}$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2015      | 0.45                  | -   | -   |
| <b>ER</b>         | -                | -         | -                     | -   | -   |
| <b>TC</b>         | -                | -         | -                     |     |     |
| <b>TL</b>         | TL-MT            | 2015      | 1700                  |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -                     |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                     |     |     |
| <b>F/Fmsy</b>     | -                | -         | -                     |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                     |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -                     |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                     |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2015      | 2.368                 |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                     |     |     |



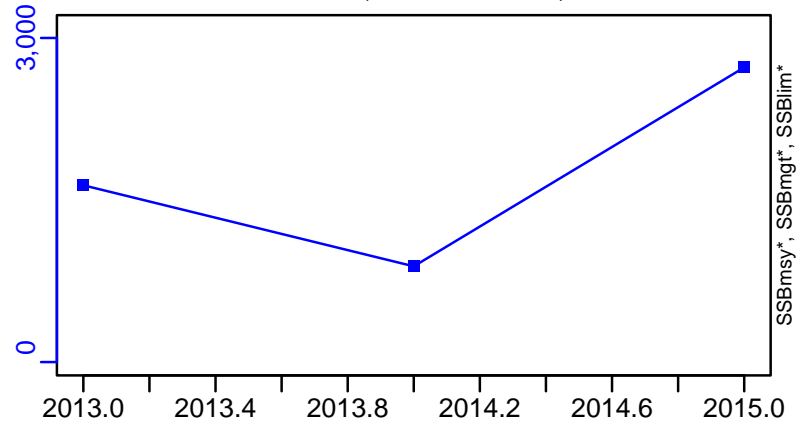
◆ Start Year ◆ End Year \* No Data

Gilthead seabream Gulf of Lions [GHBRMGSA7]

TB\*



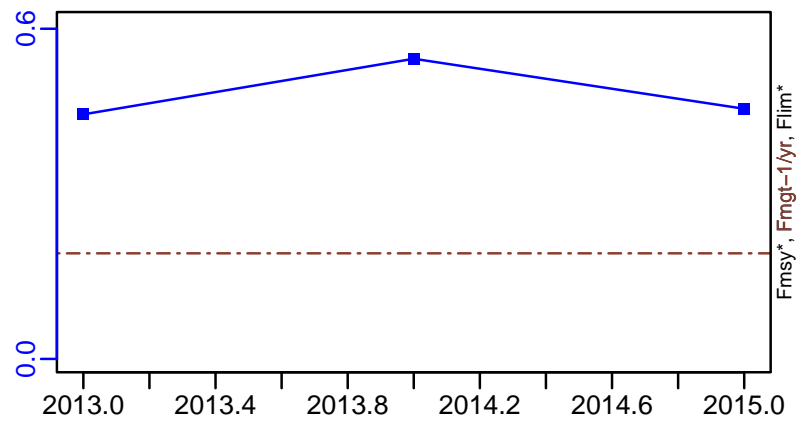
SSB-MT (2013–2015–OSIO)



TN \*



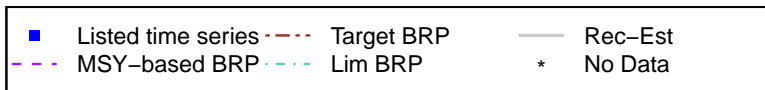
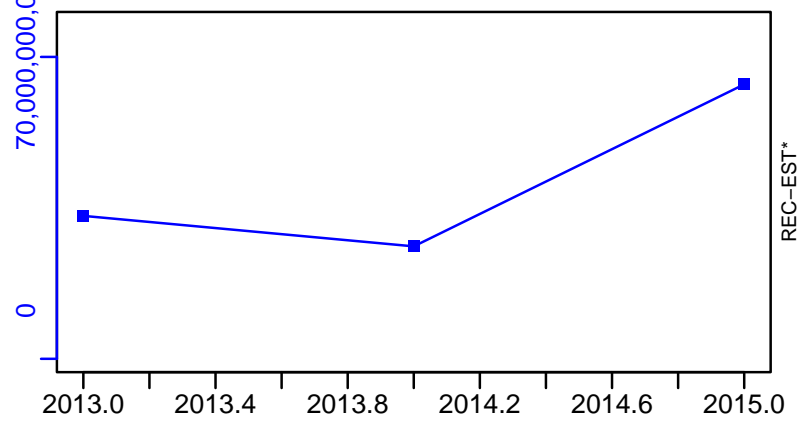
F-1/yr (2013–2015–OSIO)



ER\*

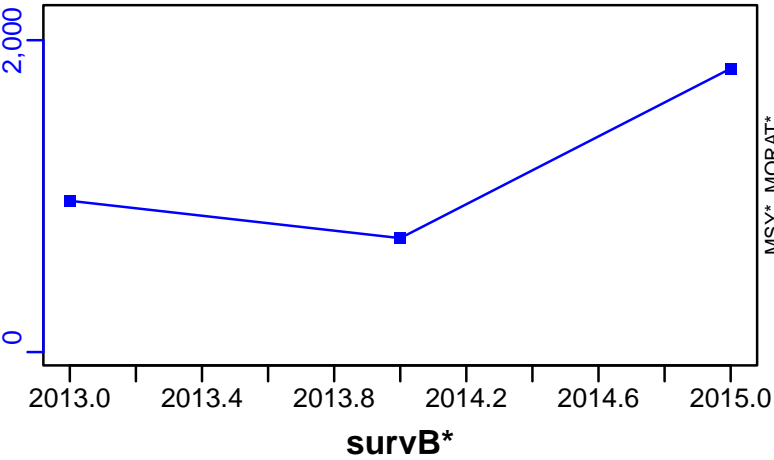


R-E00 (2013–2015–OSIO)



Gilthead seabream Gulf of Lions [GHBRMGSA7]

TL-MT, TC\*, RecC\* (2013-2015-OSIO)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Giant red shrimp Geographical Sub-Areas 12-16 [GRSHRIMPEDGSA12-16]

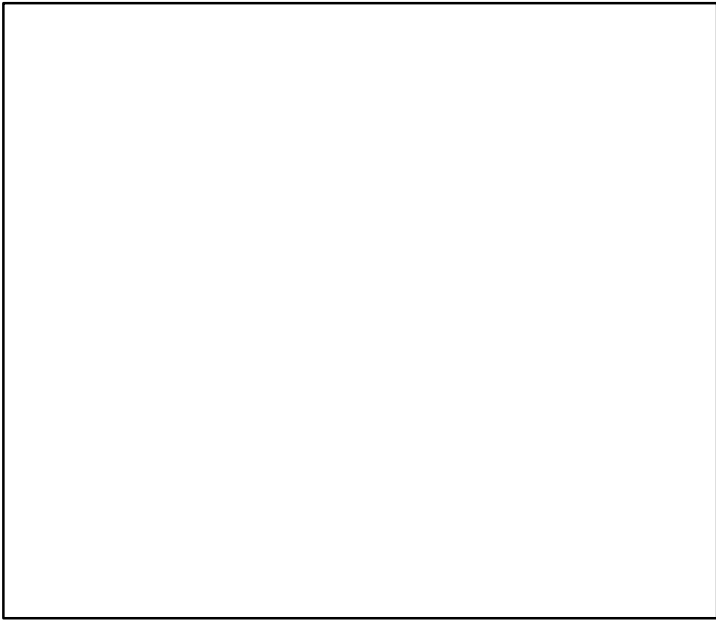
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Aristaeomorpha foliacea   |
| <b>Current Assess ID</b>    | STECF-GRSHRIMPEDGSA12-16-2005-2011-OSIO                                       |
| <b>Area</b>                 | Geographical Sub-Areas 12-16  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2011      | 0.3   |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2011      | 1250       | -   | 1+  |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2011      | 84,400,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2011      | 1.67       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2011      | 1590       |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2011      | 5.567      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



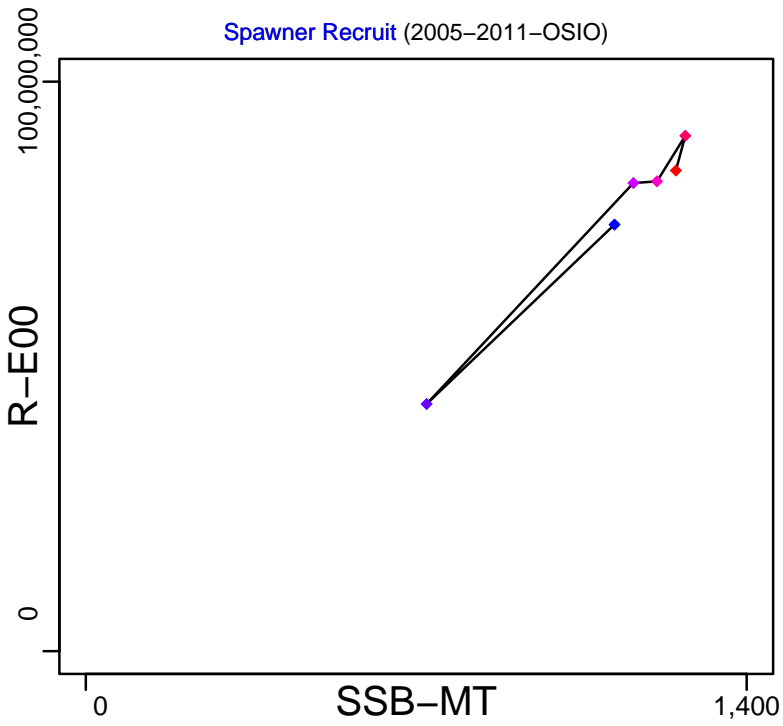
**Kobe MSY\***



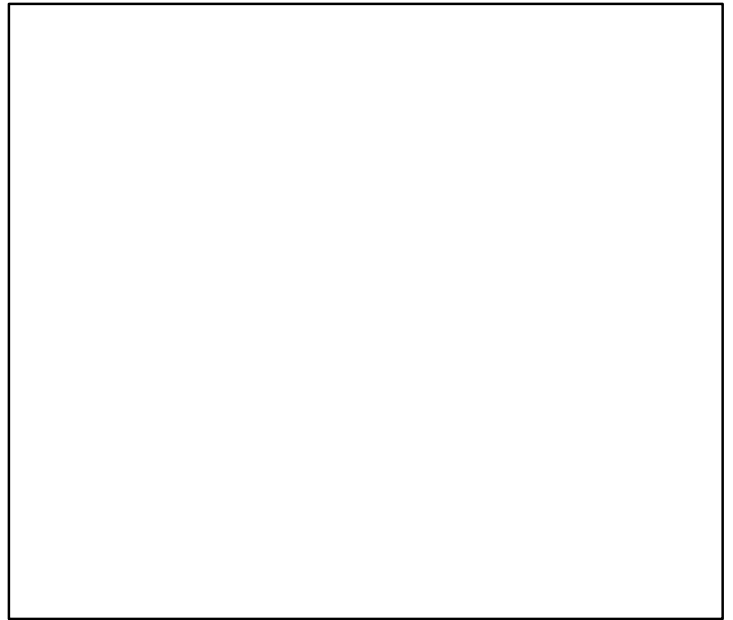
**Kobe MGT\***



**Spawner Recruit (2005–2011–OSIO)**



**Production\***



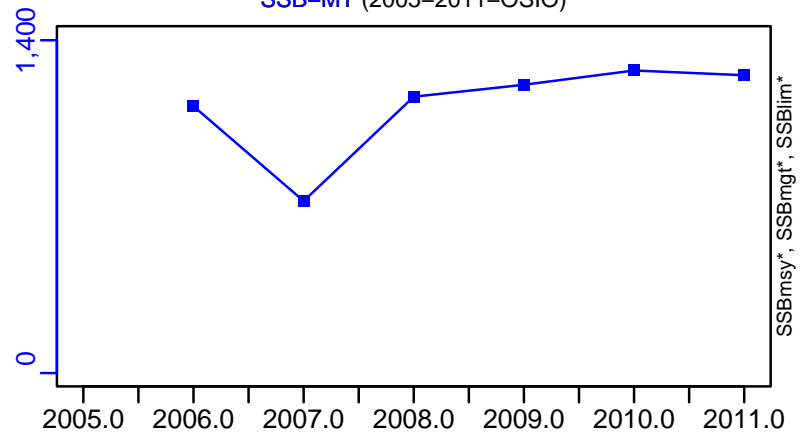
◆ Start Year ◆ End Year \* No Data

# Giant red shrimp Geographical Sub-Areas 12–16 [GRSHRIMPEDGSA12–16]

TB\*



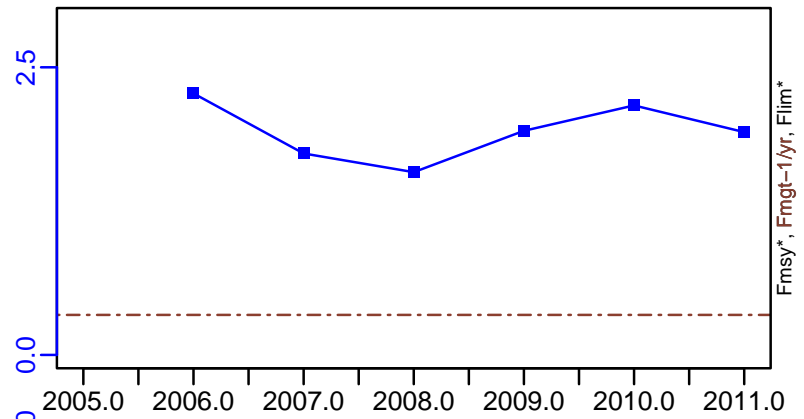
SSB-MT (2005–2011–OSIO)



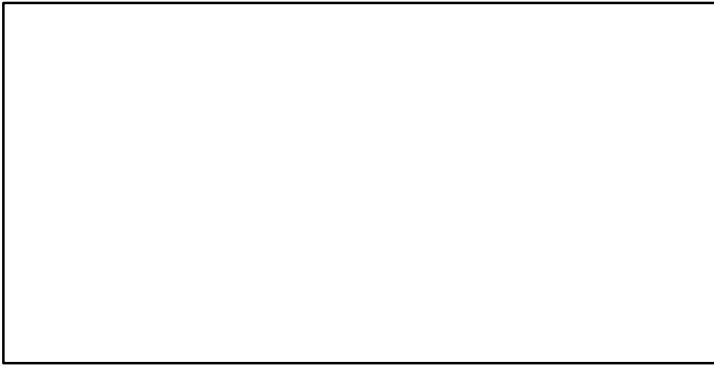
TN \*



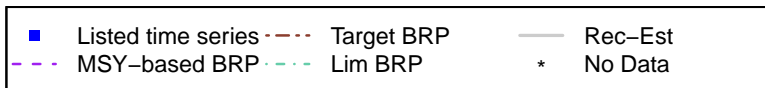
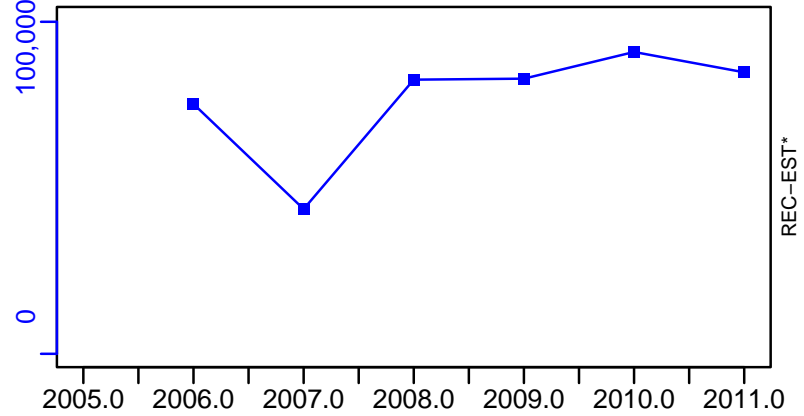
F-1/yr (2005–2011–OSIO)



ER\*

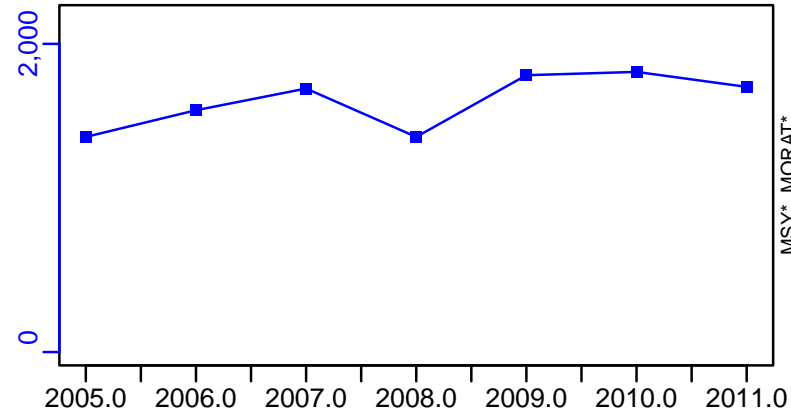


R-E00 (2005–2011–OSIO)



Giant red shrimp Geographical Sub-Areas 12–16 [GRSHRIMPEDGSA12–16]

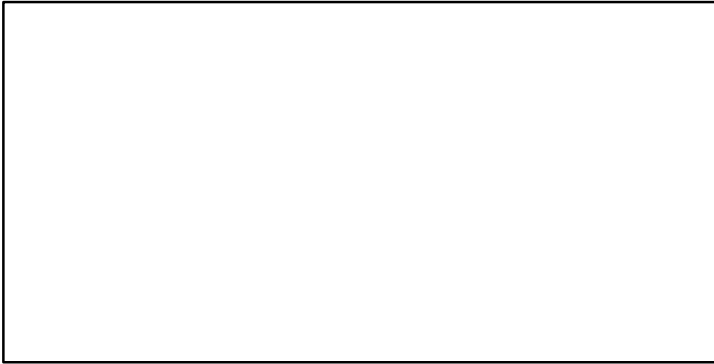
TC–MT, TL\*, RecC\* (2005–2011–OSIO)



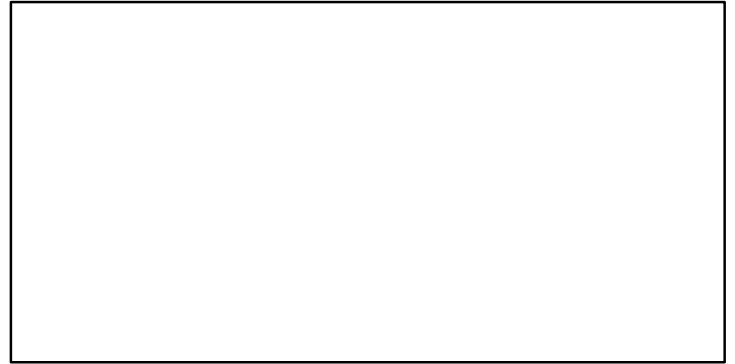
TAC\*, Cpair\*, Cadv\*



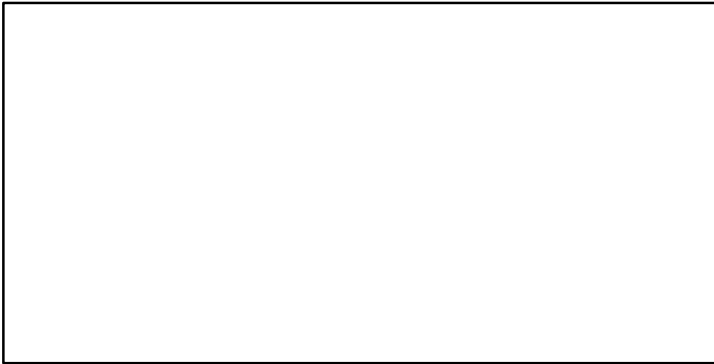
survB\*



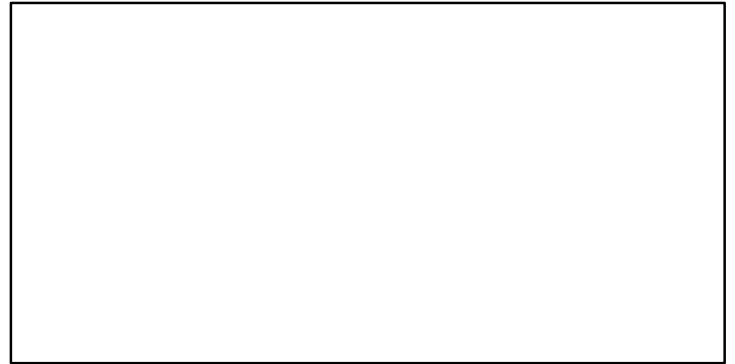
CPUE\*



EFFORT\*



CdivMSY\*



**Giant red shrimp South Adriatic Sea and West Ionian Sea (GSA 18,19)**  
**[GRSHRIMPEDGSA18-19]**

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Aristaeomorpha foliacea   |
| <b>Current Assess ID</b>    | STECF-GRSHRIMPEDGSA18-19-2008-2014-OSIO                                       |
| <b>Area</b>                 | South Adriatic Sea and West Ionian Sea (GSA 18,19)                            |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2014  |

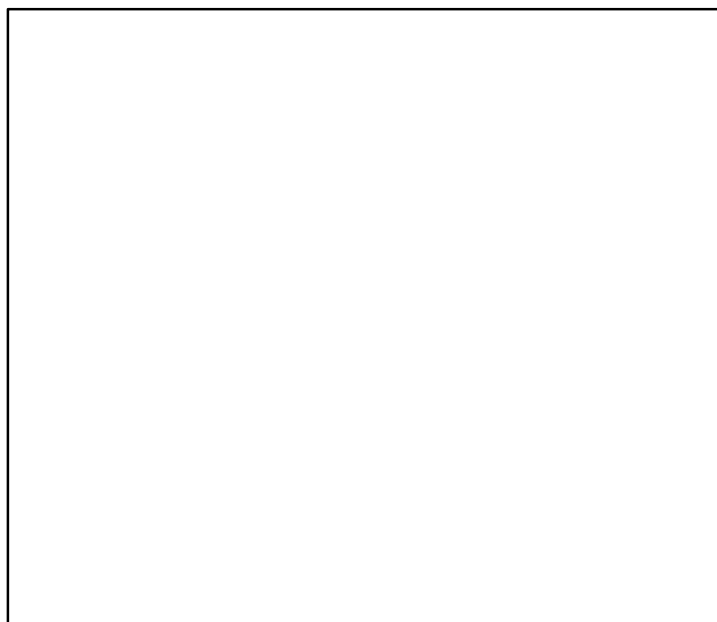
| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2014      | 0.42  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |            |     |     |
|-------------|------------------|-----------|------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value | Sex | Age |
| TB          | -                | -         | -          | -   | -   |
| SSB         | SSB-MT           | 2014      | 525        | -   | 1+  |
| TN          | -                | -         | -          | -   | -   |
| R           | R-E00            | 2014      | 30,200,000 | -   | -   |
| F           | F-1/yr           | 2014      | 0.463      | -   | -   |
| ER          | -                | -         | -          | -   | -   |
| TC          | TC-MT            | 2014      | 328        |     |     |
| TL          | -                | -         | -          |     |     |
| TB/TBmsy    | -                | -         | -          |     |     |
| SSB/SSBmsy  | -                | -         | -          |     |     |
| F/Fmsy      | -                | -         | -          |     |     |
| ER/ERmsy    | -                | -         | -          |     |     |
| TB/TBmgt    | -                | -         | -          |     |     |
| SSB/SSBmgt  | -                | -         | -          |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2014      | 1.102      |     |     |
| ER/ERmgt    | -                | -         | -          |     |     |

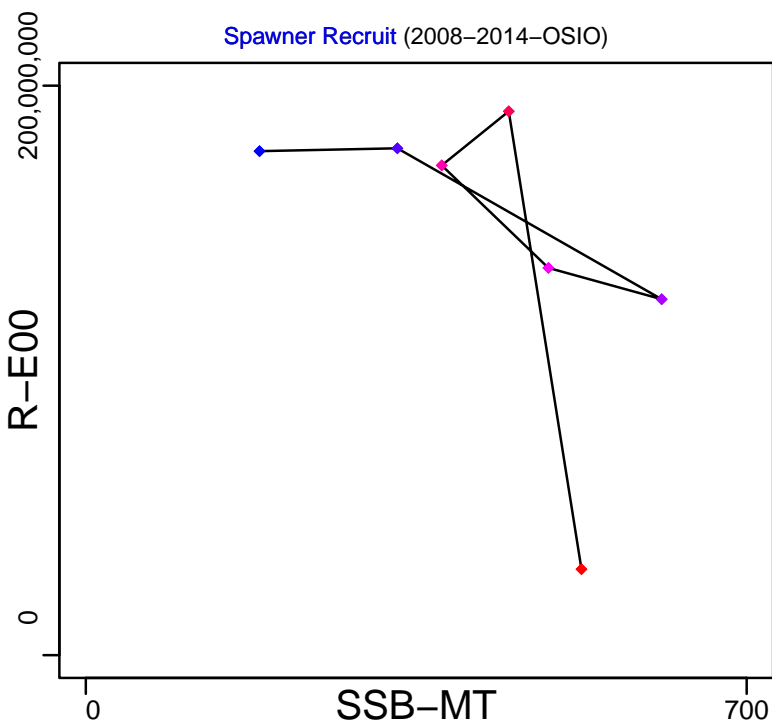
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit (2008-2014-OSIO)**



**Production\***



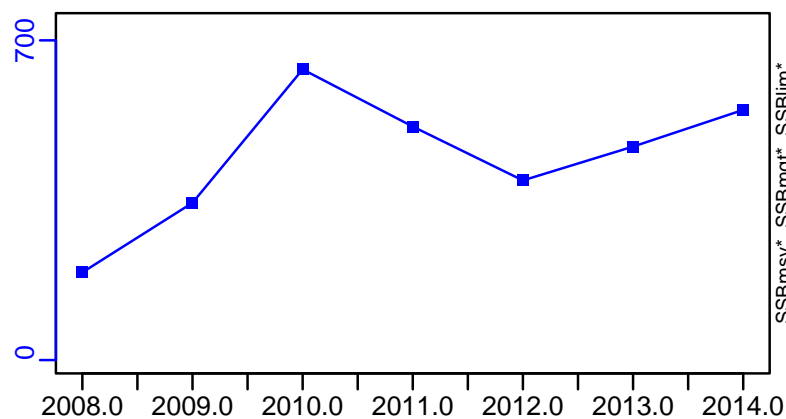
◆ Start Year ◆ End Year \* No Data

# Giant red shrimp South Adriatic Sea and West Ionian Sea (GSA 18,19) [GRSHRIMPEDGSA18-19]

TB\*



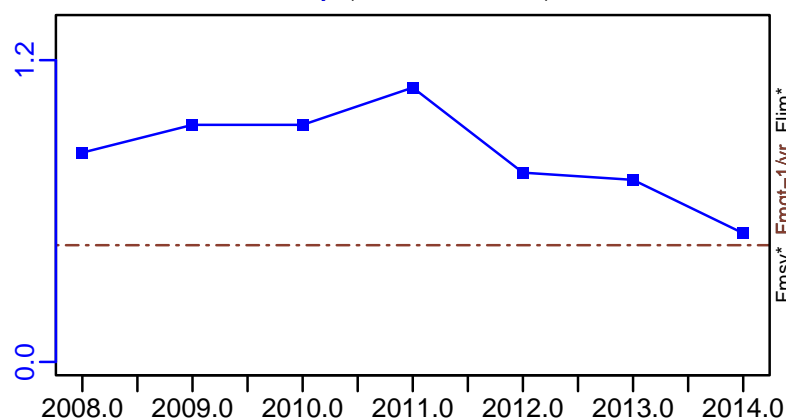
SSB-MT (2008-2014-OSIO)



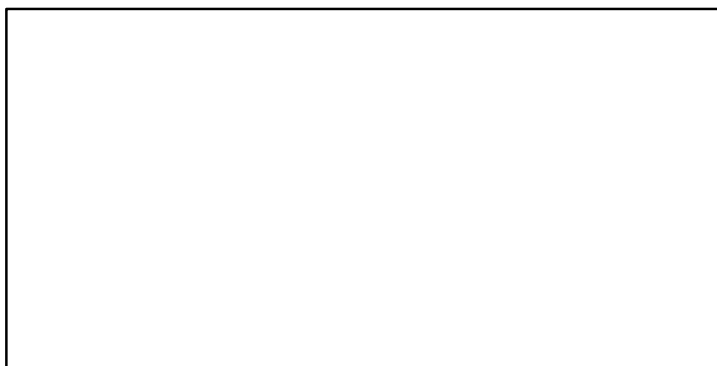
TN \*



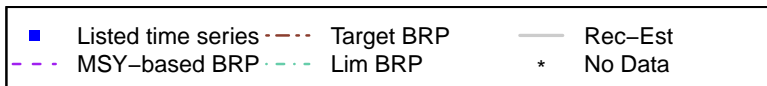
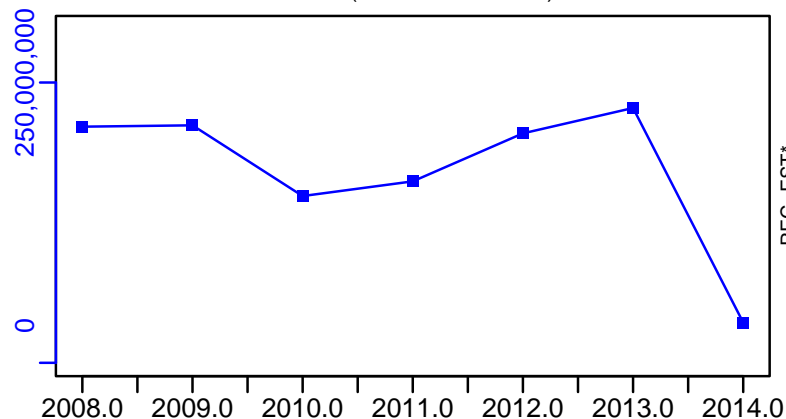
F-1/yr (2008-2014-OSIO)



ER\*

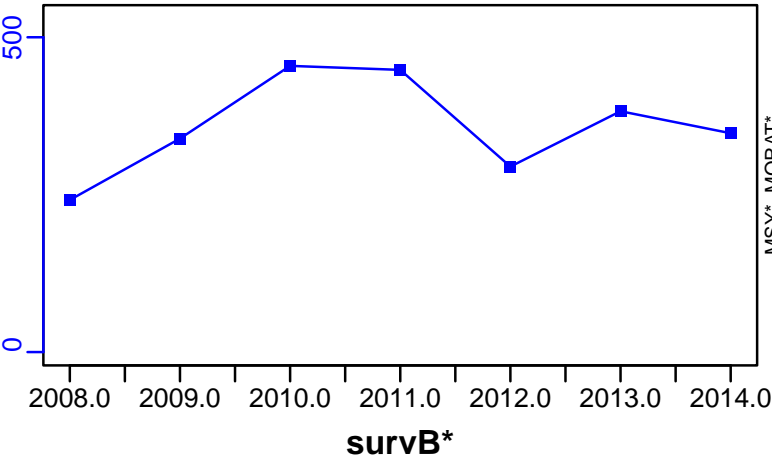


R-E00 (2008-2014-OSIO)



Giant red shrimp South Adriatic Sea and West Ionian Sea (GSA 18,19) [GRSHRIMPEDGSA18–19]

TC–MT, TL\*, RecC\* (2008–2014–OSIO)



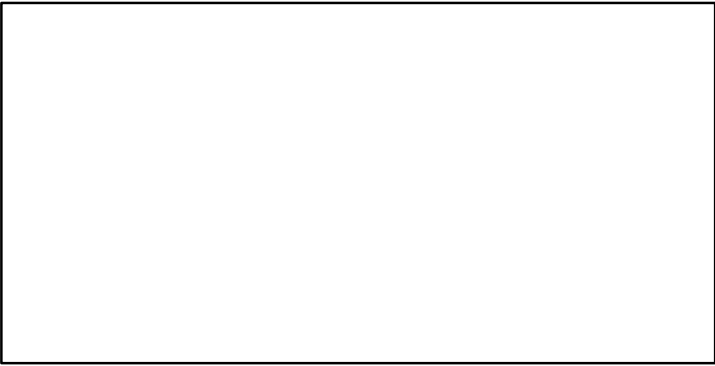
TAC\*, Cpair\*, Cadv\*



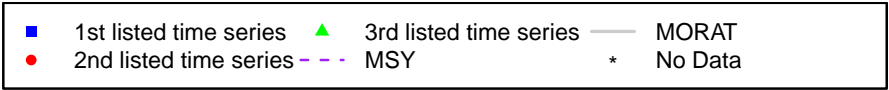
CPUE\*



EFFORT\*



CdivMSY\*



## Giant red shrimp Geographical Sub-Areas 9-11 [GRSHRIMPEDGSA9-11]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Aristaeomorpha foliacea   |
| <b>Current Assess ID</b>    | STECF-GRSHRIMPEDGSA9-11-2005-2019-MEDIMP2021-2                                |
| <b>Area</b>                 | Geographical Sub-Areas 9-11   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.476 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |             |     |     |
|-------------------|------------------|-----------|-------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value  | Sex | Age |
| <b>TB</b>         | -                | -         | -           | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 716         | -   | -   |
| <b>TN</b>         | -                | -         | -           | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 279,817,380 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.734       | -   | -   |
| <b>ER</b>         | -                | -         | -           | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 571         |     |     |
| <b>TL</b>         | -                | -         | -           |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -           |     |     |
| <b>F/Fmsy</b>     | -                | -         | -           |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -           |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -           |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 1.541       |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -           |     |     |



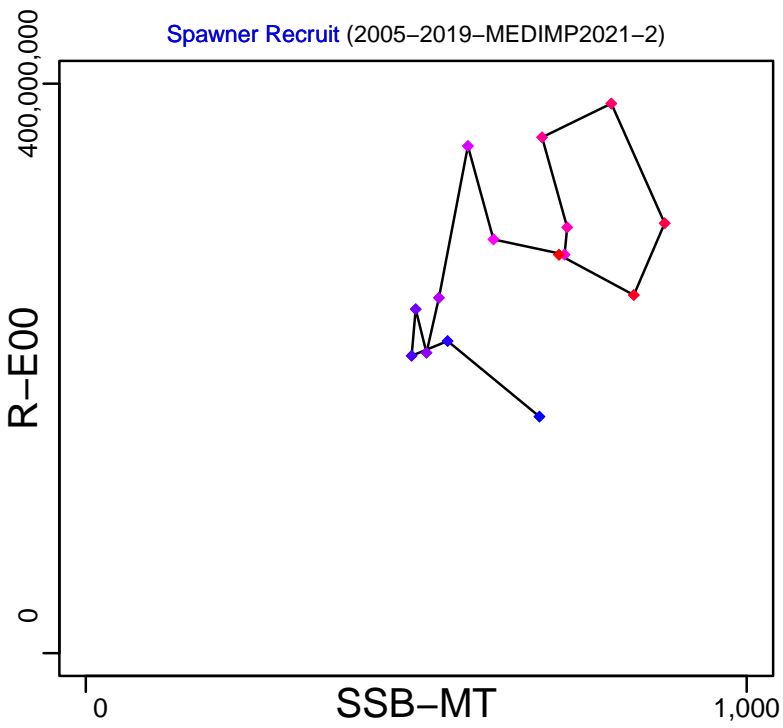
**Kobe MSY\***



**Kobe MGT\***

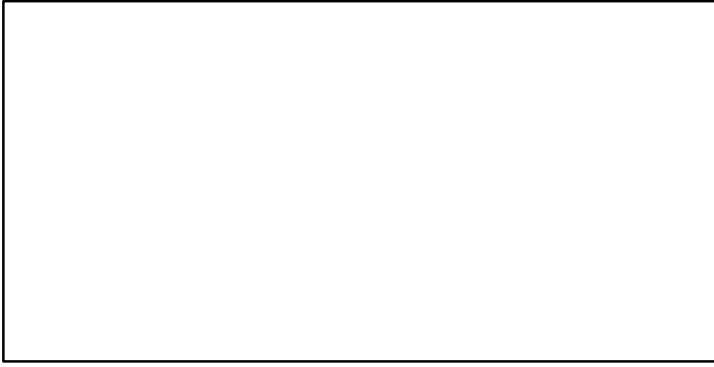


Spawner Recruit (2005–2019–MEDIMP2021–2)

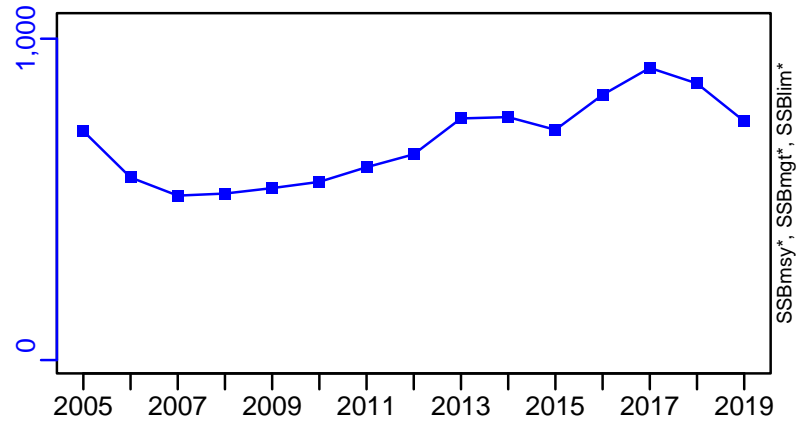


# Giant red shrimp Geographical Sub-Areas 9–11 [GRSHRIMPEDGSA9–11]

TB\*



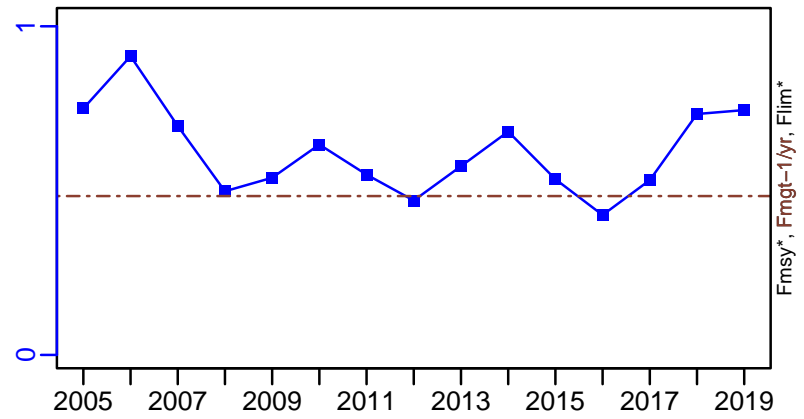
SSB-MT (2005–2019–MEDIMP2021–2)



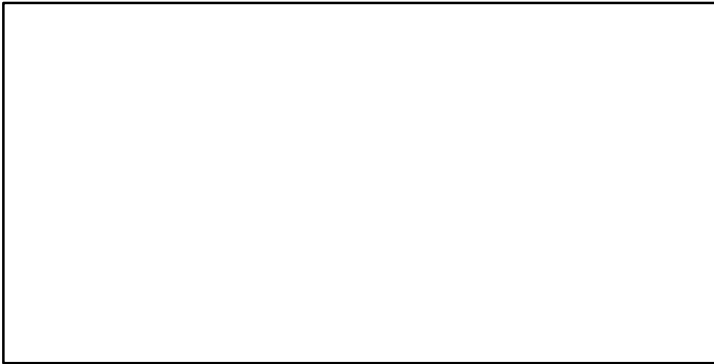
TN \*



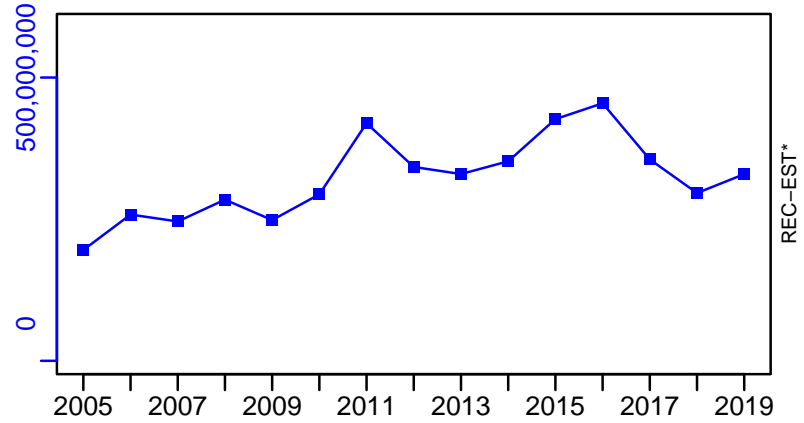
F-1/yr (2005–2019–MEDIMP2021–2)



ER\*

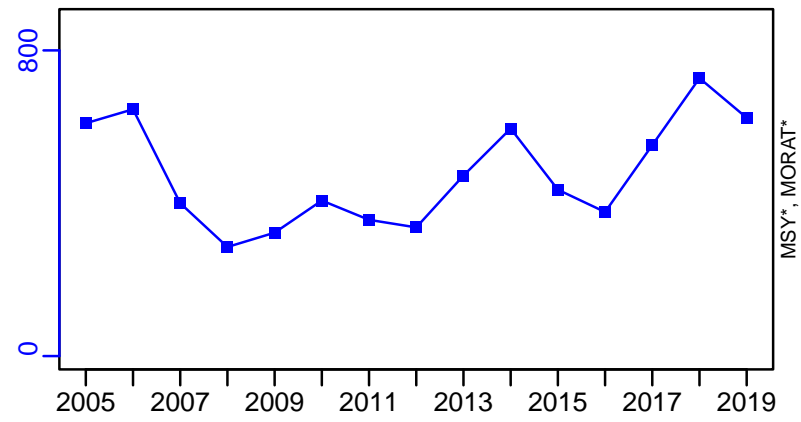


R-E00 (2005–2019–MEDIMP2021–2)



# Giant red shrimp Geographical Sub-Areas 9–11 [GRSHRIMPEDGSA9–11]

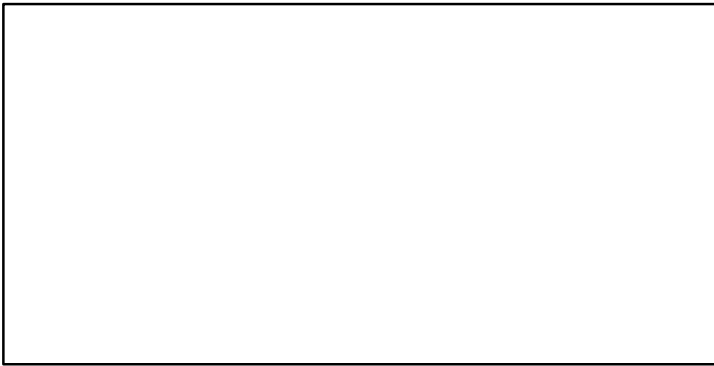
TC–MT, TL\*, RecC\* (2005–2019–MEDIMP2021–2)



TAC\*, Cpair\*, Cadv\*



survB\*



CPUE\*



EFFORT\*



CdivMSY\*



## Hake Malta Island and South of Sicily (GSA 15, 16) [HAKEMEDGSA15-16]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Merluccius merluccius   |
| <b>Current Assess ID</b>    | STECF-HAKEMEDGSA15-16-2005-2009-OSIO  |
| <b>Area</b>                 | Malta Island and South of Sicily (GSA 15, 16)                                 |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2009  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2009      | 0.15  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |            |     |     |
|-------------|------------------|-----------|------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value | Sex | Age |
| TB          | -                | -         | -          | -   | -   |
| SSB         | -                | -         | -          | -   | -   |
| TN          | -                | -         | -          | -   | -   |
| R           | -                | -         | -          | -   | -   |
| F           | F-1/yr           | 2009      | 1.12       | -   | -   |
| ER          | -                | -         | -          | -   | -   |
| TC          | TC-MT            | 2009      | 1590       |     |     |
| TL          | -                | -         | -          |     |     |
| TB/TBmsy    | -                | -         | -          |     |     |
| SSB/SSBmsy  | -                | -         | -          |     |     |
| F/Fmsy      | -                | -         | -          |     |     |
| ER/ERmsy    | -                | -         | -          |     |     |
| TB/TBmgt    | -                | -         | -          |     |     |
| SSB/SSBmgt  | -                | -         | -          |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2009      | 7.467      |     |     |
| ER/ERmgt    | -                | -         | -          |     |     |

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***

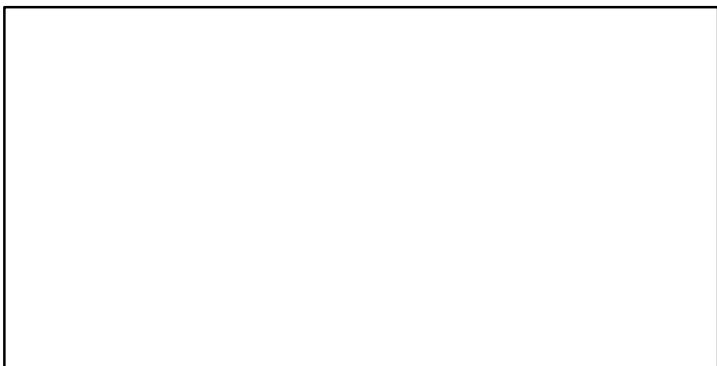


**Production\***

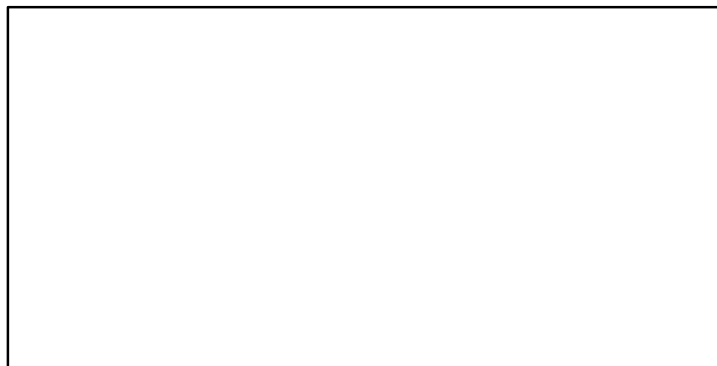


◆ Start Year ◆ End Year \* No Data

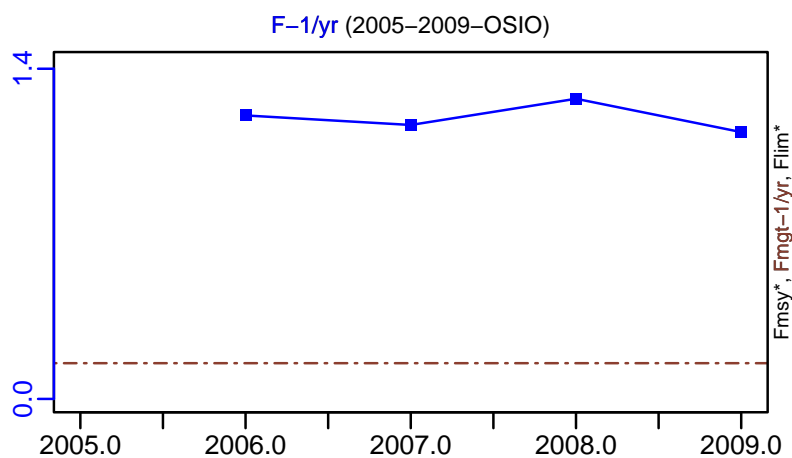
**TB\***



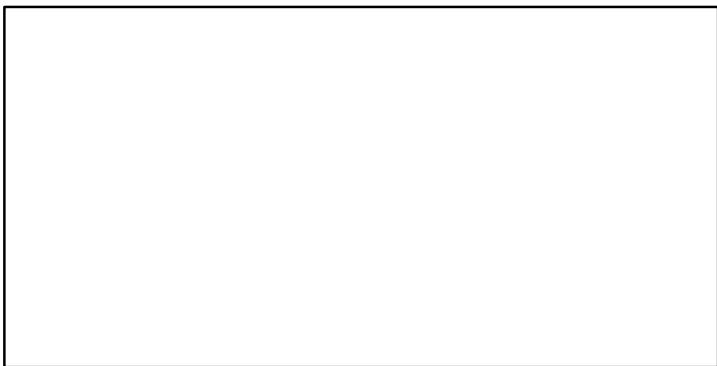
**SSB\***



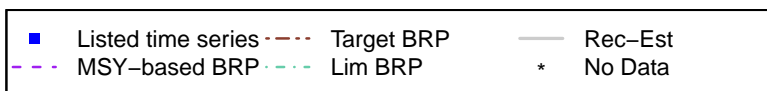
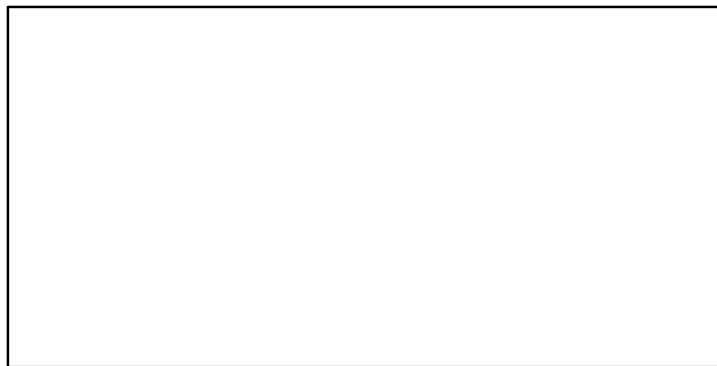
**TN \***



**ER\***

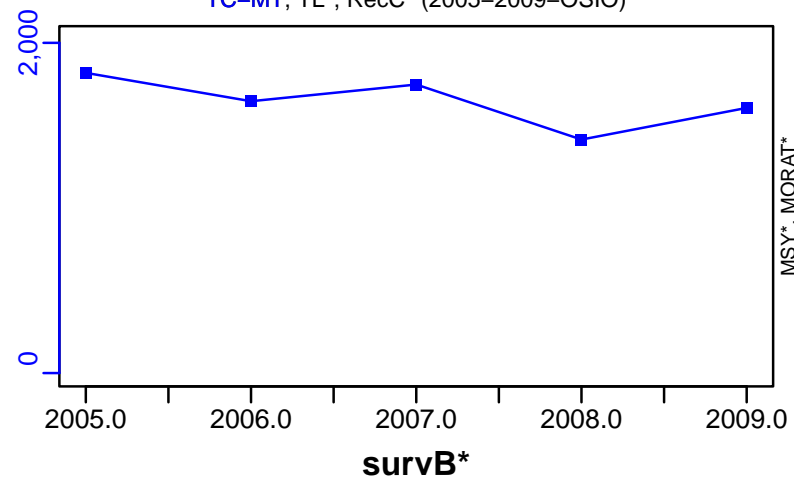


**Recruits\***

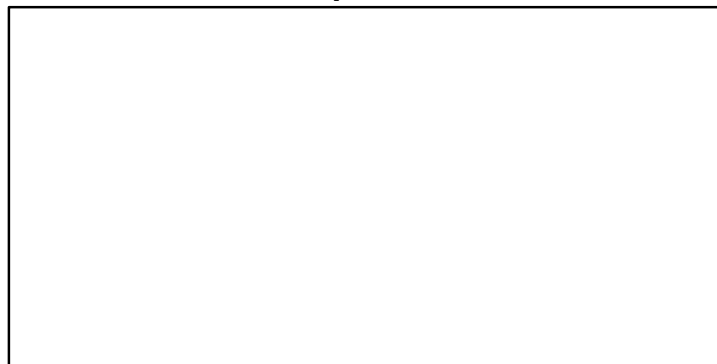


# Hake Malta Island and South of Sicily (GSA 15, 16) [HAKEMEDGSA15-16]

TC-MT, TL\*, RecC\* (2005-2009-OSIO)



TAC\*, Cpair\*, Cadv\*



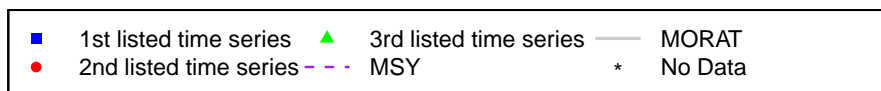
CPUE\*



EFFORT\*



CdivMSY\*



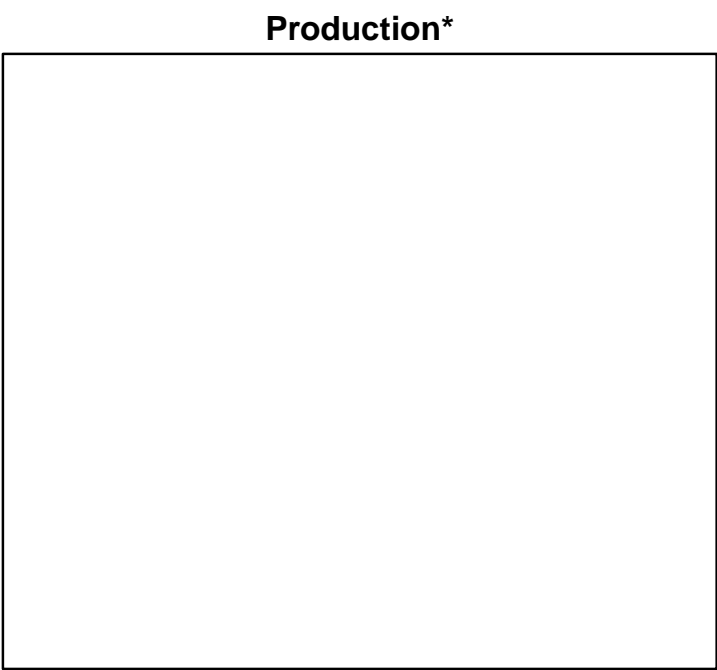
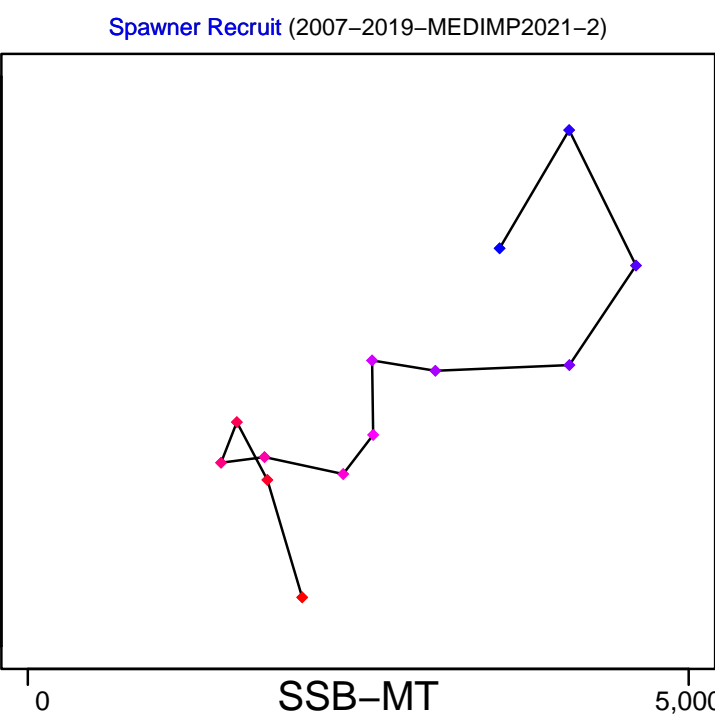
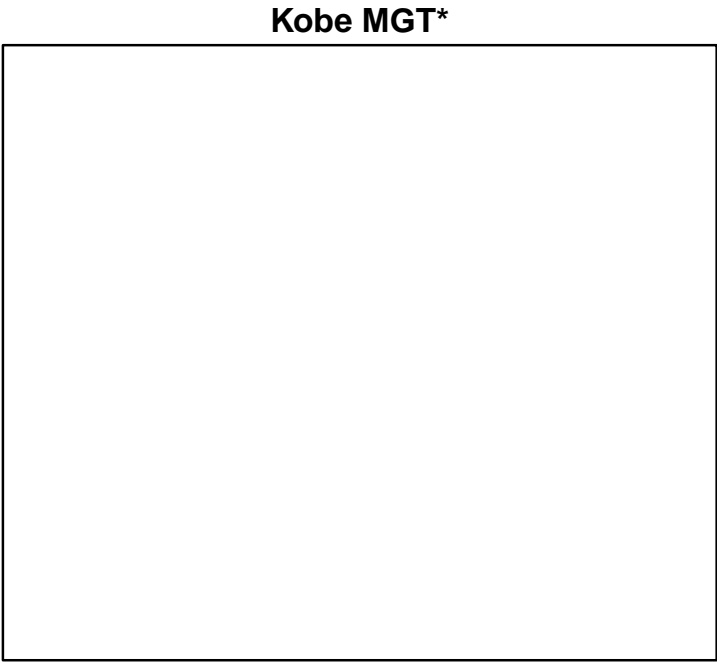
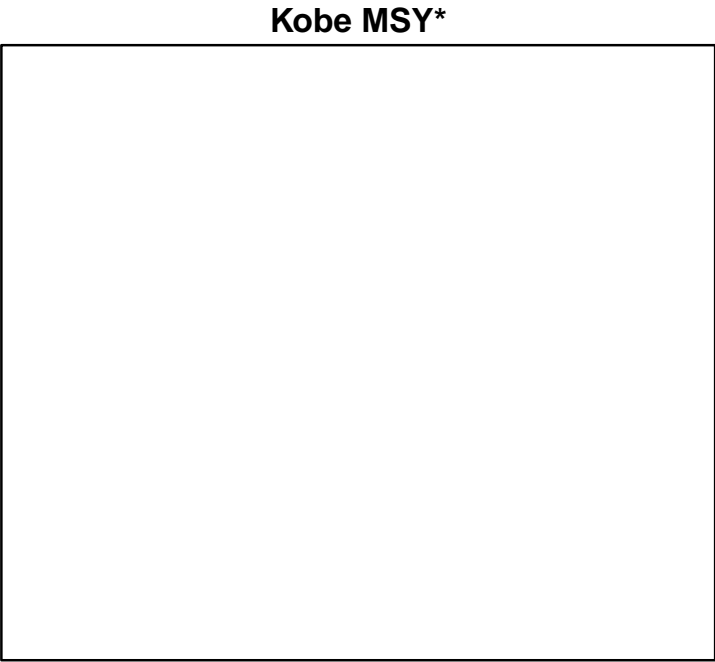
## Hake Geographical Sub-Areas 1-7 [HAKEMEDGSA1-7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Merluccius merluccius   |
| <b>Current Assess ID</b>    | STECF-HAKEMEDGSA1-7-2007-2019-MEDIMP2021-2                                    |
| <b>Area</b>                 | Geographical Sub-Areas 1-7  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2014, 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2019      | 0.388 |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | SSBlim-MT | 2014      | 5186  |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |            |     |     |
|-------------|------------------|-----------|------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value | Sex | Age |
| TB          | -                | -         | -          | -   | -   |
| SSB         | SSB-MT           | 2019      | 2076       | -   | -   |
| TN          | -                | -         | -          | -   | -   |
| R           | R-E00            | 2019      | 42,849,214 | -   | -   |
| F           | F-1/yr           | 2019      | 1.585      | -   | -   |
| ER          | -                | -         | -          | -   | -   |
| TC          | TC-MT            | 2019      | 3148       |     |     |
| TL          | -                | -         | -          |     |     |
| TB/TBmsy    | -                | -         | -          |     |     |
| SSB/SSBmsy  | -                | -         | -          |     |     |
| F/Fmsy      | -                | -         | -          |     |     |
| ER/ERmsy    | -                | -         | -          |     |     |
| TB/TBmgt    | -                | -         | -          |     |     |
| SSB/SSBmgt  | -                | -         | -          |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2019      | 4.085      |     |     |
| ER/ERmgt    | -                | -         | -          |     |     |





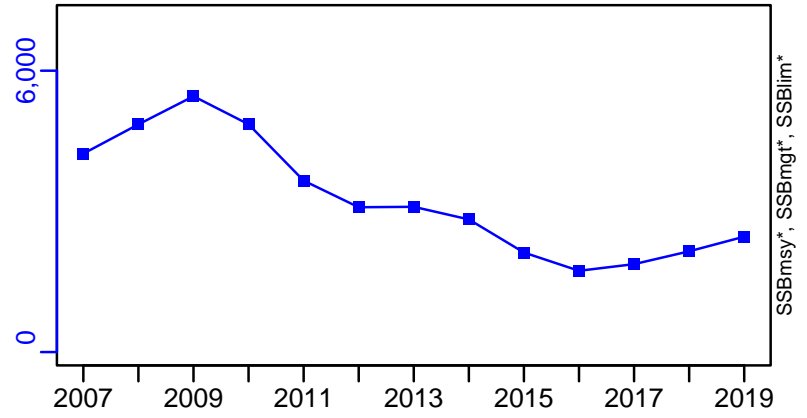
◆ Start Year ◆ End Year \* No Data

# Hake Geographical Sub-Areas 1-7 [HAKEMEDGSA1-7]

TB\*



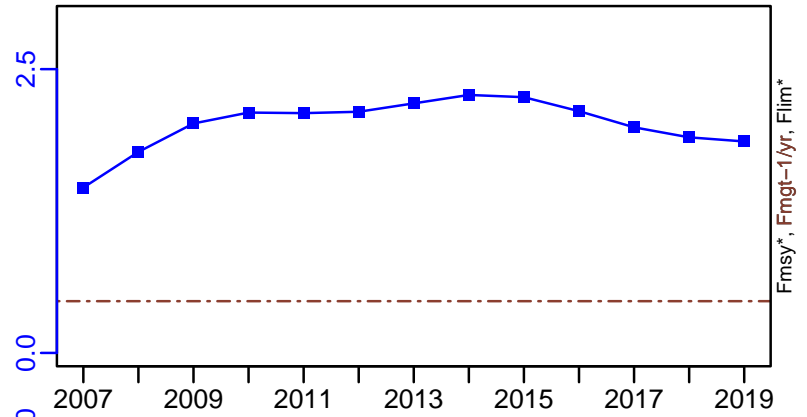
SSB-MT (2007-2019-MEDIMP2021-2)



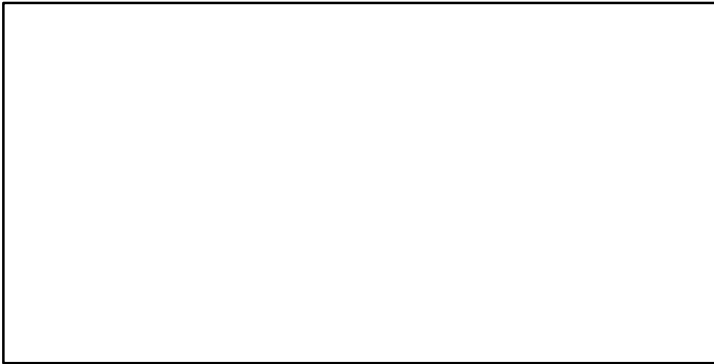
TN \*



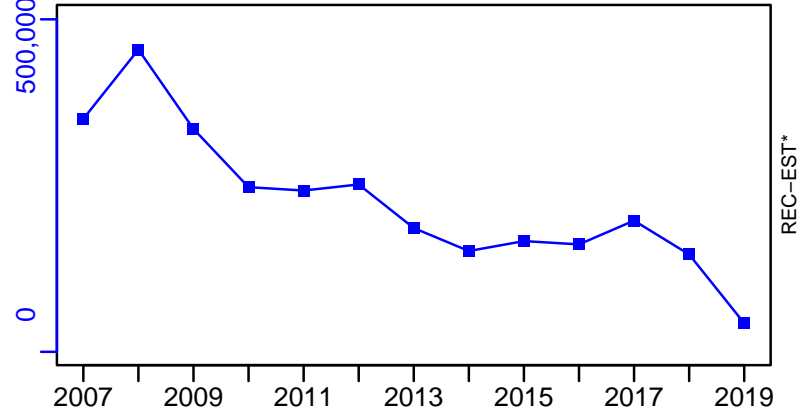
F-1/yr (2007-2019-MEDIMP2021-2)



ER\*

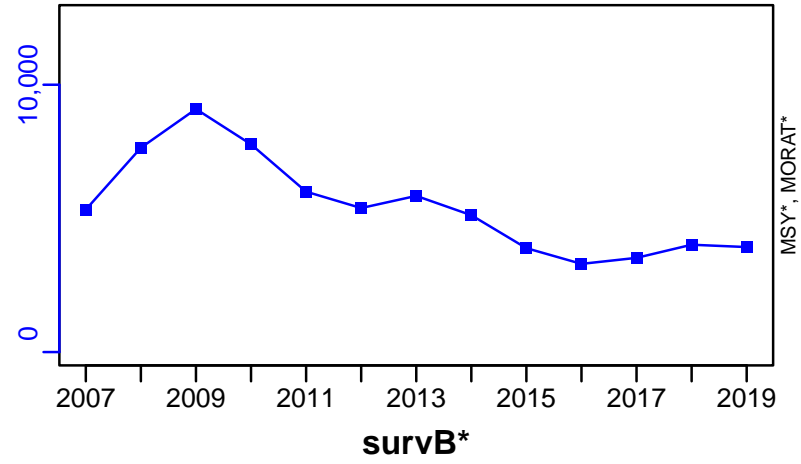


R-E00 (2007-2019-MEDIMP2021-2)

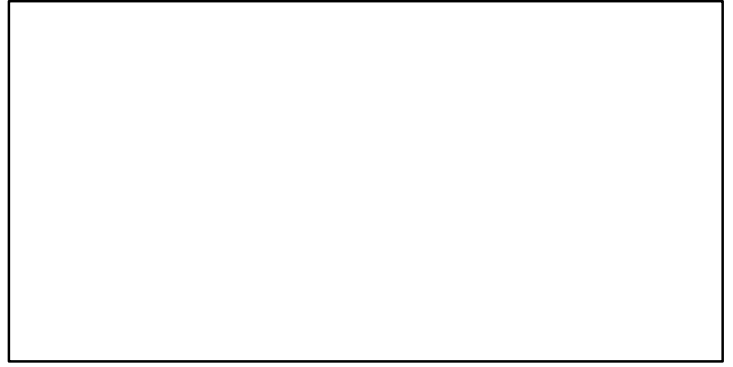


# Hake Geographical Sub-Areas 1-7 [HAKEMEDGSA1-7]

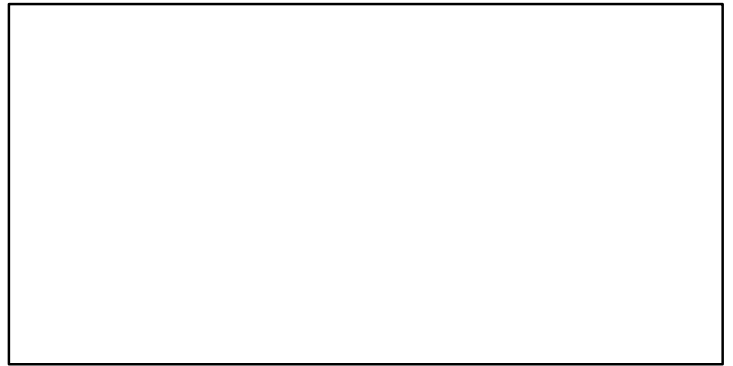
TC-MT, TL\*, RecC\* (2007-2019-MEDIMP2021-2)



TAC\*, Cpair\*, Cadv\*



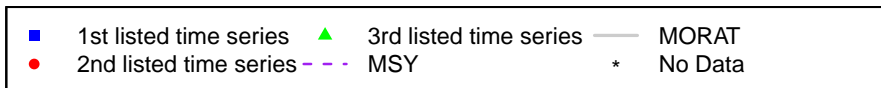
CPUE\*



EFFORT\*



CdivMSY\*



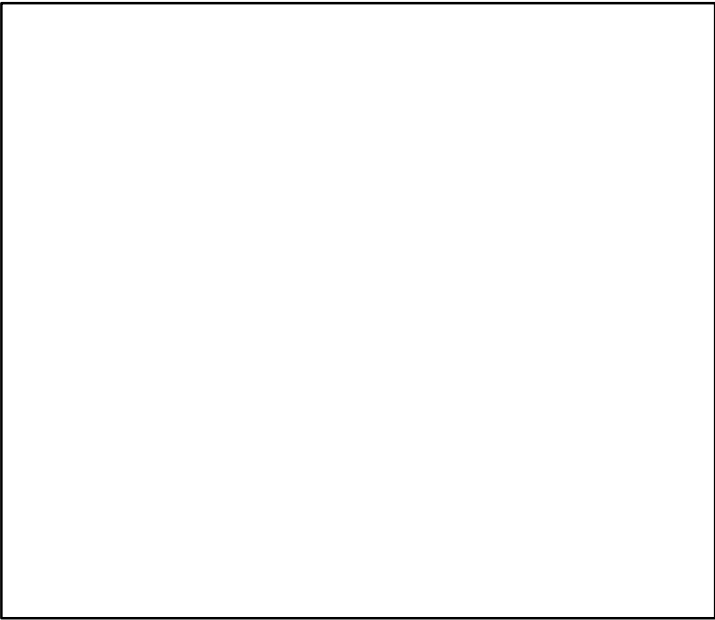
## Hake Adriatic Sea (GSA 17,18) [HAKEMEDGSA17-18]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Merluccius merluccius   |
| <b>Current Assess ID</b>    | STECF-HAKEMEDGSA17-18-1998-2019-MEDIMP2021-2                                  |
| <b>Area</b>                 | Adriatic Sea (GSA 17,18)  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019, 2014  |

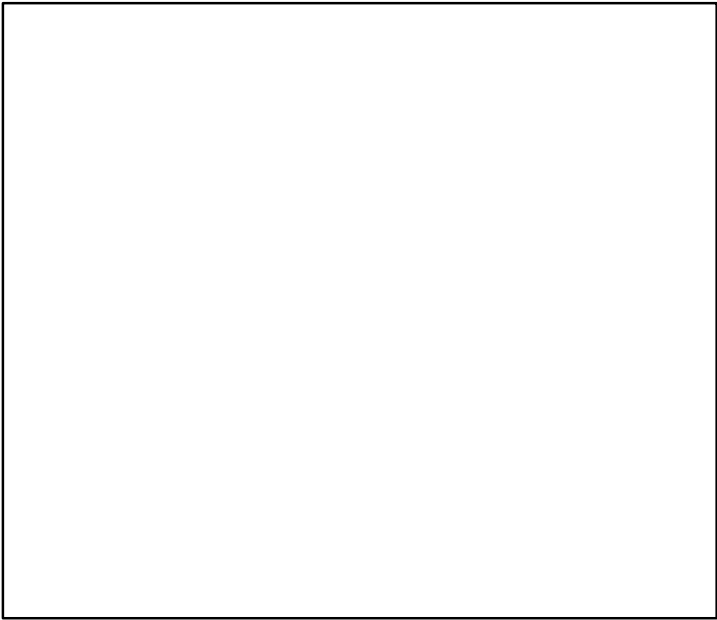
| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2019      | 0.179 |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.179 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |             |     |     |
|-------------------|------------------|-----------|-------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value  | Sex | Age |
| <b>TB</b>         | -                | -         | -           | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 3322        | -   | -   |
| <b>TN</b>         | -                | -         | -           | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 326,847,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.41        | -   | -   |
| <b>ER</b>         | -                | -         | -           | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 5361        |     |     |
| <b>TL</b>         | -                | -         | -           |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -           |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2019      | 2.291       |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -           |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -           |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 2.291       |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -           |     |     |

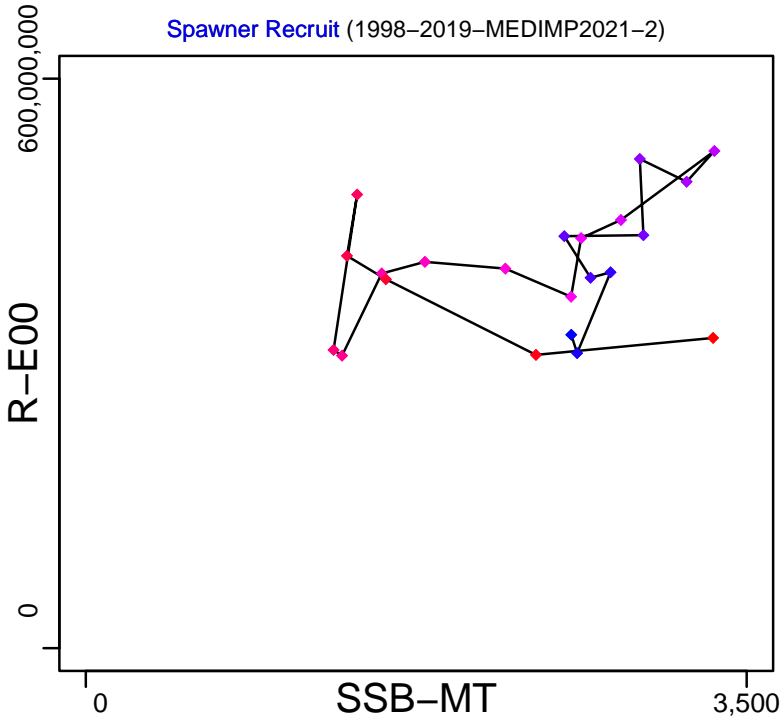
Kobe MSY\*



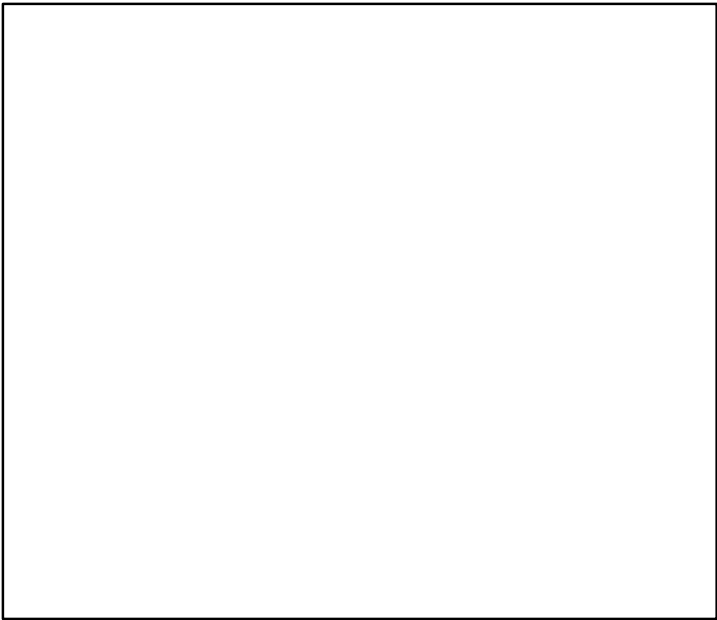
Kobe MGT\*



Spawner Recruit (1998-2019-MEDIMP2021-2)



Production\*



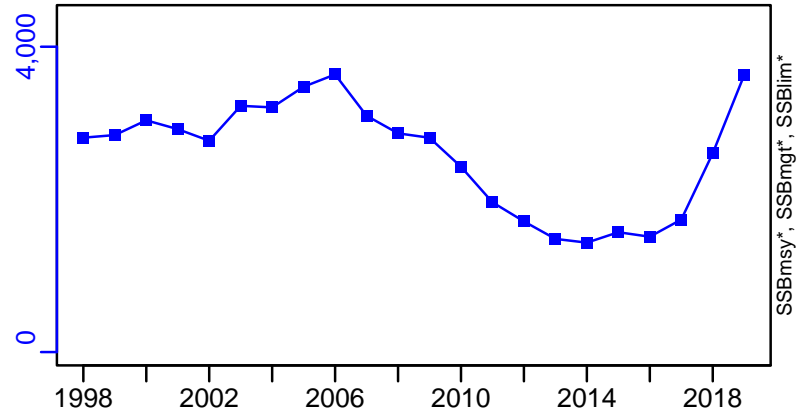
◆ Start Year ◆ End Year \* No Data

# Hake Adriatic Sea (GSA 17,18) [HAKEMEDGSA17-18]

TB\*



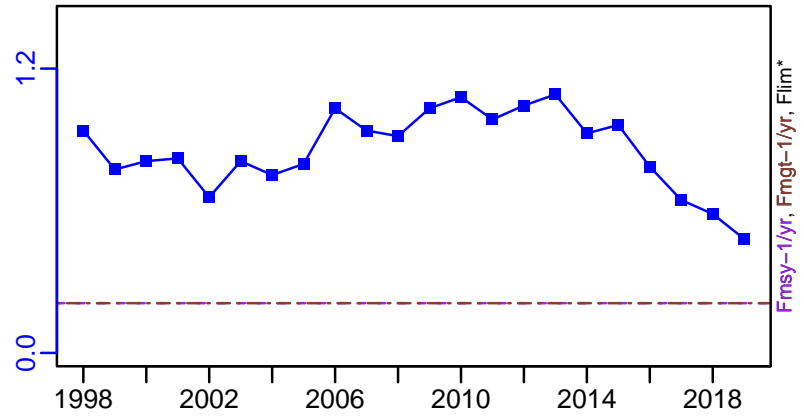
SSB-MT (1998-2019-MEDIMP2021-2)



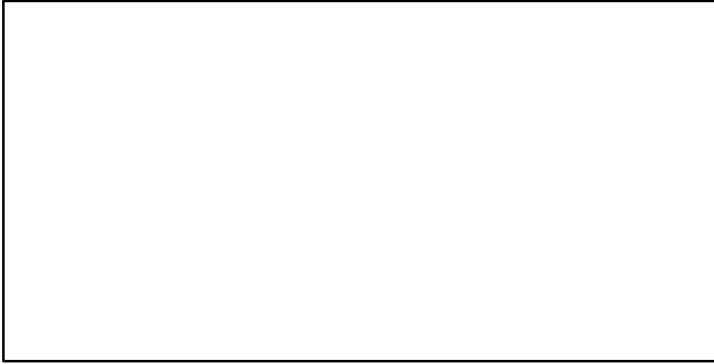
TN \*



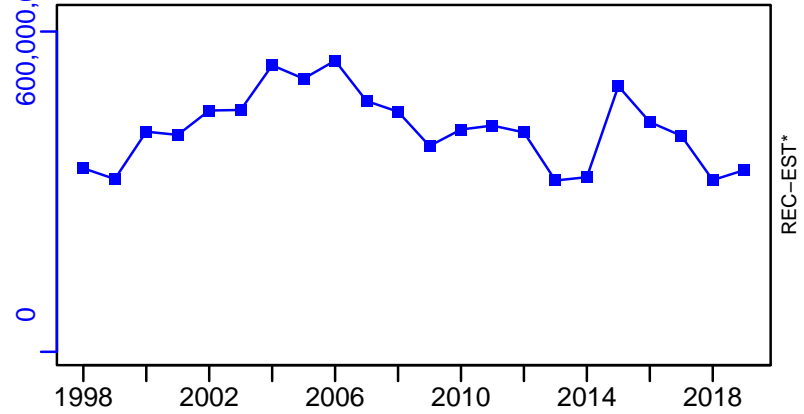
F-1/yr (1998-2019-MEDIMP2021-2)



ER\*

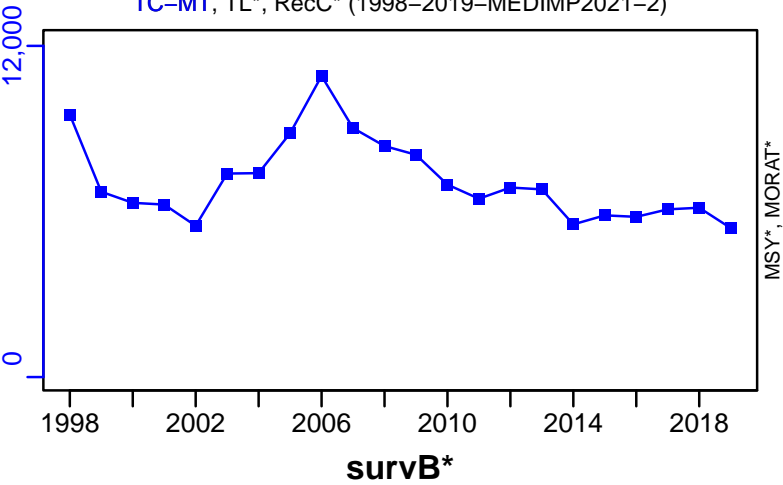


R-E00 (1998-2019-MEDIMP2021-2)



Hake Adriatic Sea (GSA 17,18) [HAKEMEDGSA17-18]

TC-MT, TL\*, RecC\* (1998-2019-MEDIMP2021-2)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Hake Western Ionian Sea [HAKEMEDGSA19]

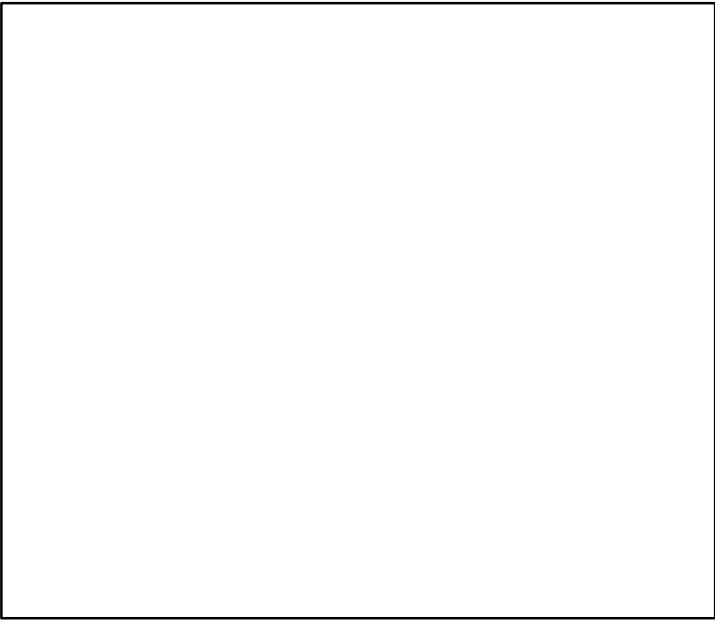
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Merluccius merluccius   |
| <b>Current Assess ID</b>    | STECF-HAKEMEDGSA19-2004-2019-MEDIMP2021-2                                     |
| <b>Area</b>                 | Western Ionian Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019, 2014  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.135 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

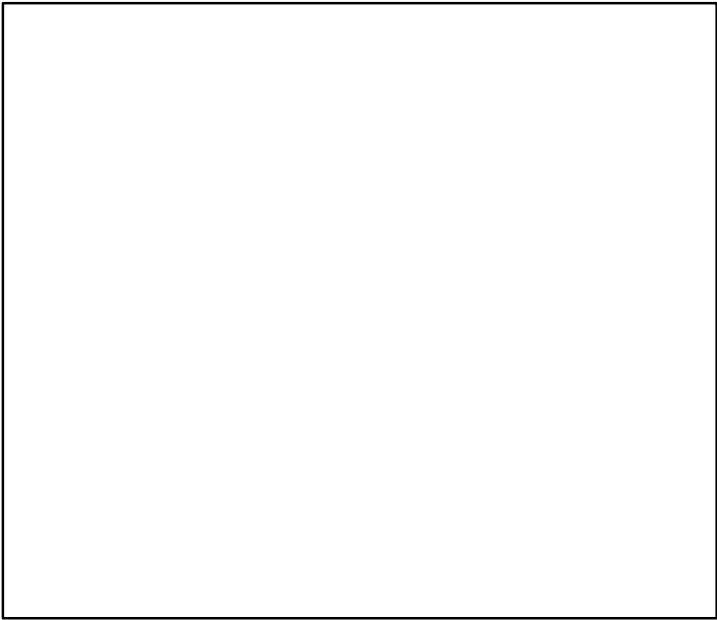
| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 1193       | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 50,329,414 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.325      | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 594        |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 2.405      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



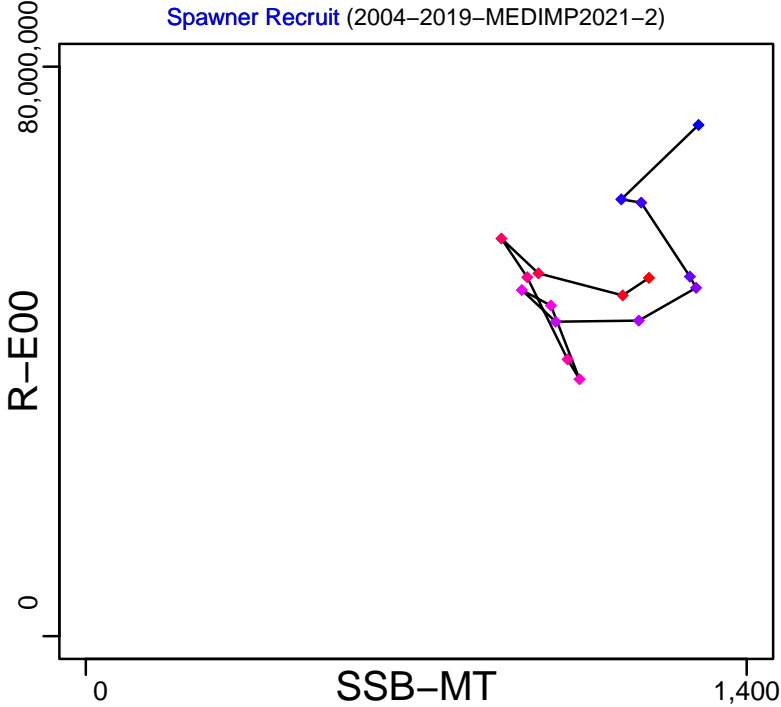
Kobe MSY\*



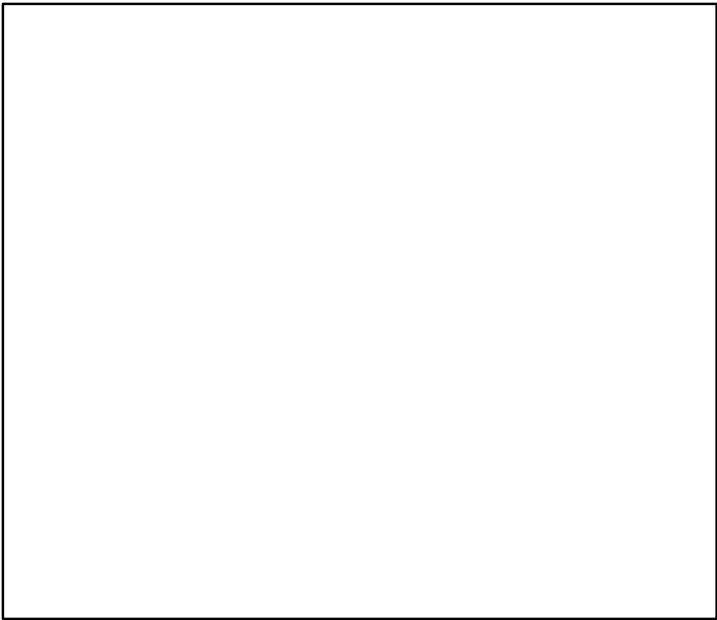
Kobe MGT\*



Spawner Recruit (2004–2019–MEDIMP2021–2)



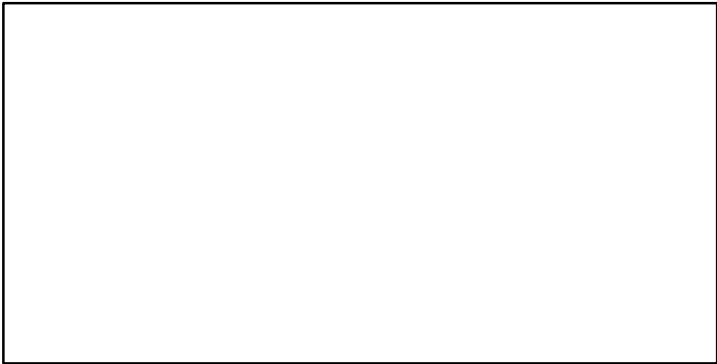
Production\*



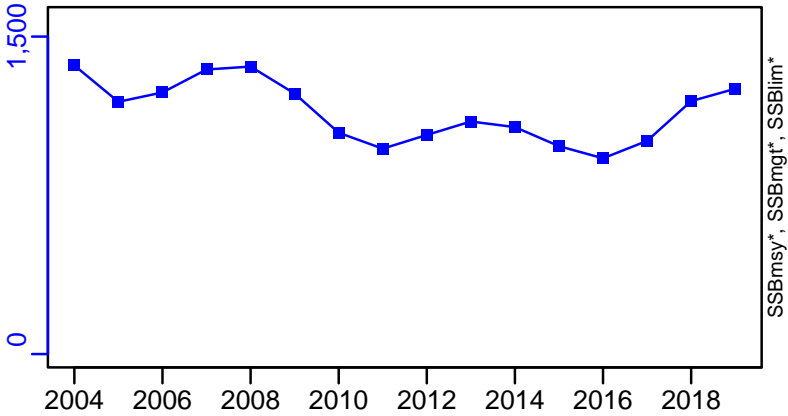
◆ Start Year ◆ End Year \* No Data

Hake Western Ionian Sea [HAKEMEDGSA19]

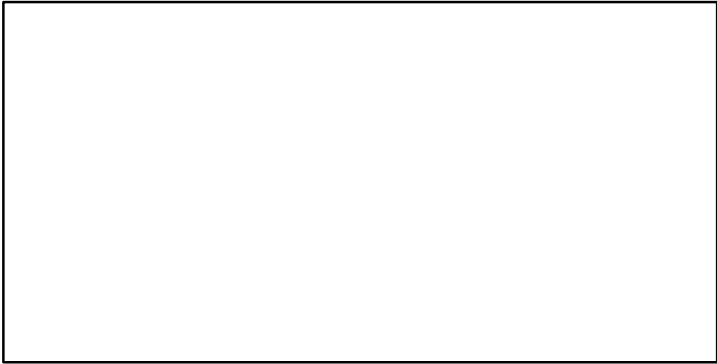
TB\*



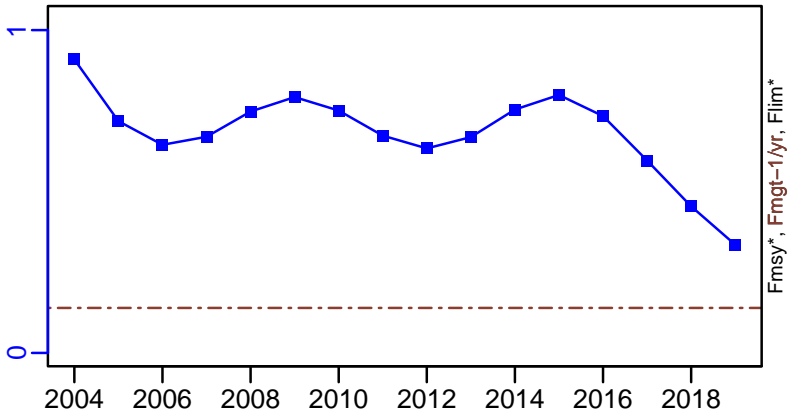
SSB-MT (2004–2019–MEDIMP2021–2)



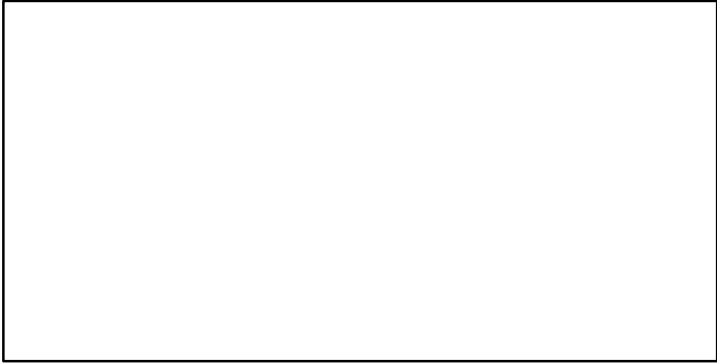
TN \*



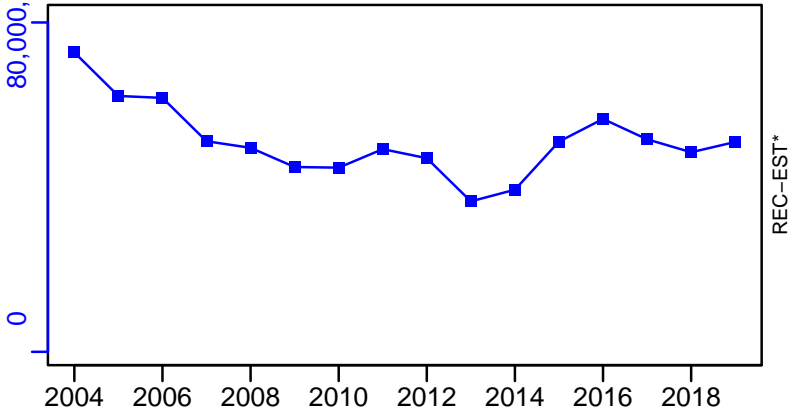
F-1/yr (2004–2019–MEDIMP2021–2)



ER\*

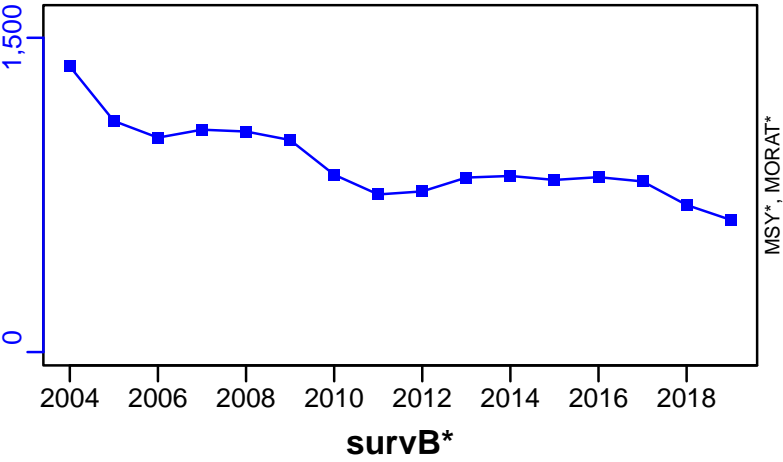


R-E00 (2004–2019–MEDIMP2021–2)



Hake Western Ionian Sea [HAKEMEDGSA19]

TC-MT, TL\*, RecC\* (2004-2019-MEDIMP2021-2)



TAC\*, Cpair\*, Cadv\*



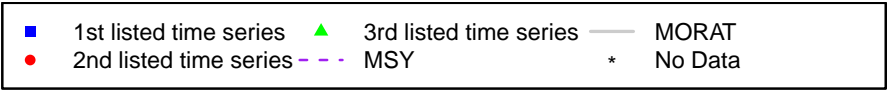
CPUE\*



EFFORT\*



CdivMSY\*



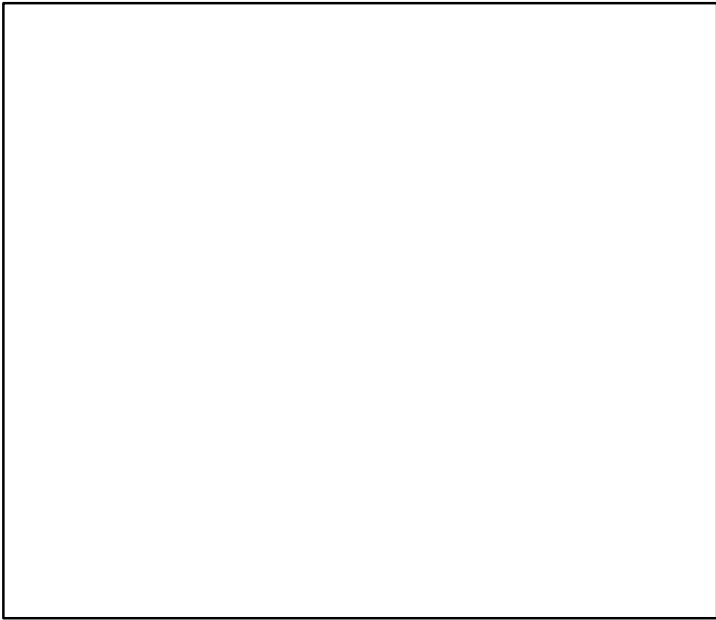
## Hake Eastern Ionian Sea [HAKEMEDGSA20]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Merluccius merluccius   |
| <b>Current Assess ID</b>    | STECF-HAKEMEDGSA20-2003-2019-MEDIMP2021-2                                     |
| <b>Area</b>                 | Eastern Ionian Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2008, 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.358 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 1237       | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 98,572,383 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.745      | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 872        |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 2.082      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

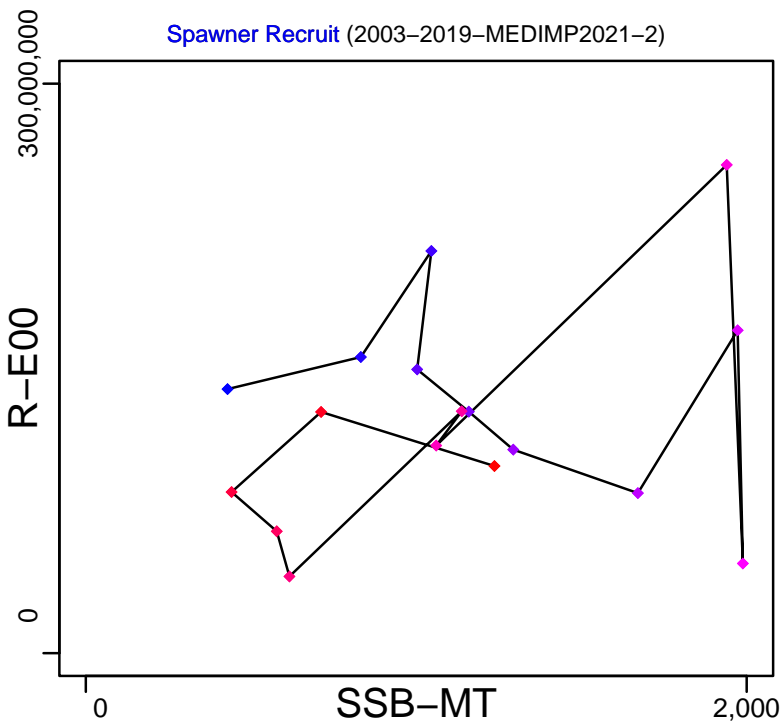
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit** (2003–2019–MEDIMP2021–2)

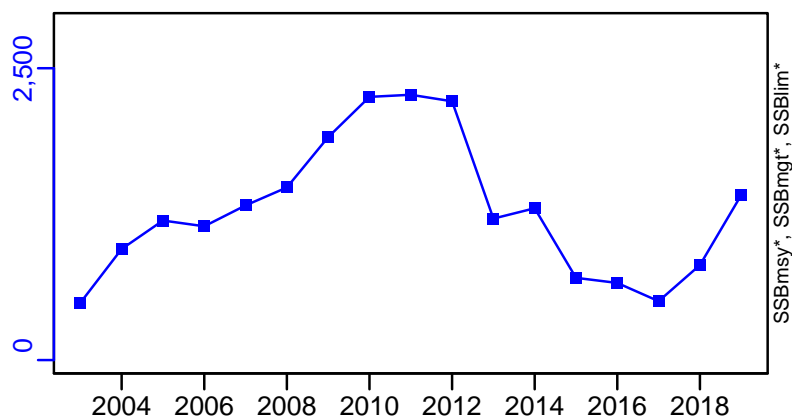


# Hake Eastern Ionian Sea [HAKEMEDGSA20]

TB\*



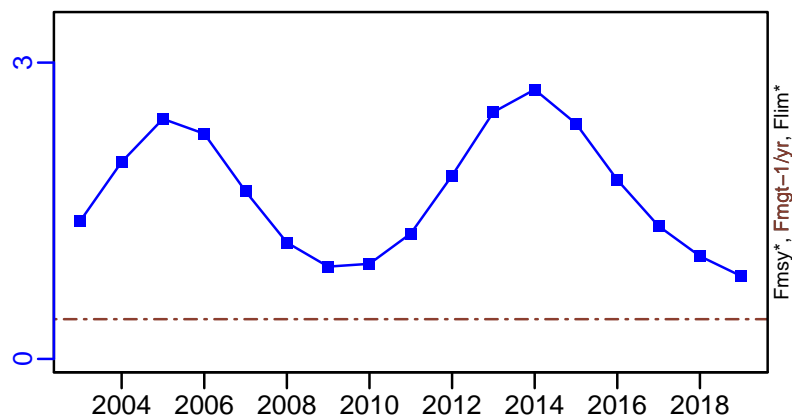
SSB-MT (2003–2019–MEDIMP2021–2)



TN \*



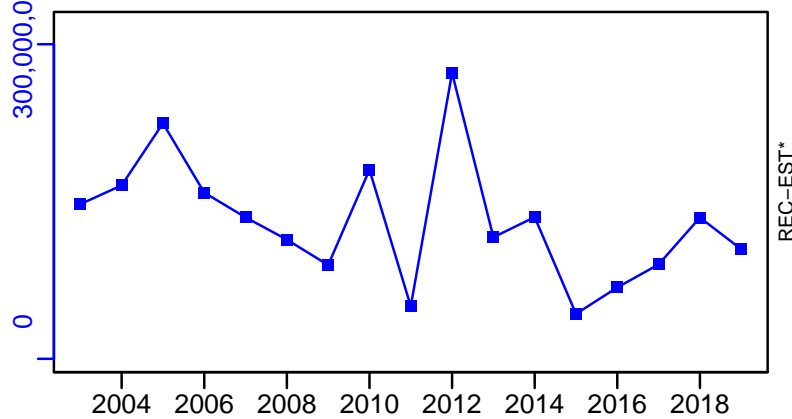
F-1/yr (2003–2019–MEDIMP2021–2)



ER\*

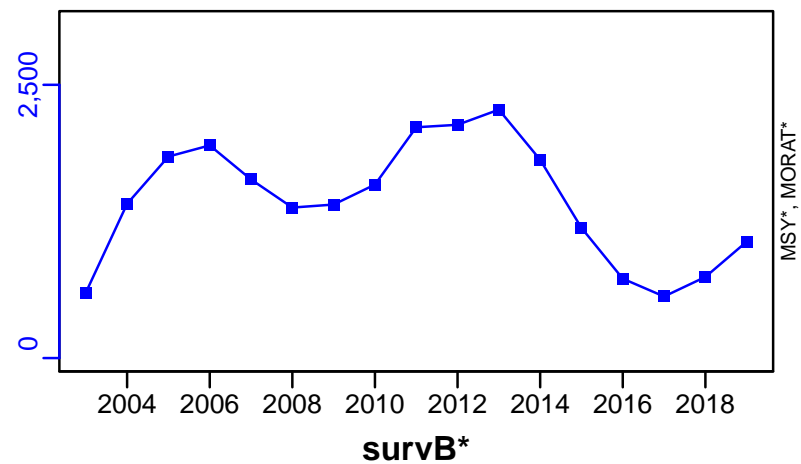


R-E00 (2003–2019–MEDIMP2021–2)



# Hake Eastern Ionian Sea [HAKEMEDGSA20]

TC-MT, TL\*, RecC\* (2003-2019-MEDIMP2021-2)



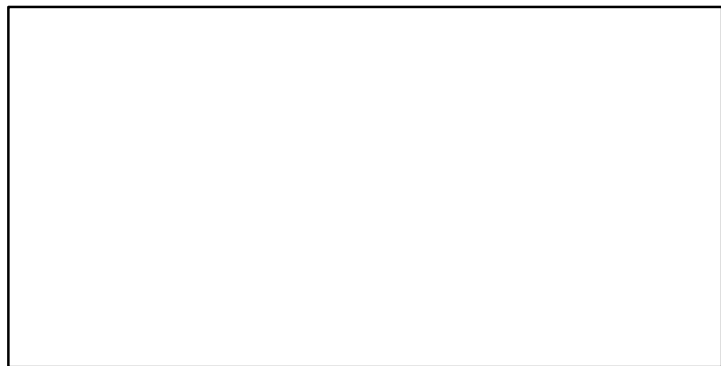
TAC\*, Cpair\*, Cadv\*



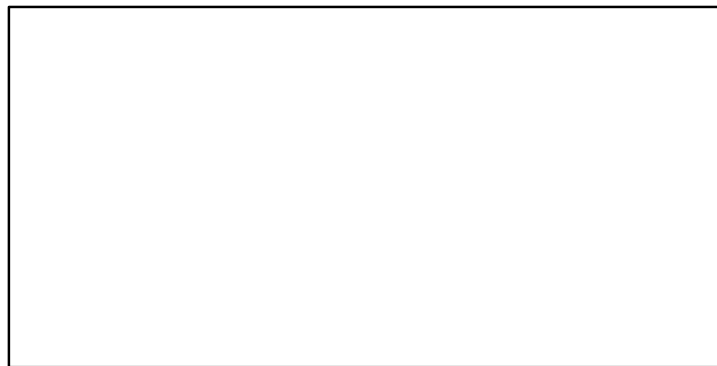
CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Hake Aegean Sea and Crete Island (GSA 22,23) [HAKEMEDGSA22-23]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Merluccius merluccius   |
| <b>Current Assess ID</b>    | STECF-HAKEMEDGSA22-23-2003-2008-OSIO  |
| <b>Area</b>                 | Aegean Sea and Crete Island (GSA 22,23)                                       |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2008  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2008      | 0.24  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |                    |     |     |
|-------------|------------------|-----------|--------------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value         | Sex | Age |
| TB          | -                | -         | -                  | -   | -   |
| SSB         | SSB-MT           | 2008      | 5650               | -   | 2+  |
| TN          | -                | -         | -                  | -   | -   |
| R           | R-E00            | 2008      | $3.75 \times 10^8$ | -   | -   |
| F           | F-1/yr           | 2008      | 0.83               | -   | -   |
| ER          | -                | -         | -                  | -   | -   |
| TC          | TC-MT            | 2008      | 7160               |     |     |
| TL          | -                | -         | -                  |     |     |
| TB/TBmsy    | -                | -         | -                  |     |     |
| SSB/SSBmsy  | -                | -         | -                  |     |     |
| F/Fmsy      | -                | -         | -                  |     |     |
| ER/ERmsy    | -                | -         | -                  |     |     |
| TB/TBmgt    | -                | -         | -                  |     |     |
| SSB/SSBmgt  | -                | -         | -                  |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2008      | 3.458              |     |     |
| ER/ERmgt    | -                | -         | -                  |     |     |



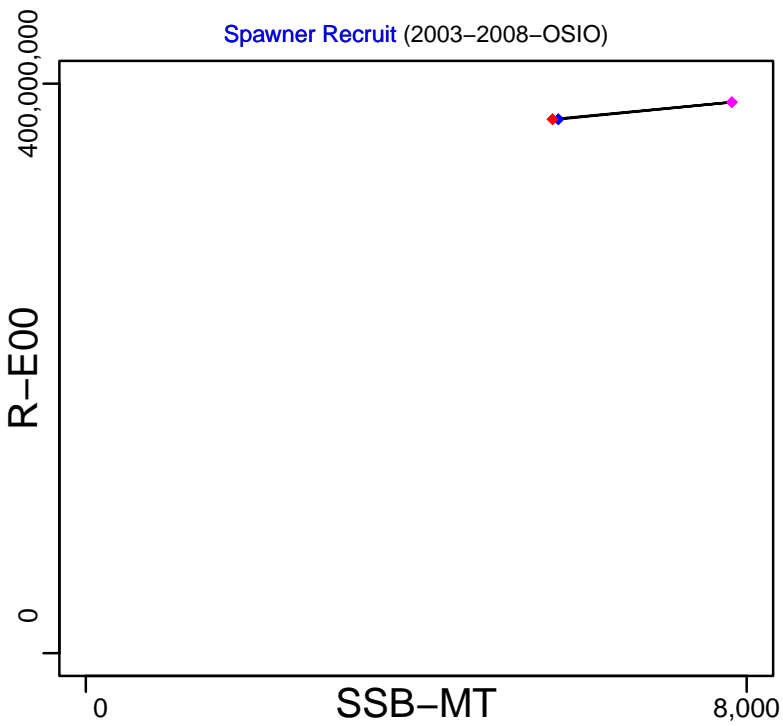
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit (2003-2008-OSIO)**



**Production\***



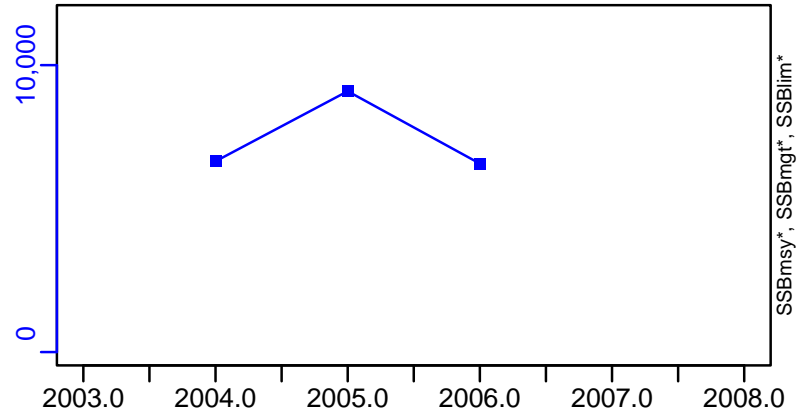
◆ Start Year ◆ End Year \* No Data

# Hake Aegean Sea and Crete Island (GSA 22,23) [HAKEMEDGSA22-23]

TB\*



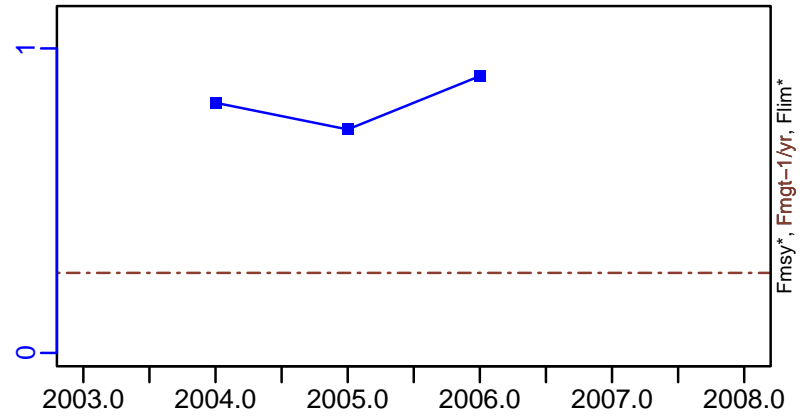
SSB-MT (2003–2008–OSIO)



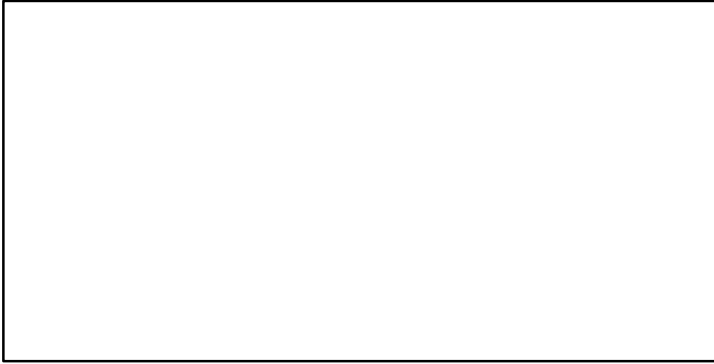
TN \*



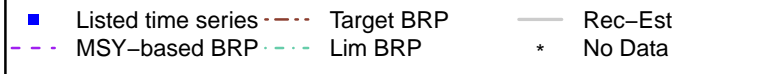
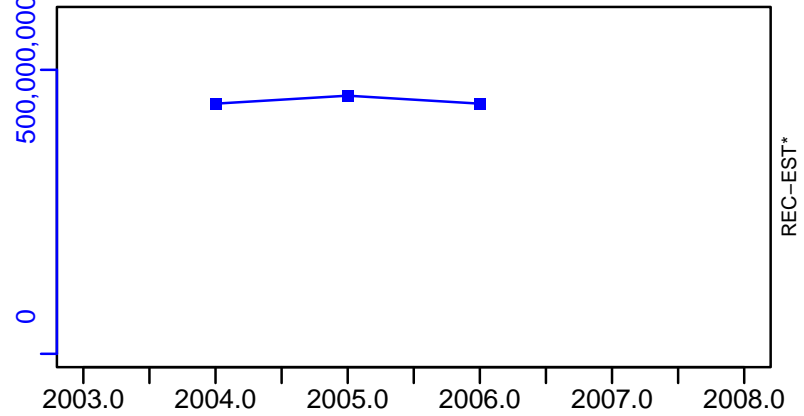
F-1/yr (2003–2008–OSIO)



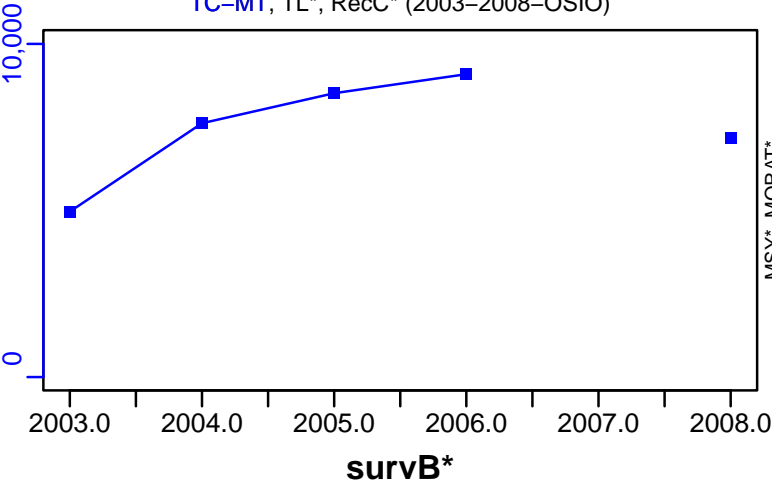
ER\*



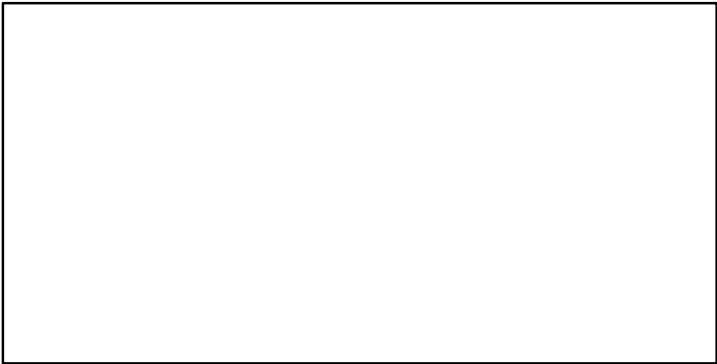
R-E00 (2003–2008–OSIO)



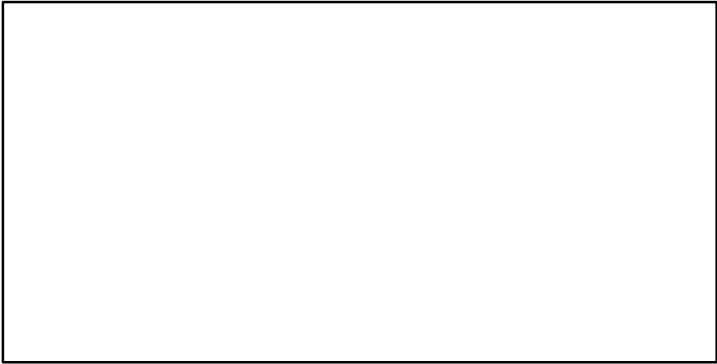
TC-MT, TL\*, RecC\* (2003-2008-OSIO)



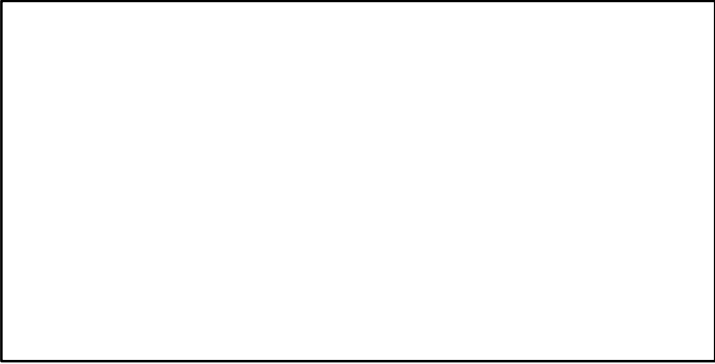
TAC\*, Cpair\*, Cadv\*



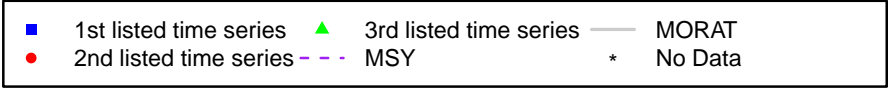
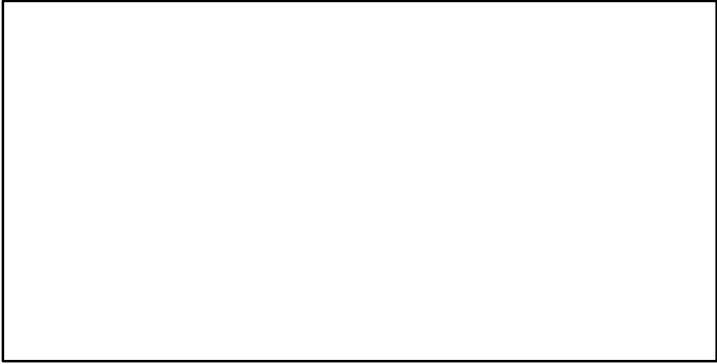
CPUE\*



EFFORT\*



CdivMSY\*



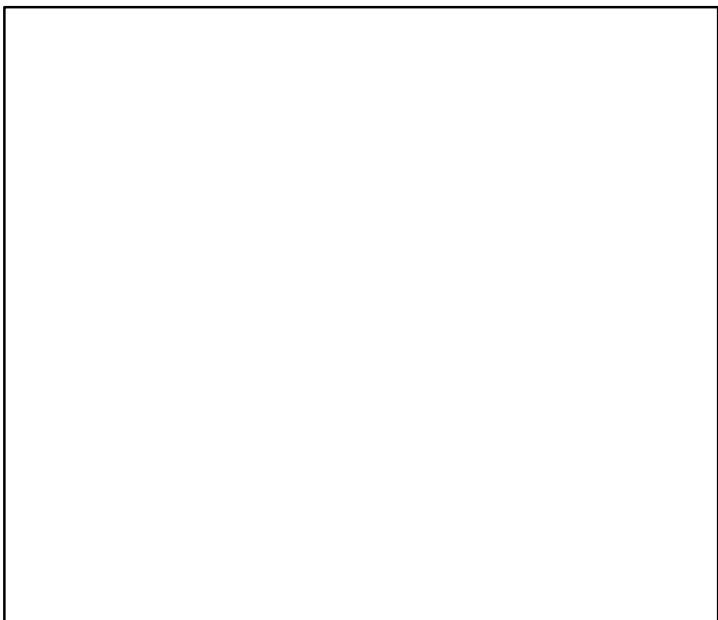
## Hake Gulf of Lions [HAKEMEDGSA7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Merluccius merluccius   |
| <b>Current Assess ID</b>    | STECF-HAKEMEDGSA7-1998-2012-OSIO  |
| <b>Area</b>                 | Gulf of Lions   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2012      | 0.11  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2012      | 543        | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2012      | 19,700,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2012      | 1.84       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | -                | -         | -          |     |     |
| <b>TL</b>         | TL-MT            | 2012      | 1110       |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2012      | 16.727     |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

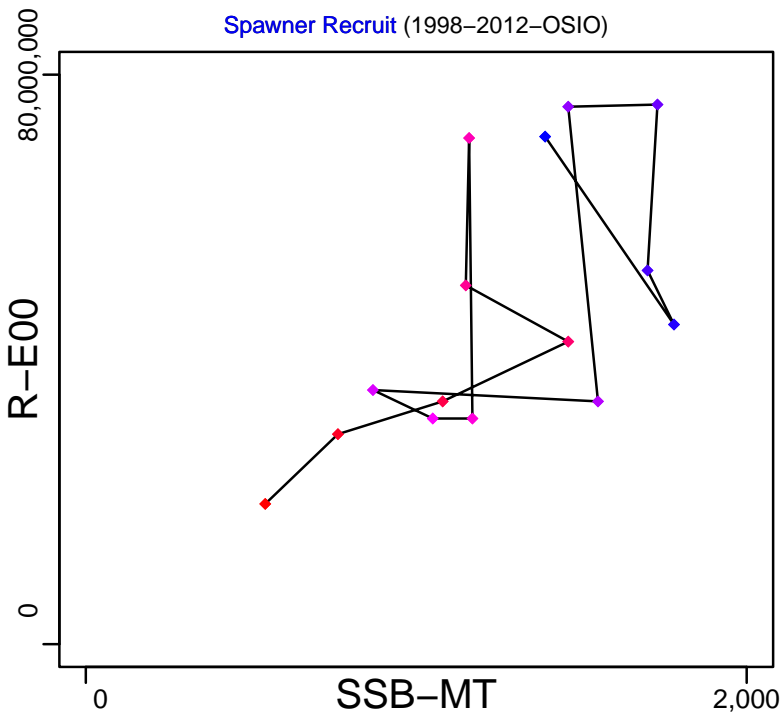
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit (1998–2012–OSIO)**



**Production\***



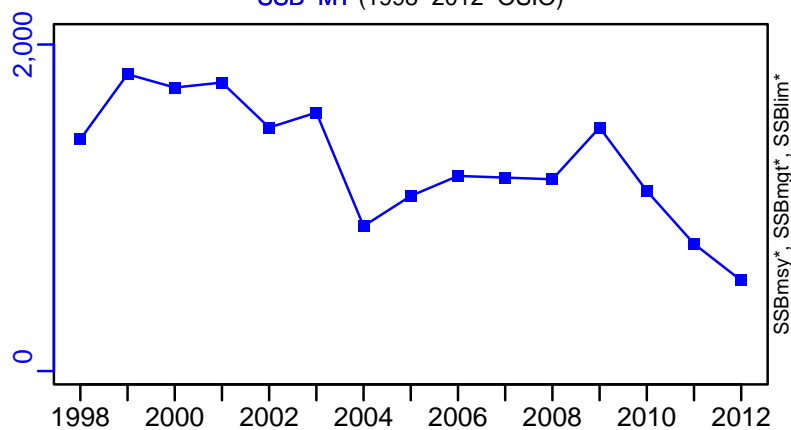
◆ Start Year ◆ End Year \* No Data

# Hake Gulf of Lions [HAKEMEDGSA7]

TB\*



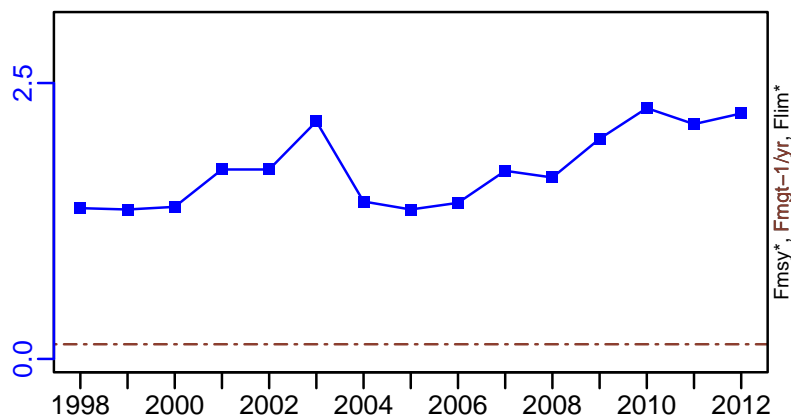
SSB-MT (1998–2012–OSIO)



TN \*



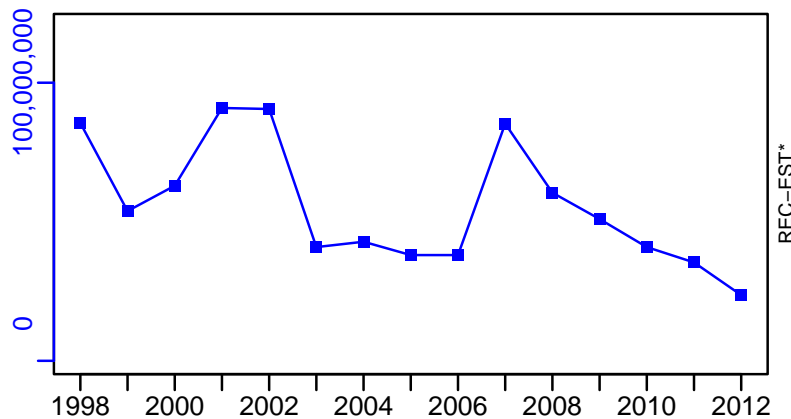
F-1/yr (1998–2012–OSIO)



ER\*



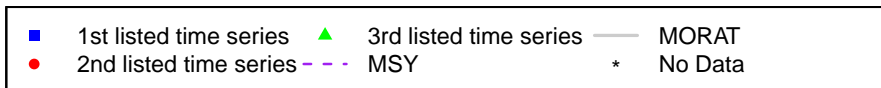
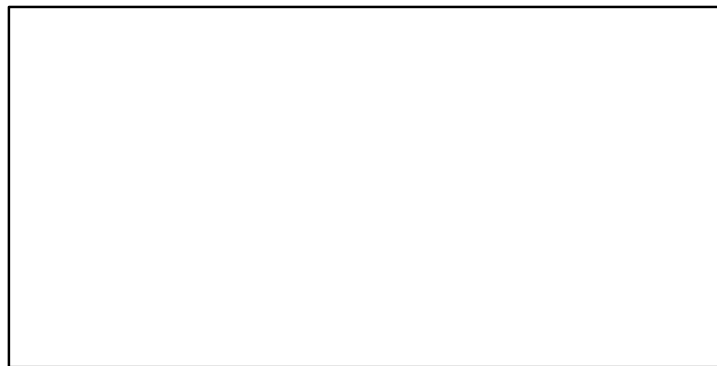
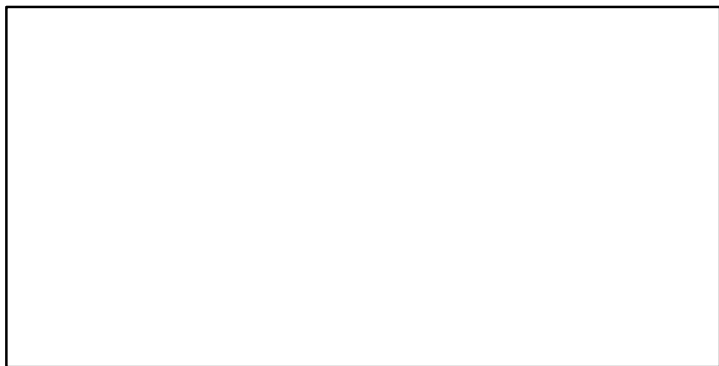
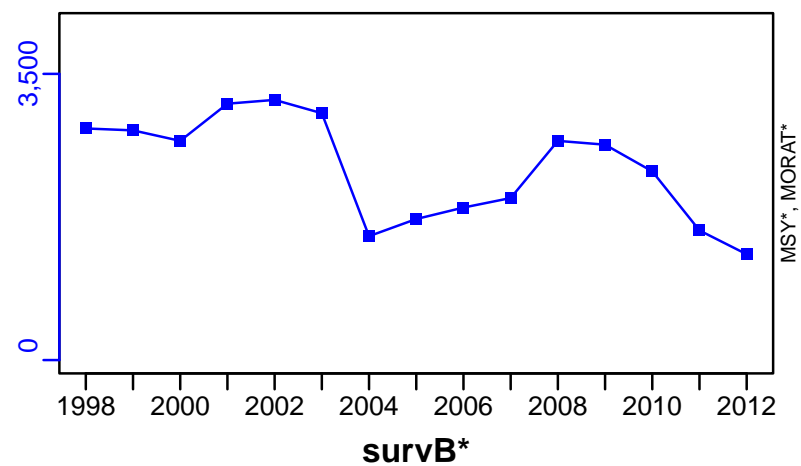
R-E00 (1998–2012–OSIO)



# Hake Gulf of Lions [HAKEMEDGSA7]

TL-MT, TC\*, RecC\* (1998-2012-OSIO)

TAC\*, Cpair\*, Cadv\*



## Hake Geographical Sub-Areas 8-11 [HAKEMEDGSA8-11]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Merluccius merluccius   |
| <b>Current Assess ID</b>    | STECF-HAKEMEDGSA8-11-2005-2019-MEDIMP2021-2                                   |
| <b>Area</b>                 | Geographical Sub-Areas 8-11   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.167 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |             |     |     |
|-------------------|------------------|-----------|-------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value  | Sex | Age |
| <b>TB</b>         | -                | -         | -           | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 4509        | -   | -   |
| <b>TN</b>         | -                | -         | -           | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 298,907,974 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.567       | -   | -   |
| <b>ER</b>         | -                | -         | -           | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 2075        |     |     |
| <b>TL</b>         | -                | -         | -           |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -           |     |     |
| <b>F/Fmsy</b>     | -                | -         | -           |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -           |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -           |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 3.391       |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -           |     |     |



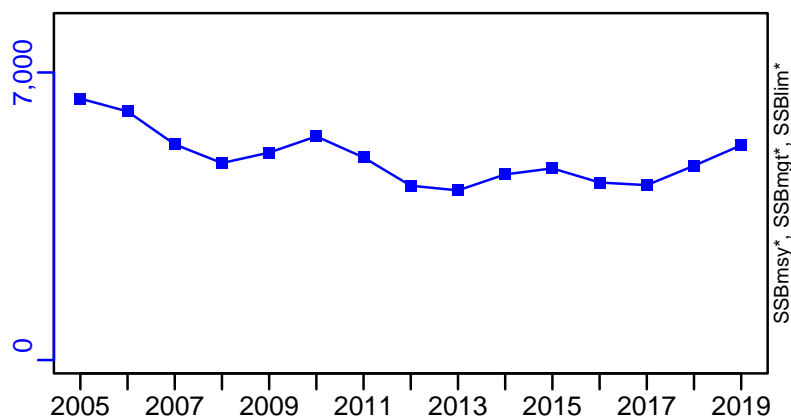


# Hake Geographical Sub-Areas 8-11 [HAKEMEDGSA8-11]

TB\*



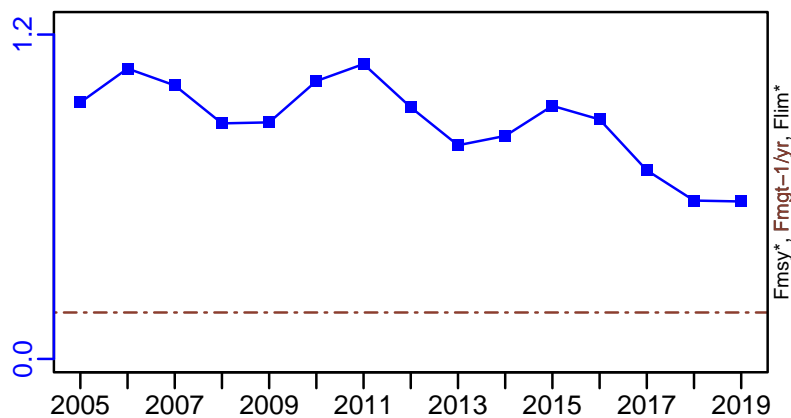
SSB-MT (2005-2019-MEDIMP2021-2)



TN \*



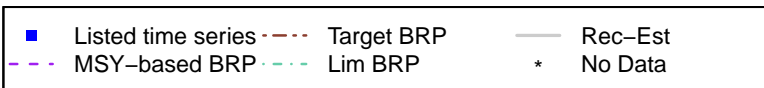
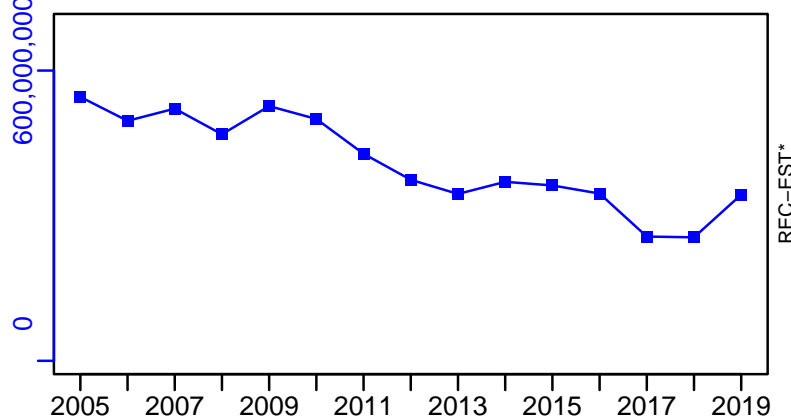
F-1/yr (2005-2019-MEDIMP2021-2)



ER\*

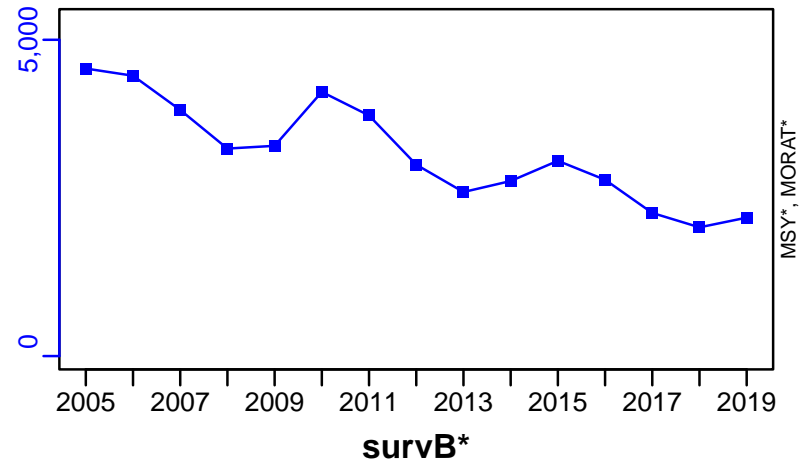


R-E00 (2005-2019-MEDIMP2021-2)



# Hake Geographical Sub-Areas 8–11 [HAKEMEDGSA8–11]

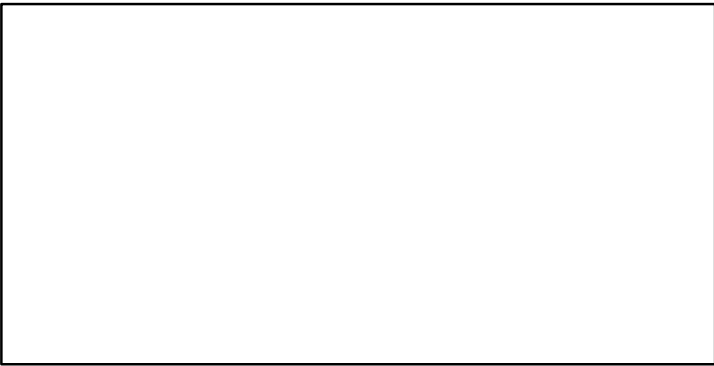
TC–MT, TL\*, RecC\* (2005–2019–MEDIMP2021–2)



TAC\*, Cpair\*, Cadv\*



survB\*



CPUE\*



EFFORT\*



CdivMSY\*



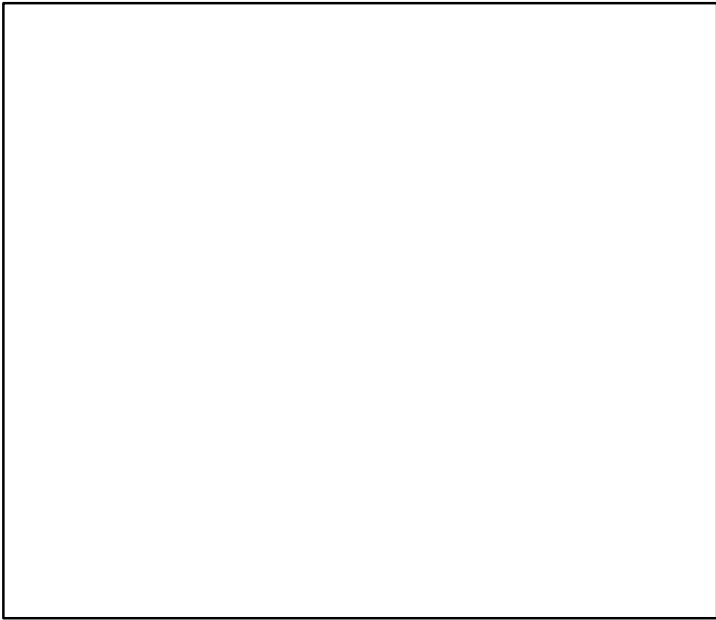
## Horse mackerel Geographical Sub-Areas 9-11 [HMACKMEDGSA9-11]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Trachurus trachurus   |
| <b>Current Assess ID</b>    | STECF-HMACKMEDGSA9-11-2009-2016-MEDIMP2021-2                                  |
| <b>Area</b>                 | Geographical Sub-Areas 9-11   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2016  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2016      | 0.23  |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2016      | 0.23  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |             |     |     |
|-------------------|------------------|-----------|-------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value  | Sex | Age |
| <b>TB</b>         | -                | -         | -           | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2016      | 970         | -   | -   |
| <b>TN</b>         | -                | -         | -           | -   | -   |
| <b>R</b>          | R-E00            | 2016      | 430,635,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2016      | 0.56        | -   | -   |
| <b>ER</b>         | -                | -         | -           | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 3769        |     |     |
| <b>TL</b>         | -                | -         | -           |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -           |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2016      | 2.435       |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -           |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -           |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2016      | 2.435       |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -           |     |     |

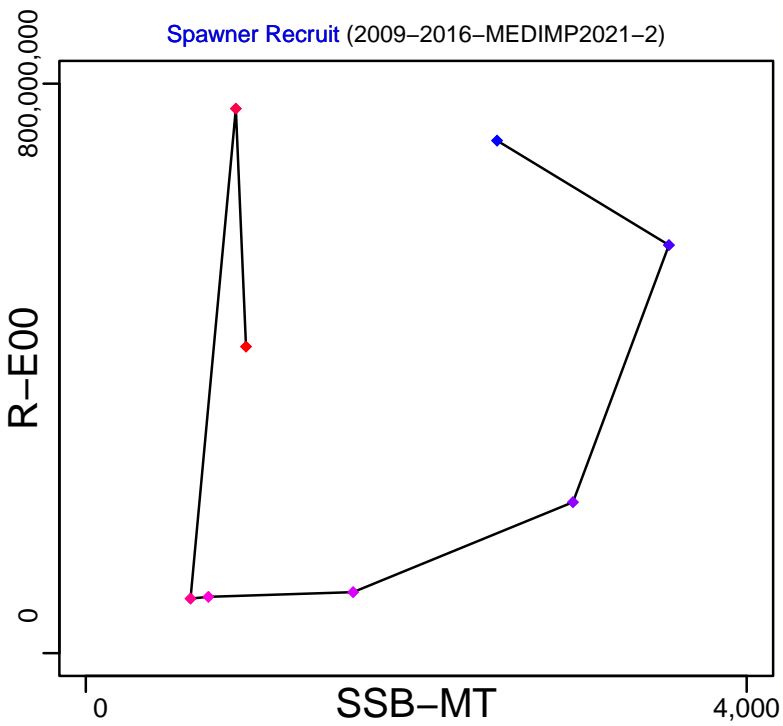
**Kobe MSY\***



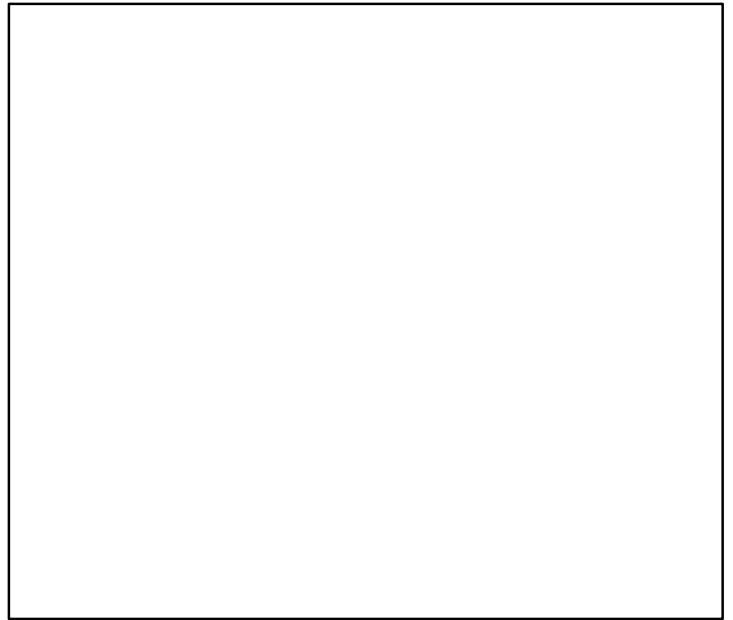
**Kobe MGT\***



**Spawner Recruit** (2009–2016–MEDIMP2021–2)



**Production\***



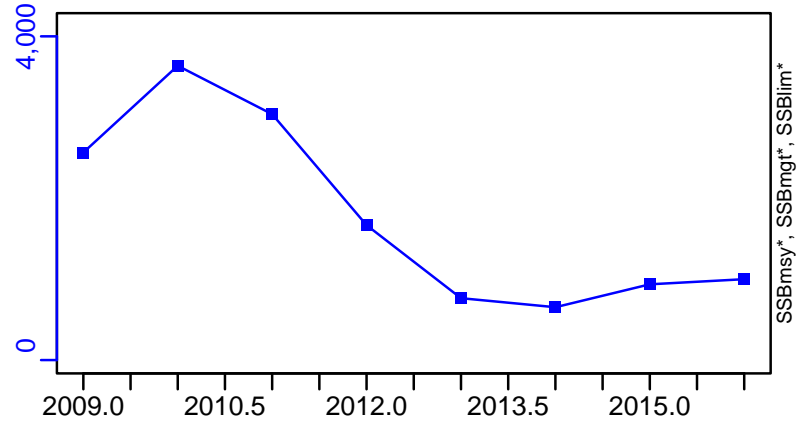
◆ Start Year ◆ End Year \* No Data

Horse mackerel Geographical Sub-Areas 9-11 [HMACKMEDGSA9-11]

TB\*



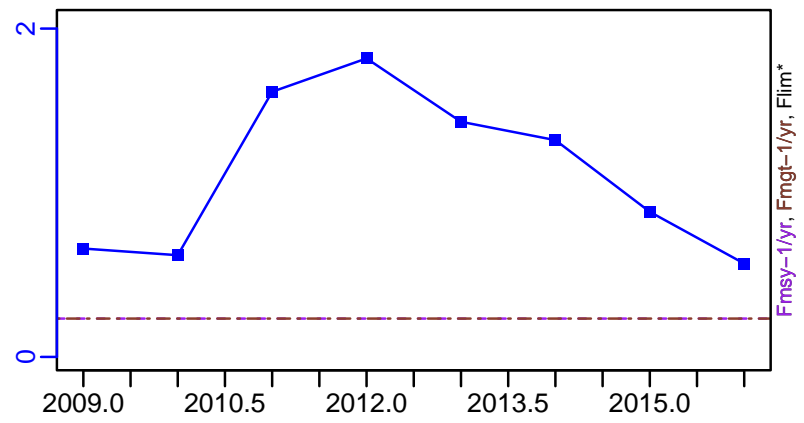
SSB-MT (2009-2016-MEDIMP2021-2)



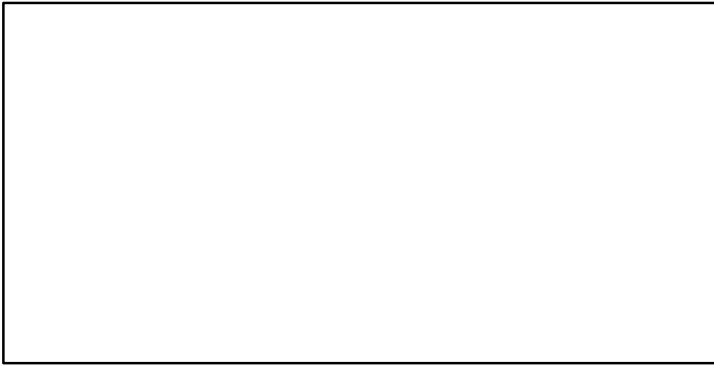
TN \*



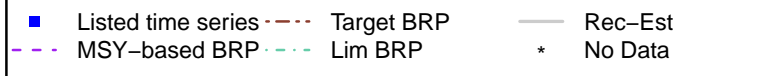
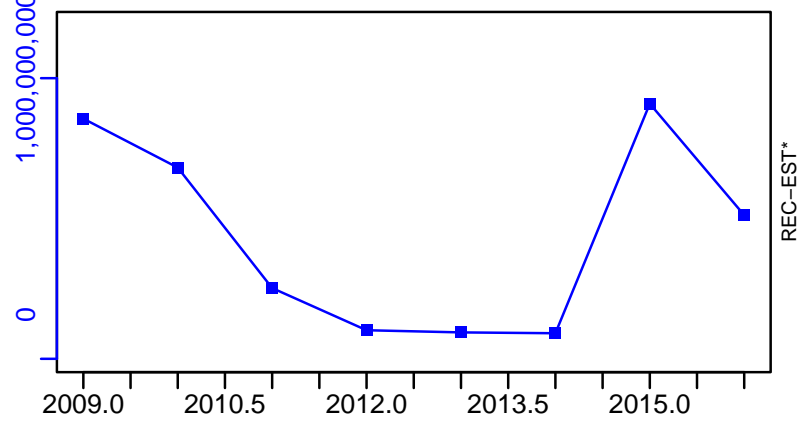
F-1/yr (2009-2016-MEDIMP2021-2)



ER\*



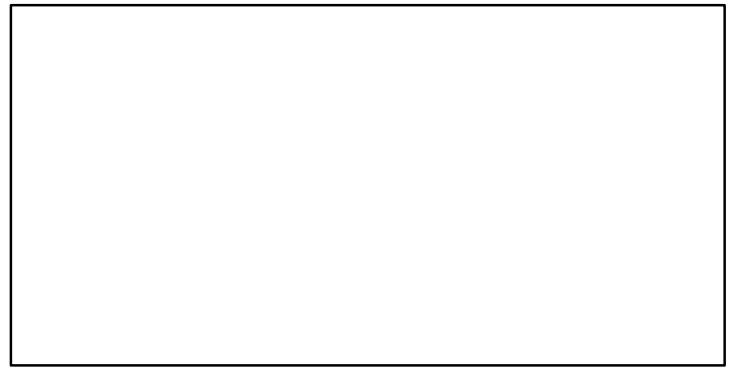
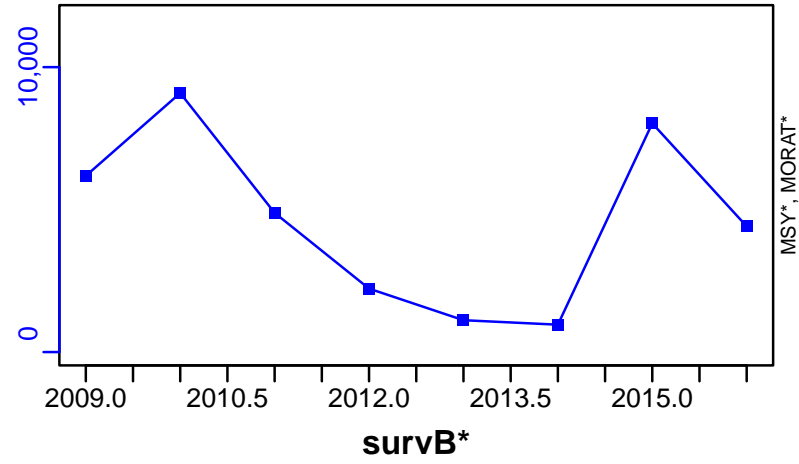
R-E00 (2009-2016-MEDIMP2021-2)



# Horse mackerel Geographical Sub-Areas 9–11 [HMACKMEDGSA9–11]

TC–MT, TL\*, RecC\* (2009–2016–MEDIMP2021–2)

TAC\*, Cpair\*, Cadv\*



## Mediterranean horse mackerel Black Sea [MHMACKMEDGSA29]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Trachurus mediterraneus   |
| <b>Current Assess ID</b>    | SGSABS-MHMACKMEDGSA29-2005-2022-HIVELY  |
| <b>Area</b>                 | Black Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Subregional Group on Stock Assessment for the Black Sea                       |
| <b>Asmts in RAM</b>         | 2021, 2022, 2014, 2016  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2016      | 0.267 |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2016      | 0.267 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |               |     |     |
|-------------------|------------------|-----------|---------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value    | Sex | Age |
| <b>TB</b>         | -                | -         | -             | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2022      | 8407          | -   | -   |
| <b>TN</b>         | -                | -         | -             | -   | -   |
| <b>R</b>          | R-E00            | 2022      | 3,391,341,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2022      | 0.996         | -   | -   |
| <b>ER</b>         | -                | -         | -             | -   | -   |
| <b>TC</b>         | TC-MT            | 2022      | 11,439        |     |     |
| <b>TL</b>         | TL-MT            | 2021      | 21,538        |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -             |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2016      | 3.663         |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -             |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -             |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2016      | 3.663         |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -             |     |     |



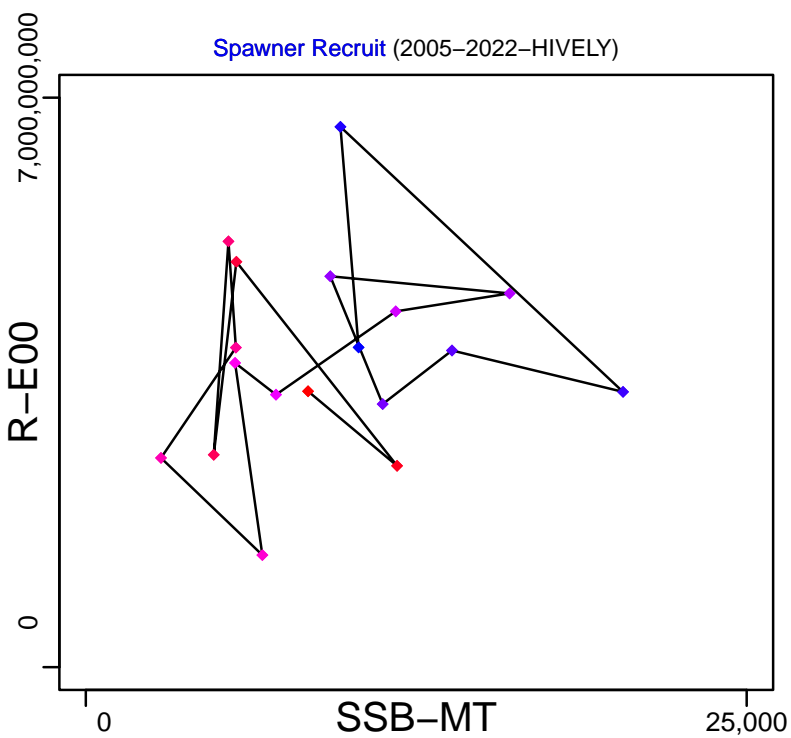
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2005–2022–HIVELY)



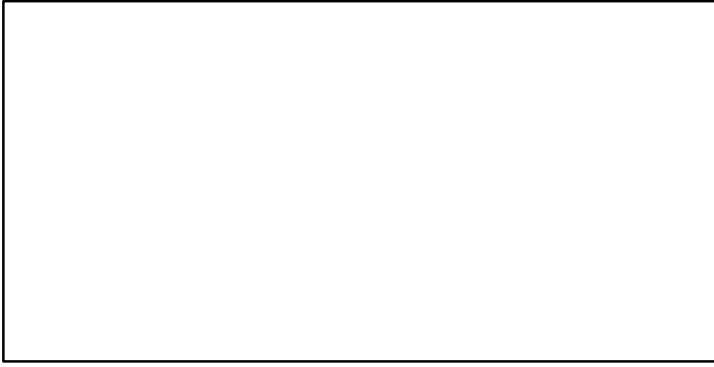
Production\*



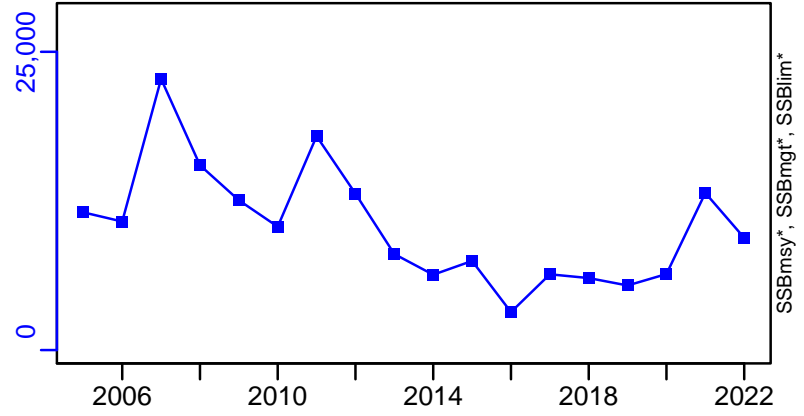
◆ Start Year ◆ End Year \* No Data

# Mediterranean horse mackerel Black Sea [MHMACKMEDGSA29]

TB\*



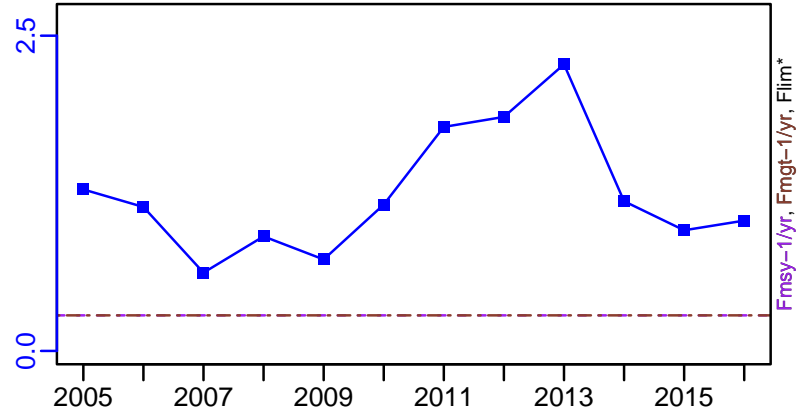
SSB-MT (2005–2022–HIVELY)



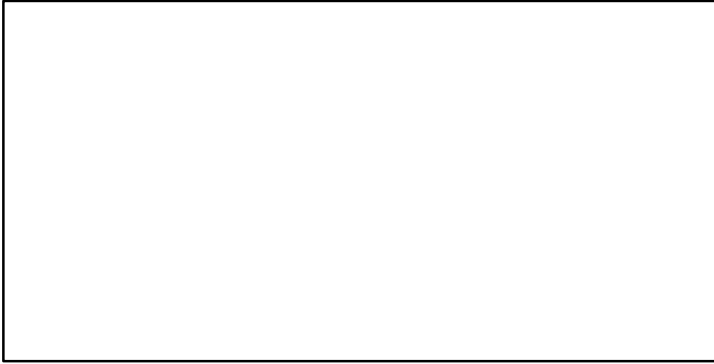
TN \*



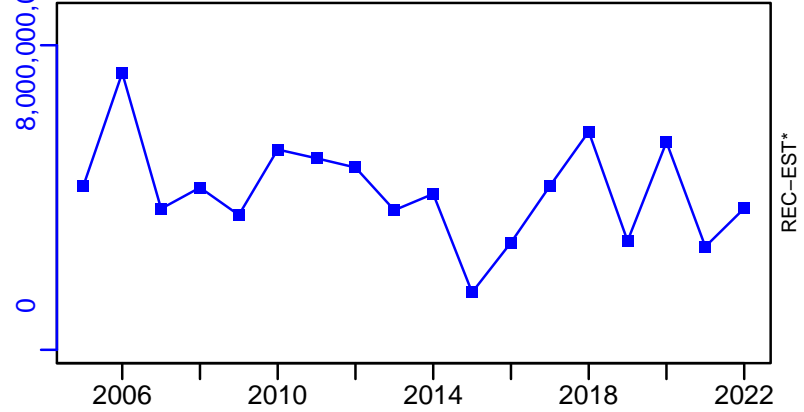
F-1/yr (2005–2016–MEDIMP2021–2)



ER\*



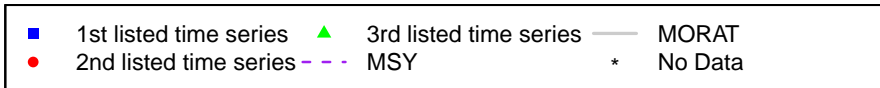
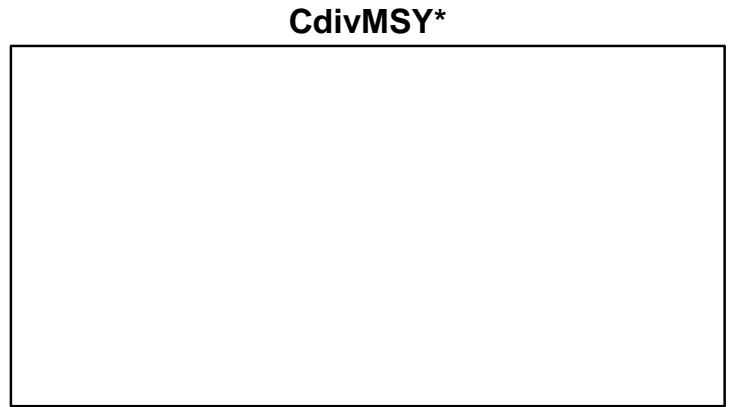
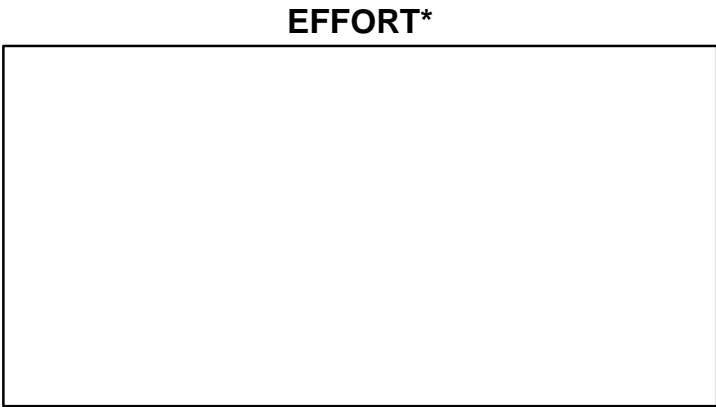
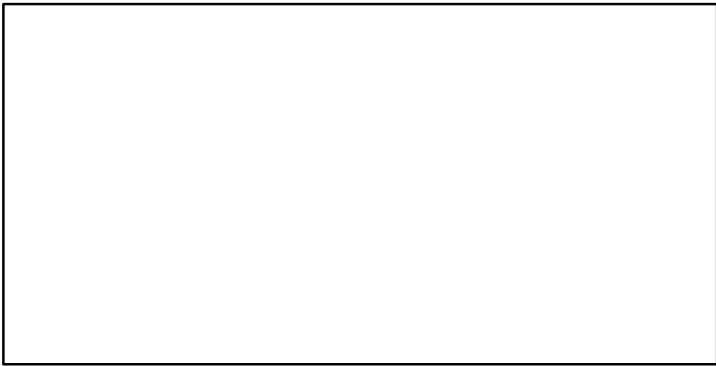
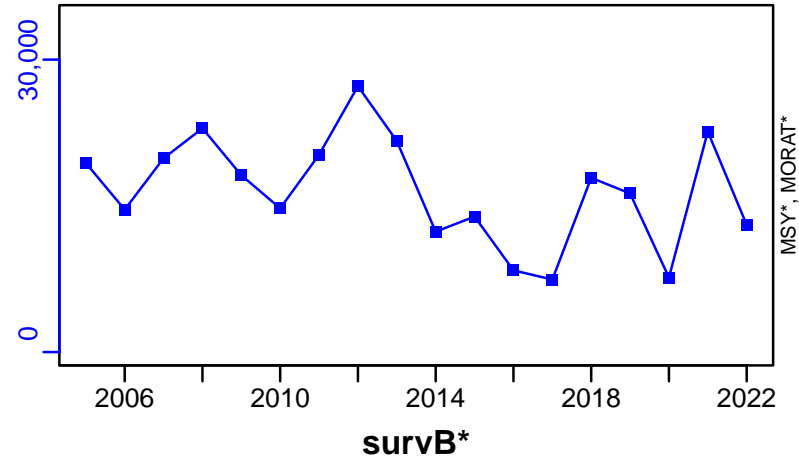
R-E00 (2005–2022–HIVELY)



# Mediterranean horse mackerel Black Sea [MHMACKMEDGSA29]

TC-MT, TL\*, RecC\* (2005-2022-HIVELY)

TAC\*, Cpair\*, Cadv\*

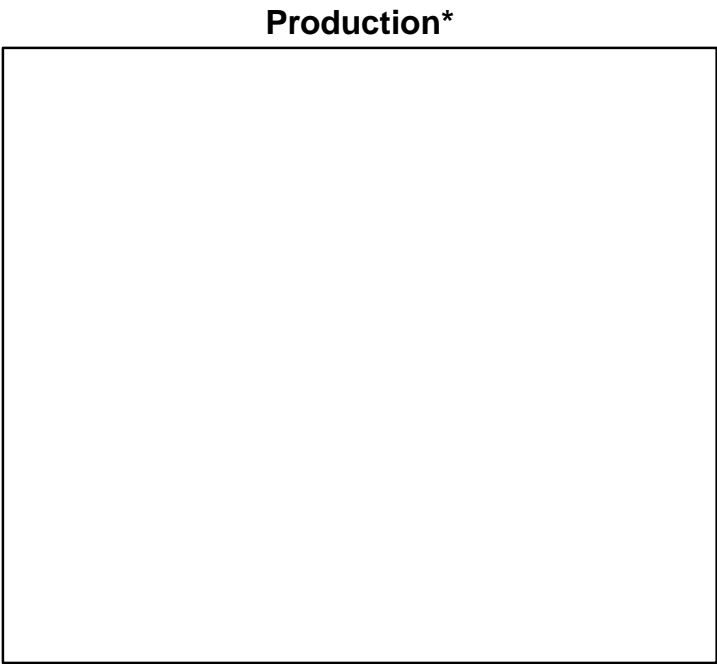
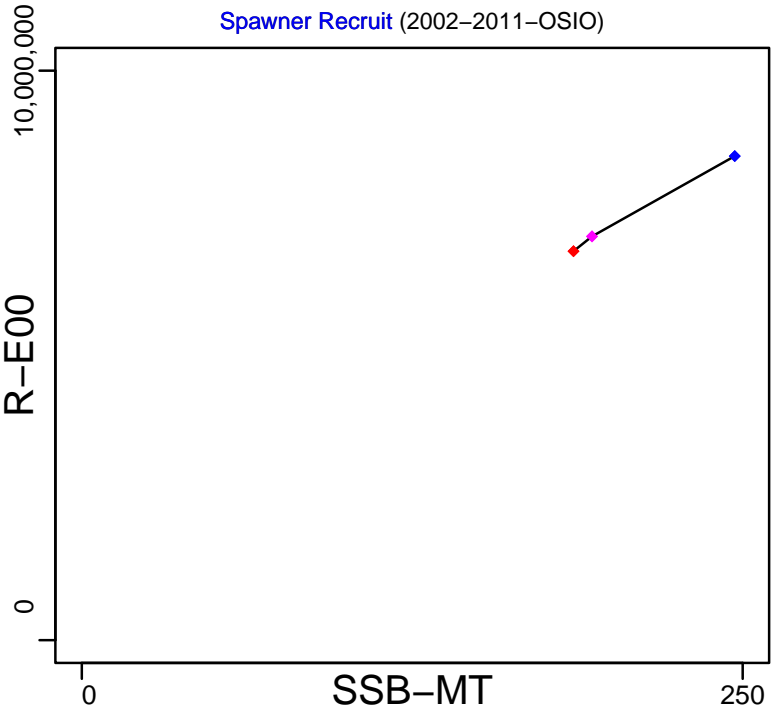
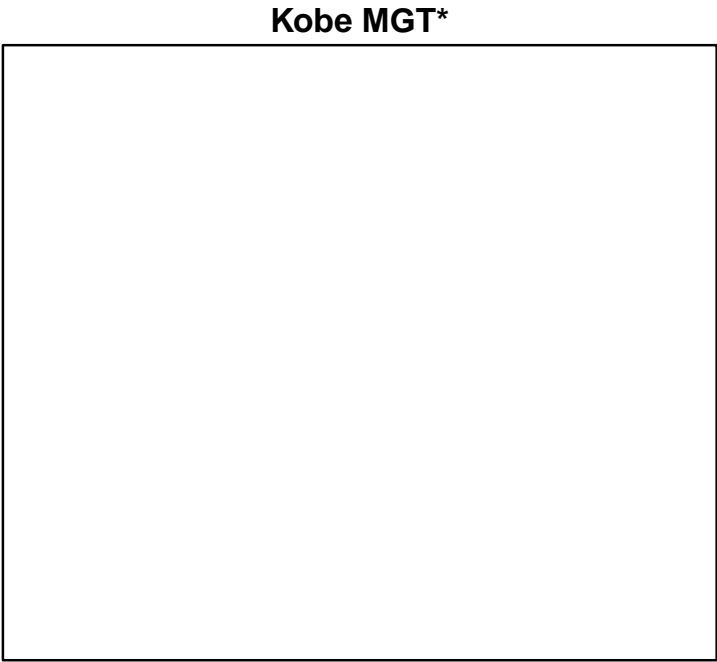
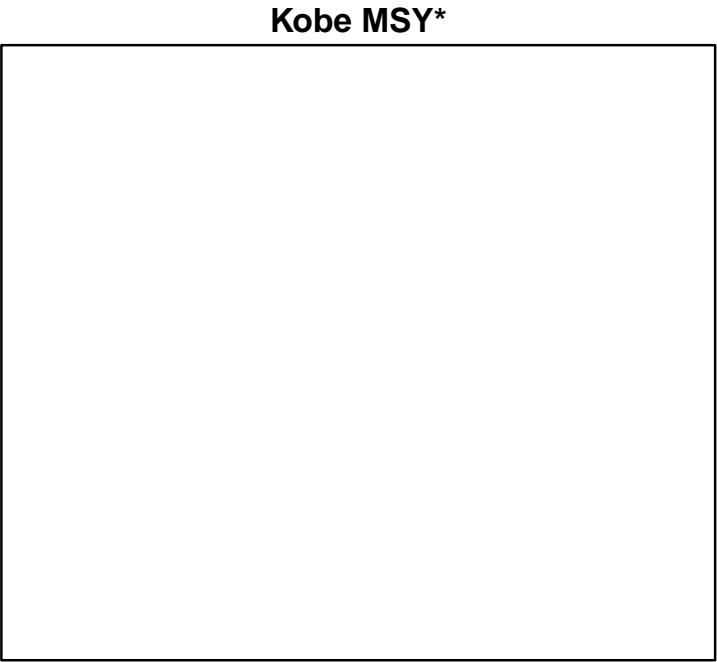


## Norway lobster Northern Alboran Sea [NEPHMEDGSA1]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Nephrops norvegicus   |
| <b>Current Assess ID</b>    | STECF-NEPHMEDGSA1-2002-2011-OSIO  |
| <b>Area</b>                 | Northern Alboran Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2011      | 0.2   |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2011      | 186        | -   | 4+  |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2011      | 6,830,000  | -   | -   |
| <b>F</b>          | F-1/yr           | 2011      | 0.33       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2011      | 75         |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2011      | 1.65       |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



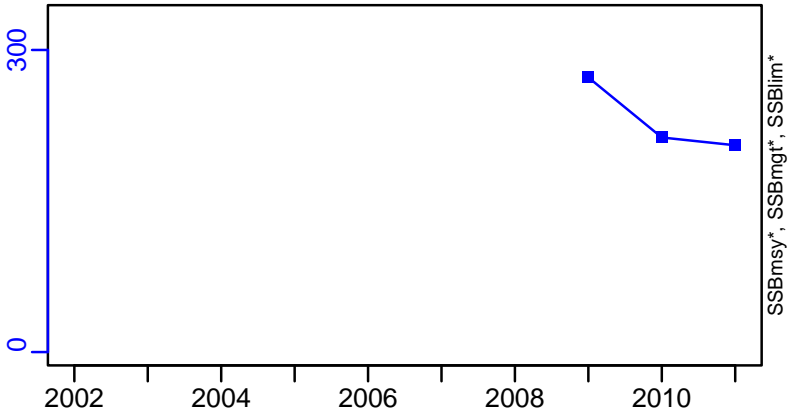
◆ Start Year ◆ End Year \* No Data

Norway lobster Northern Alboran Sea [NEPHMEDGSA1]

TB\*



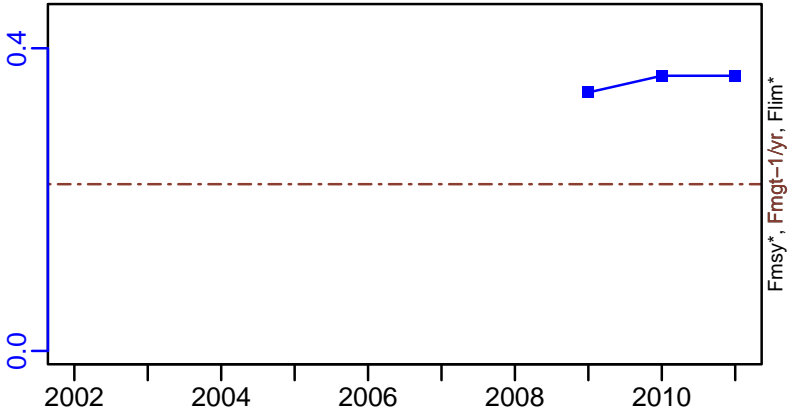
SSB-MT (2002–2011–OSIO)



TN \*



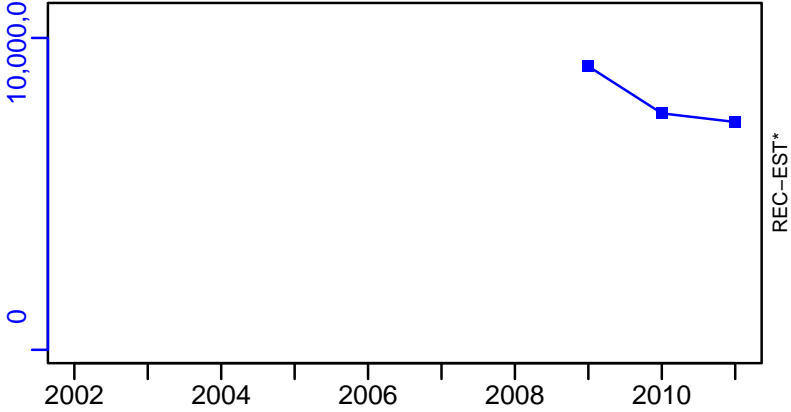
F-1/yr (2002–2011–OSIO)



ER\*

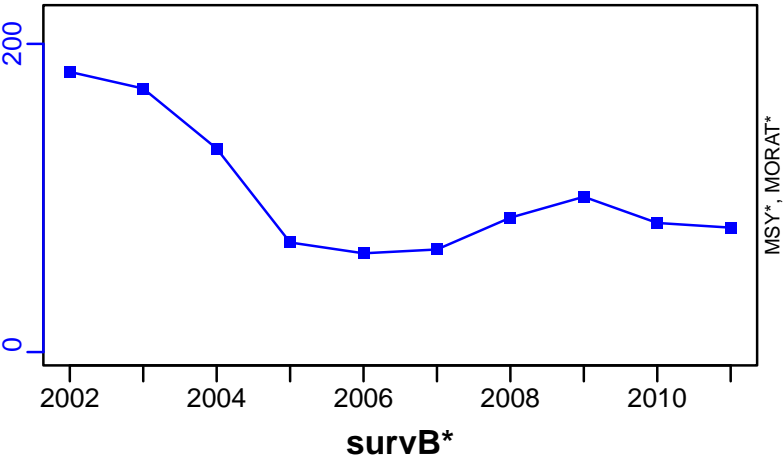


R-E00 (2002–2011–OSIO)



Norway lobster Northern Alboran Sea [NEPHMEDGSA1]

TC-MT, TL\*, RecC\* (2002-2011-OSIO)



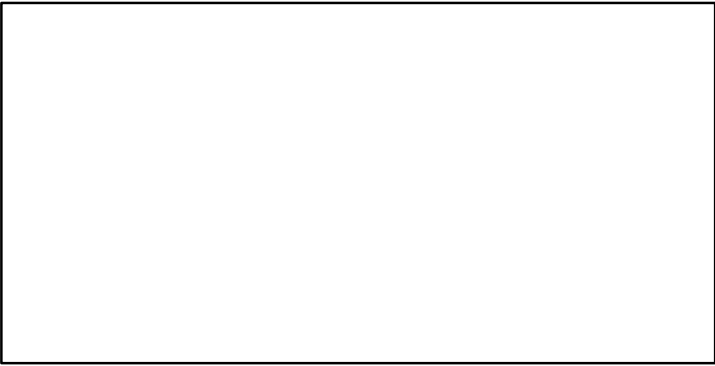
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Norway lobster Sardinia [NEPHMEDGSA11]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Nephrops norvegicus   |
| <b>Current Assess ID</b>    | STECF-NEPHMEDGSA11-2005-2015-OSIO   |
| <b>Area</b>                 | Sardinia  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2015  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2015      | 0.19  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |      |     |
|-------------------|------------------|-----------|------------|------|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex  | Age |
| <b>TB</b>         | TB-MT            | 2015      | 75         | -    | -   |
| <b>SSB</b>        | SSB-MT           | 2015      | 39         | Both | -   |
| <b>TN</b>         | -                | -         | -          | -    | -   |
| <b>R</b>          | R-E00            | 2015      | 1,370,000  | -    | -   |
| <b>F</b>          | F-1/yr           | 2015      | 0.393      | -    | -   |
| <b>ER</b>         | ER-calc-ratio    | 2015      | 0.244      | -    | -   |
| <b>TC</b>         | TC-MT            | 2015      | 18         |      |     |
| <b>TL</b>         | TL-MT            | 2015      | 18         |      |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |      |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |      |     |
| <b>F/Fmsy</b>     | -                | -         | -          |      |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |      |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |      |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |      |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2015      | 2.068      |      |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |      |     |



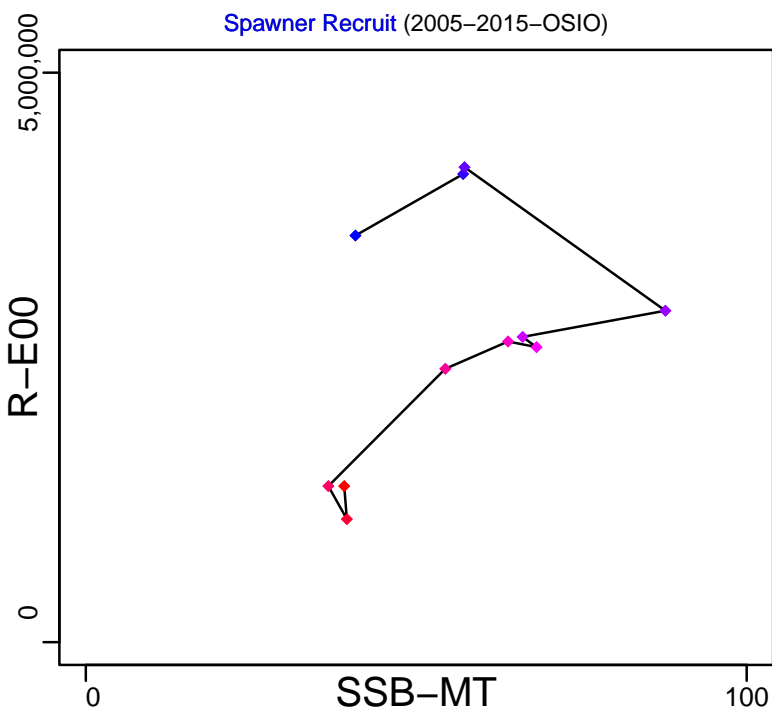
Kobe MSY\*



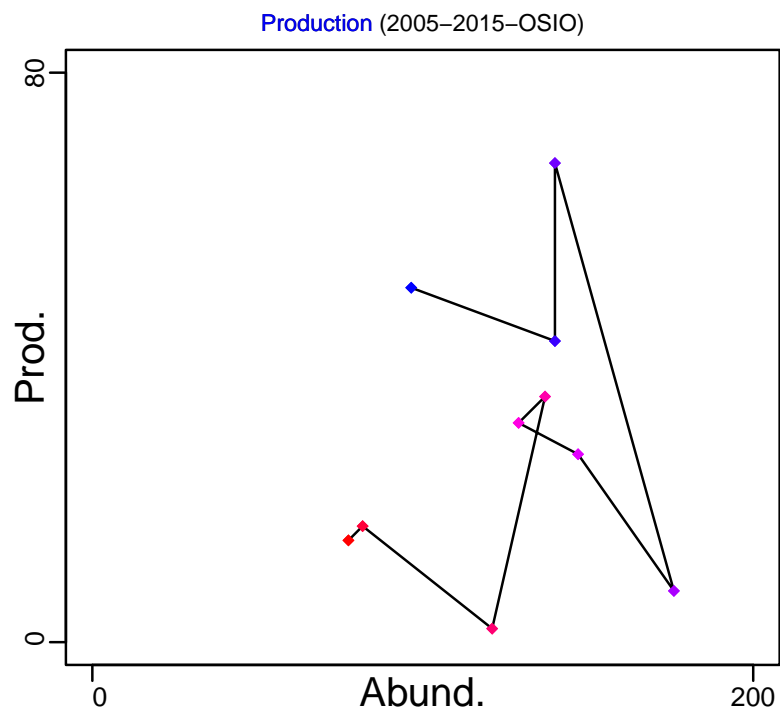
Kobe MGT\*



Spawner Recruit (2005–2015–OSIO)

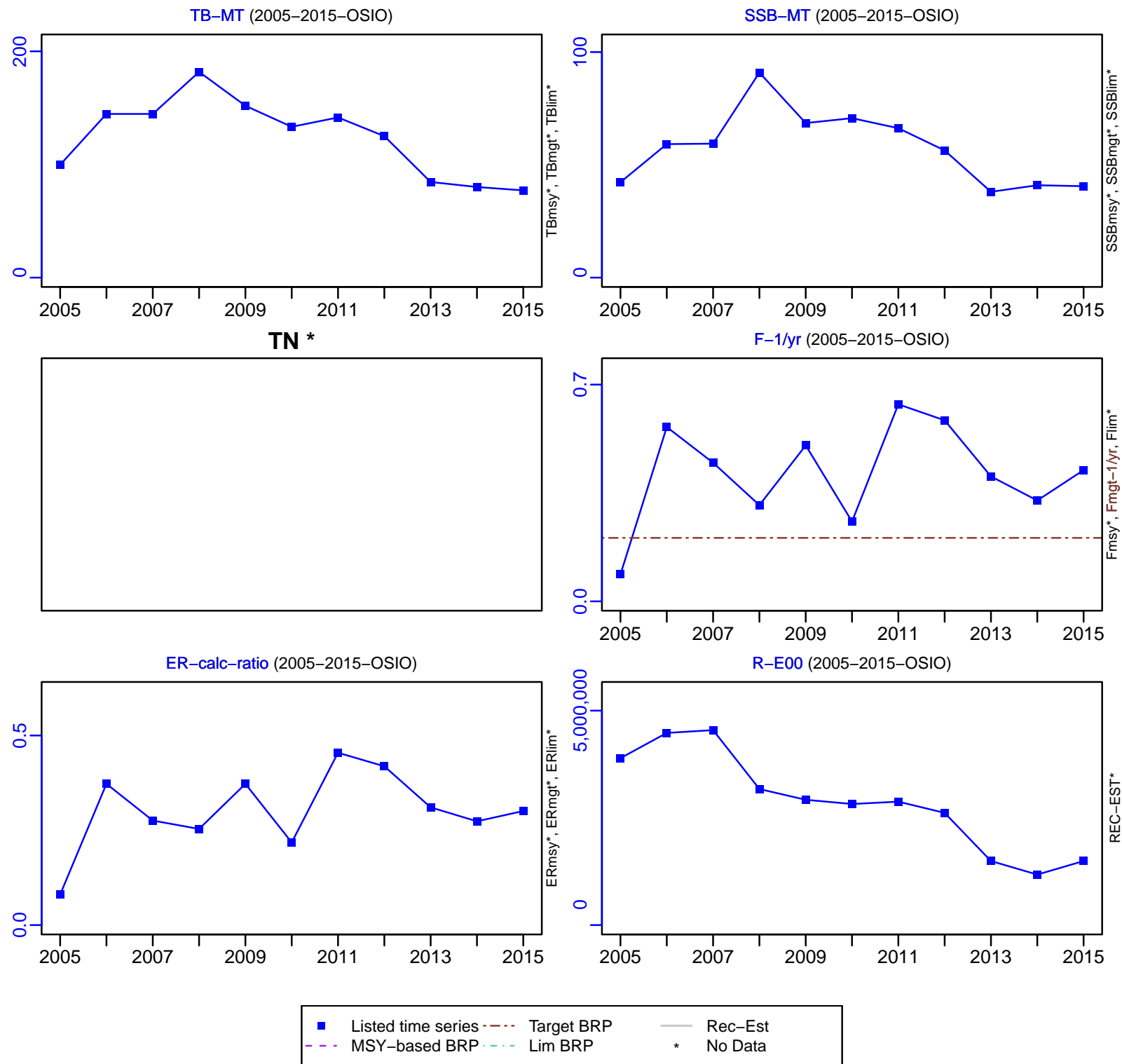


Production (2005–2015–OSIO)



◆ Start Year ◆ End Year \* No Data

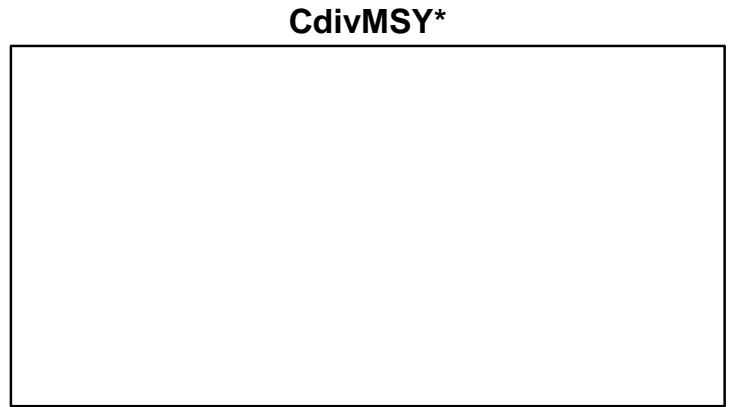
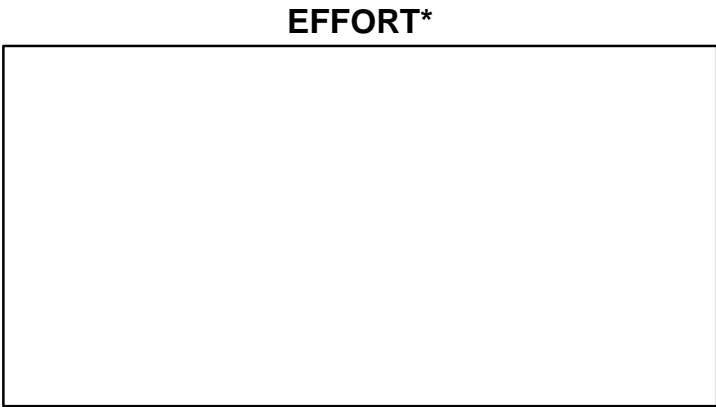
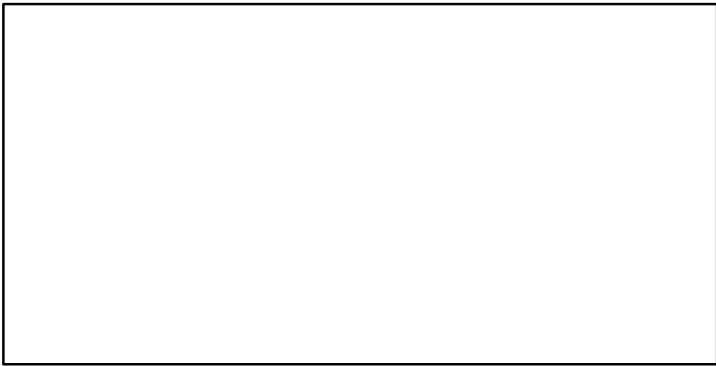
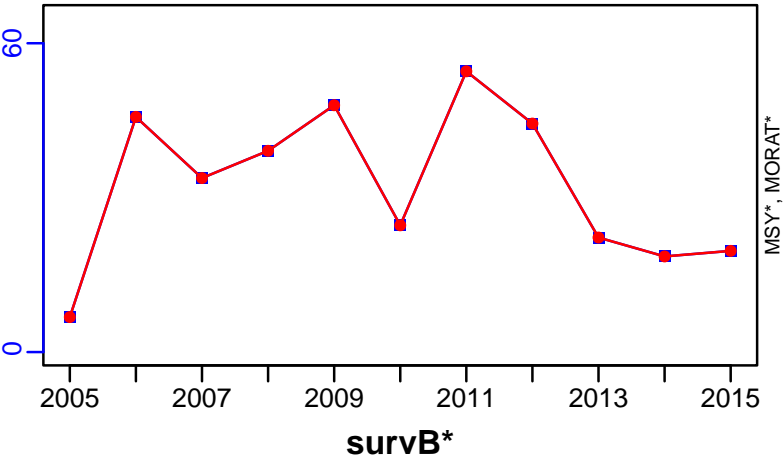
# Norway lobster Sardinia [NEPHMEDGSA11]



# Norway lobster Sardinia [NEPHMEDGSA11]

TC-MT, TL-MT, RecC\* (2005-2015-OSIO)

TAC\*, Cpair\*, Cadv\*



## Norway lobster Malta Island and South of Sicily (GSA 15, 16) [NEPHMEDGSA15-16]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Nephrops norvegicus   |
| <b>Current Assess ID</b>    | STECF-NEPHMEDGSA15-16-2003-2021-HIVELY  |
| <b>Area</b>                 | Malta Island and South of Sicily (GSA 15, 16)                                 |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012, 2021  |

| Reference Points |              |           |       |
|------------------|--------------|-----------|-------|
| Type             | ID           | Asmt Year | Value |
| TBmsy            | -            | -         | -     |
| SSBmsy           | -            | -         | -     |
| Fmsy             | Fmsy-pr-1/yr | 2021      | 0.1   |
| ERmsy            | -            | -         | -     |
| TBmgt            | -            | -         | -     |
| SSBmgt           | -            | -         | -     |
| Fmgt             | Fmgt-1/yr    | 2012      | 0.2   |
| ERmgt            | -            | -         | -     |
| TB0              | -            | -         | -     |
| SSB0             | -            | -         | -     |
| MSY              | -            | -         | -     |
| M                | -            | -         | -     |
| TBlim            | -            | -         | -     |
| SSBlim           | -            | -         | -     |
| Flim             | -            | -         | -     |
| ERlim            | -            | -         | -     |

| Time Series |                     |           |            |     |       |
|-------------|---------------------|-----------|------------|-----|-------|
| Type        | ID                  | Asmt Year | Curr Value | Sex | Age   |
| TB          | -                   | -         | -          | -   | -     |
| SSB         | SSB-MT              | 2021      | 485        | -   | -     |
| TN          | -                   | -         | -          | -   | -     |
| R           | R-E00               | 2021      | 9,484,000  | -   | 2     |
| F           | F-1/yr              | 2021      | 0.2        | -   | 8-Feb |
| ER          | -                   | -         | -          | -   | -     |
| TC          | TC-MT               | 2021      | 148        |     |       |
| TL          | -                   | -         | -          |     |       |
| TB/TBmsy    | -                   | -         | -          |     |       |
| SSB/SSBmsy  | -                   | -         | -          |     |       |
| F/Fmsy      | F-1/yr/Fmsy-pr-1/yr | 2021      | 2          |     |       |
| ER/ERmsy    | -                   | -         | -          |     |       |
| TB/TBmgt    | -                   | -         | -          |     |       |
| SSB/SSBmgt  | -                   | -         | -          |     |       |
| F/Fmgt      | F-1/yr/Fmgt-1/yr    | 2012      | 0.75       |     |       |
| ER/ERmgt    | -                   | -         | -          |     |       |

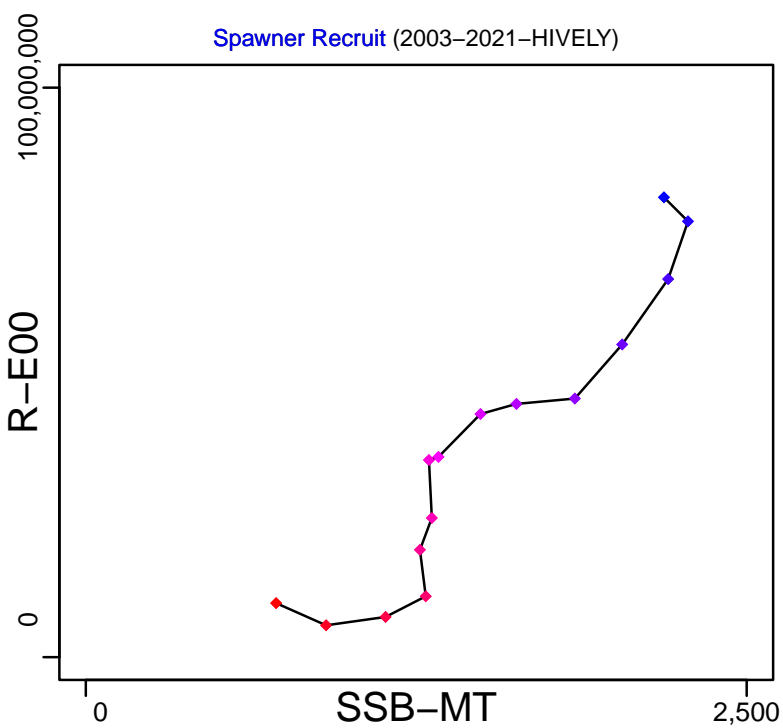
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit** (2003–2021–HIVELY)



**Production\***



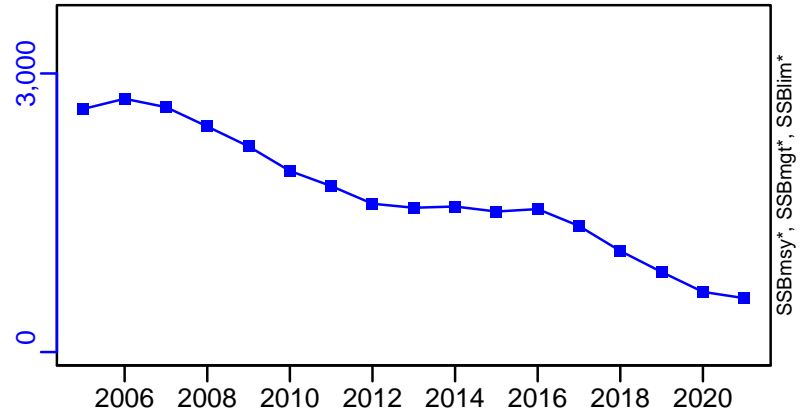
◆ Start Year ◆ End Year \* No Data

Norway lobster Malta Island and South of Sicily (GSA 15, 16) [NEPHMEDGSA15-16]

TB\*



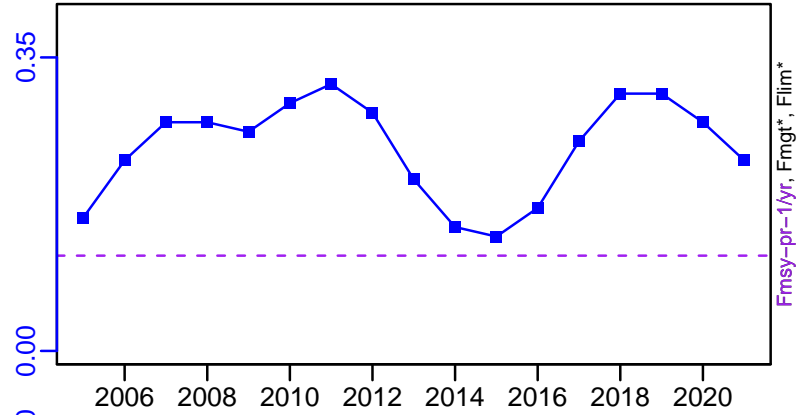
SSB-MT (2003-2021-HIVELY)



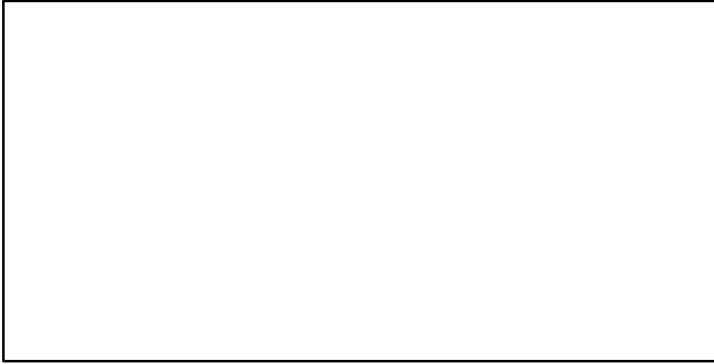
TN \*



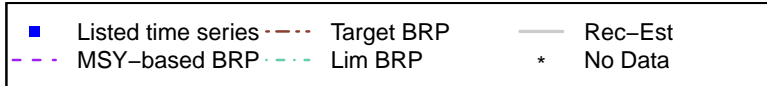
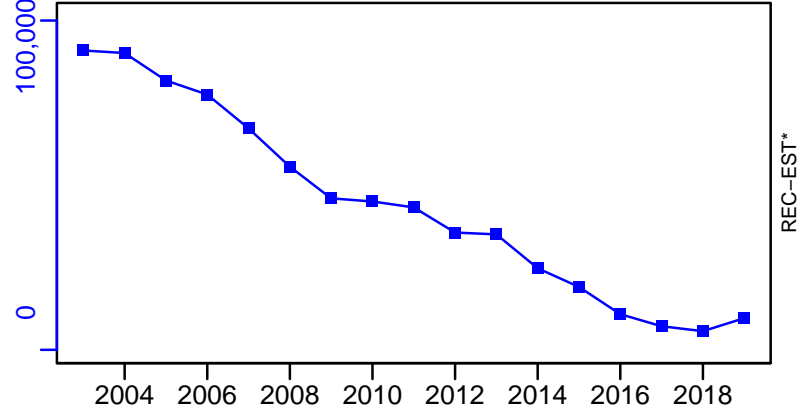
F-1/yr (2003-2021-HIVELY)



ER\*

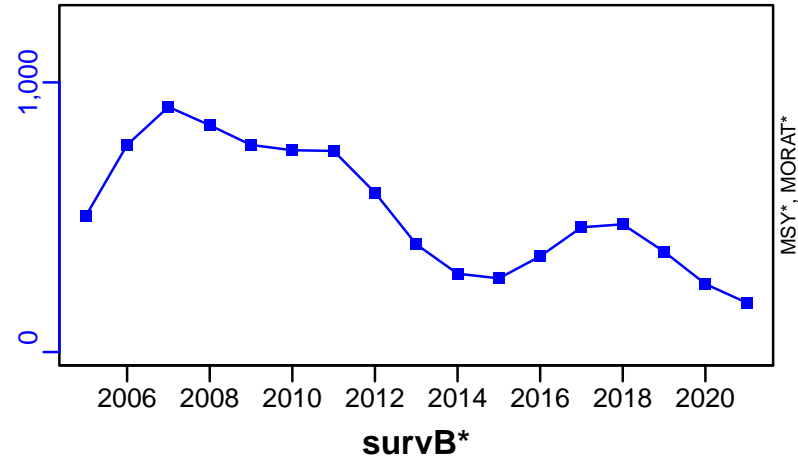


R-E00 (2003-2021-HIVELY)



Norway lobster Malta Island and South of Sicily (GSA 15, 16) [NEPHMEDGSA15-16]

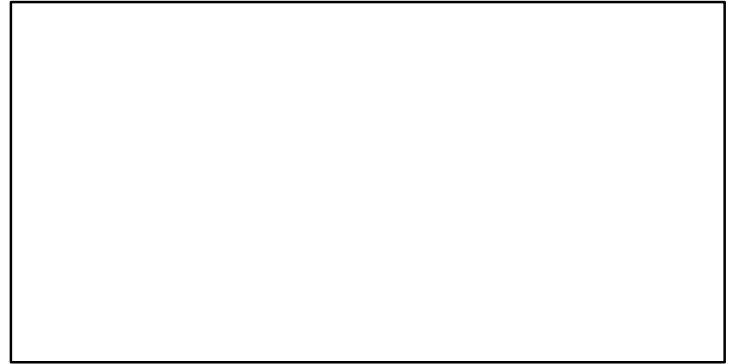
TC-MT, TL\*, RecC\* (2003-2021-HIVELY)



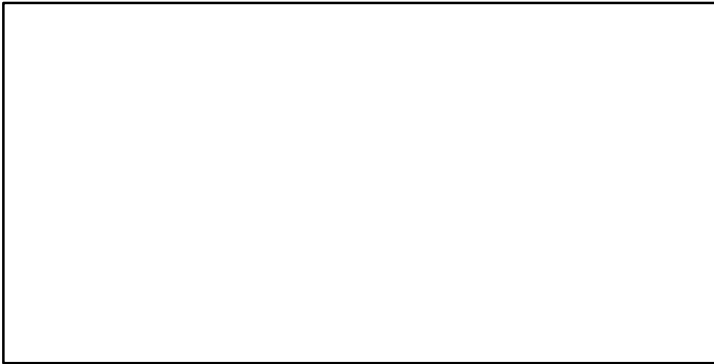
TAC\*, Cpair\*, Cadv\*



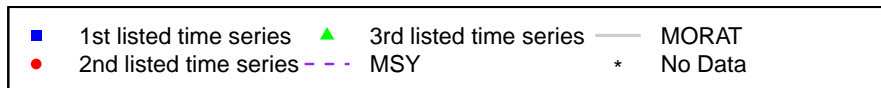
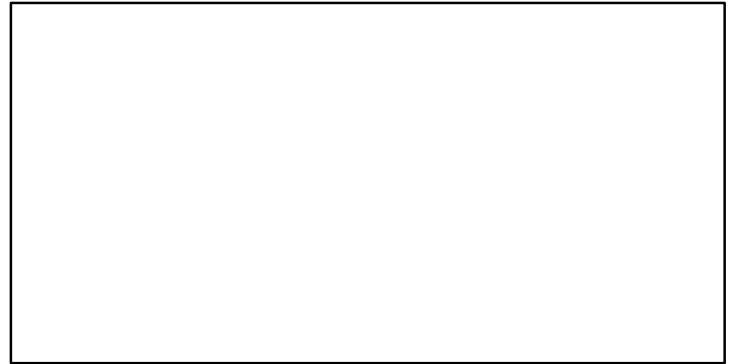
CPUE\*



EFFORT\*



CdivMSY\*



## Norway lobster Adriatic Sea (GSA 17,18) [NEPHMEDGSA17-18]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Nephrops norvegicus   |
| <b>Current Assess ID</b>    | STECF-NEPHMEDGSA17-18-1970-2019-MEDIMP2021-2                                  |
| <b>Area</b>                 | Adriatic Sea (GSA 17,18)  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2015, 2019  |

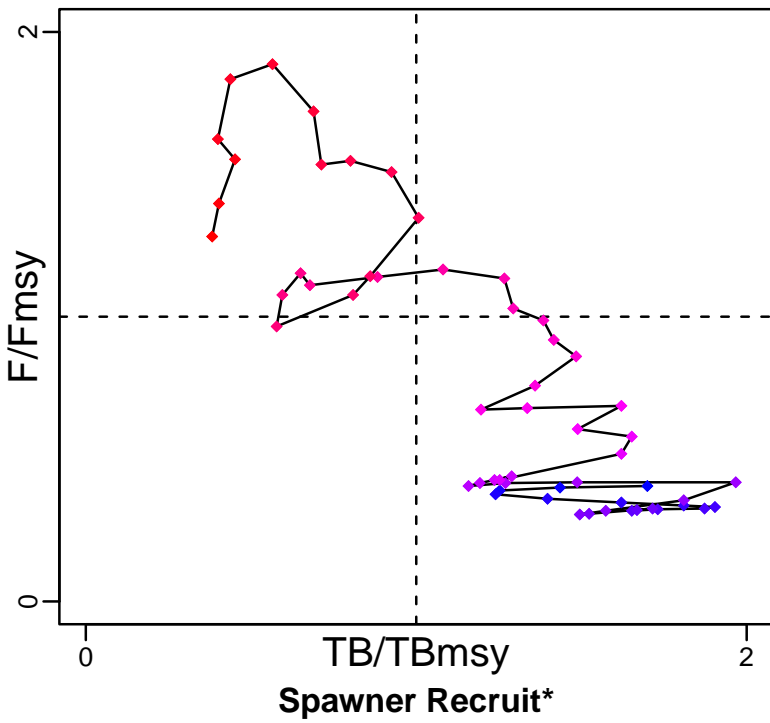
| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | TBmsy-MT  | 2015      | 6355  |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2019      | 0.363 |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | TBmgt-MT  | 2015      | 6355  |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.363 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | TB-MT            | 2015      | 2430       | -   | -   |
| <b>SSB</b>        | -                | -         | -          | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | -                | -         | -          | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.4        | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2015      | 0.49       | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 1319       |     |     |
| <b>TL</b>         | TL-MT            | 2015      | 1190       |     |     |
| <b>TB/TBmsy</b>   | TB-MT/TBmsy-MT   | 2015      | 0.382      |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2019      | 1.102      |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | TB-MT/TBmgt-MT   | 2015      | 0.382      |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 1.102      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

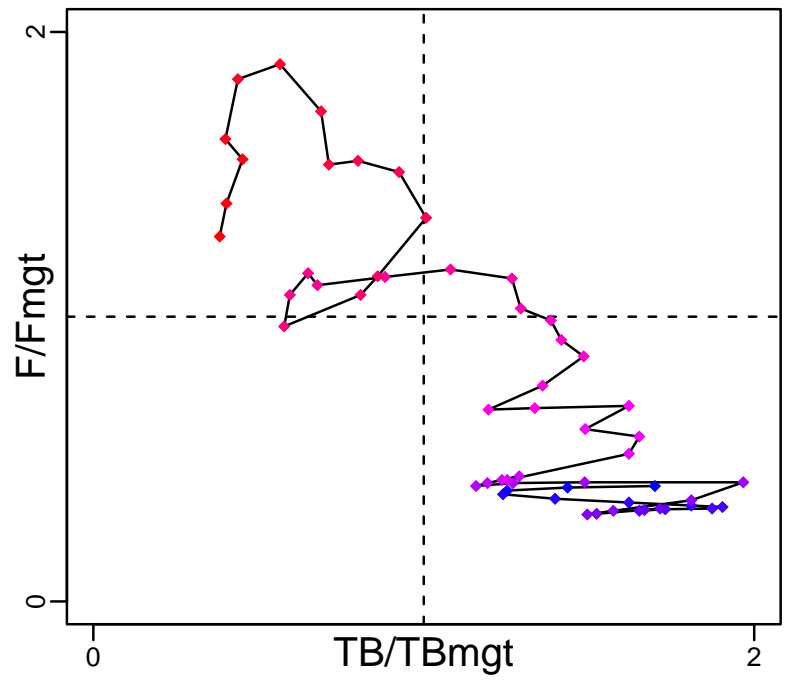


# Norway lobster Adriatic Sea (GSA 17,18) [NEPHMEDGSA17-18]

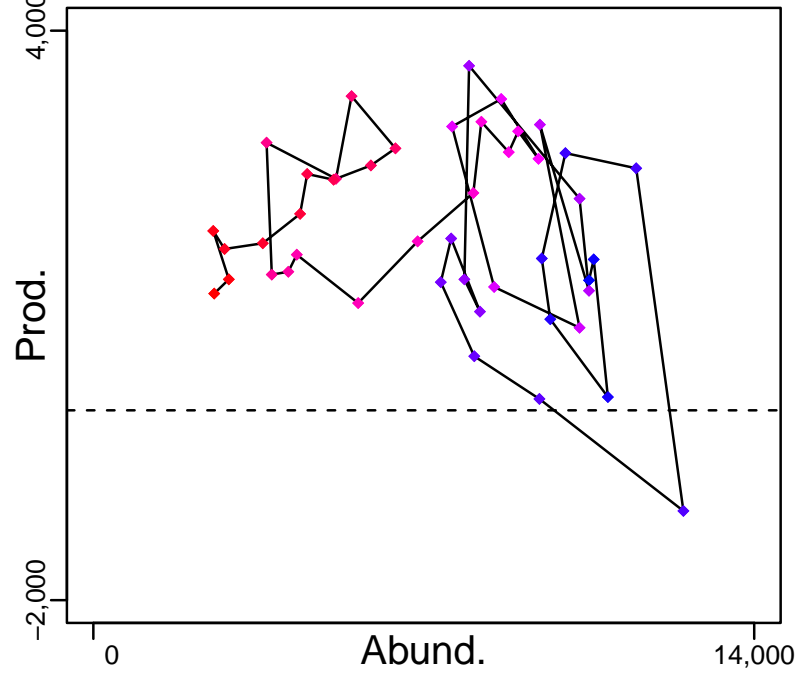
Kobe MSYpref (1960-2015-OSIO)



Kobe MGTpref (1960-2015-OSIO)

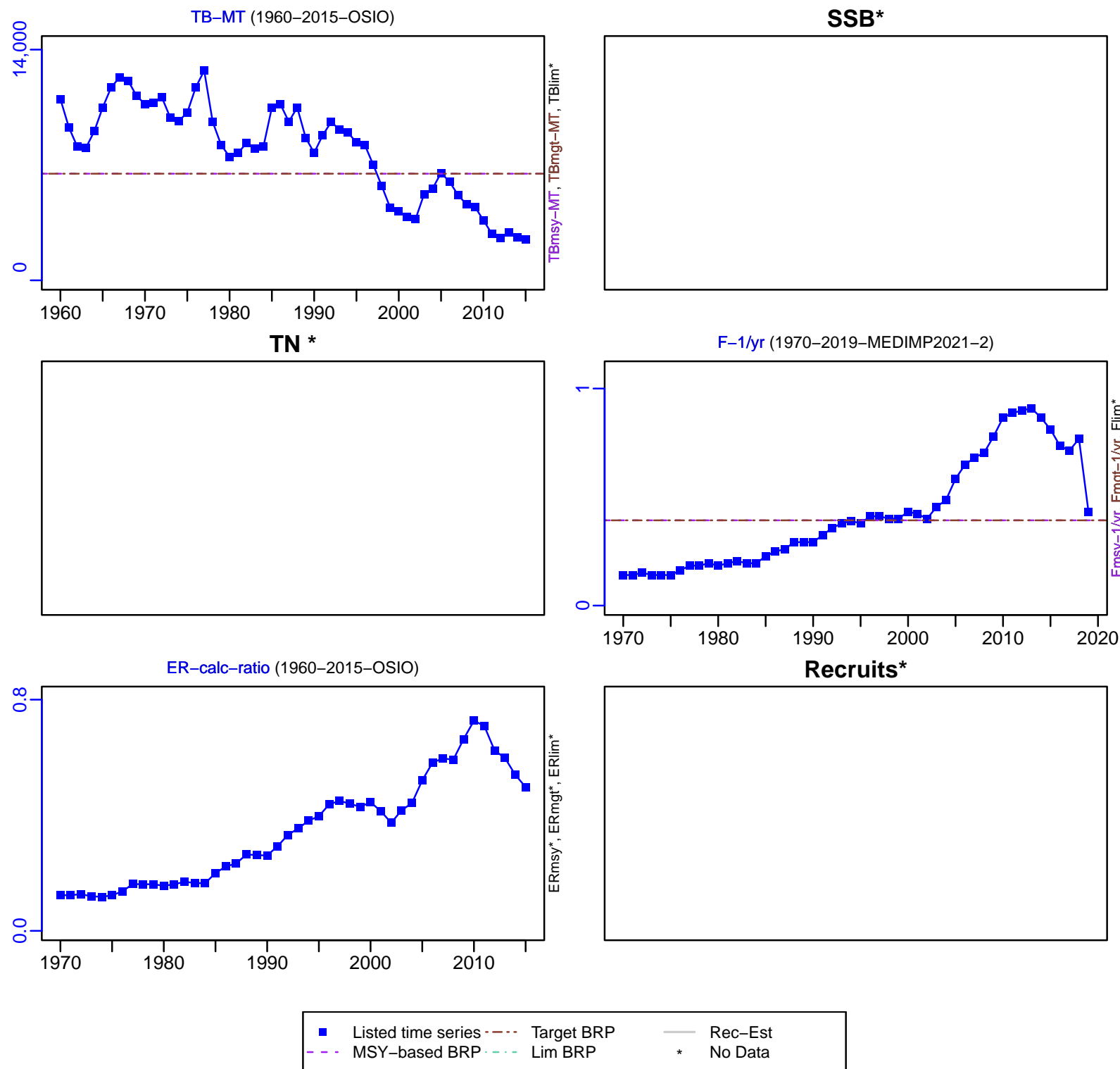


Production (1960-2015-OSIO)



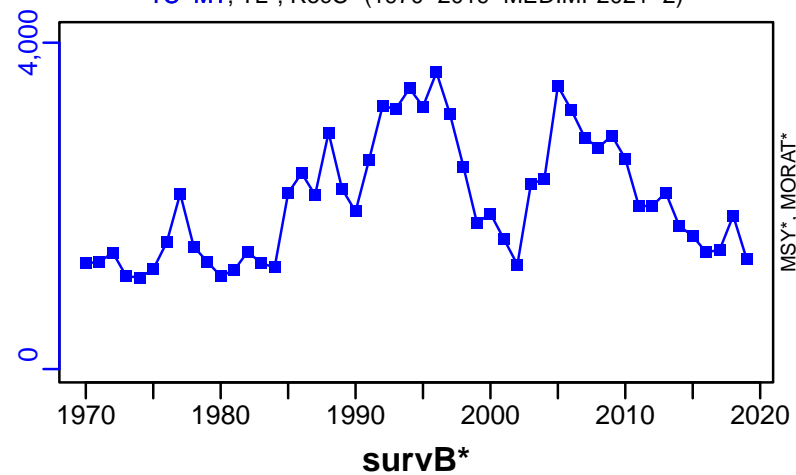
◆ Start Year ◆ End Year \* No Data

# Norway lobster Adriatic Sea (GSA 17,18) [NEPHMEDGSA17-18]



# Norway lobster Adriatic Sea (GSA 17,18) [NEPHMEDGSA17-18]

TC-MT, TL\*, RecC\* (1970-2019-MEDIMP2021-2)



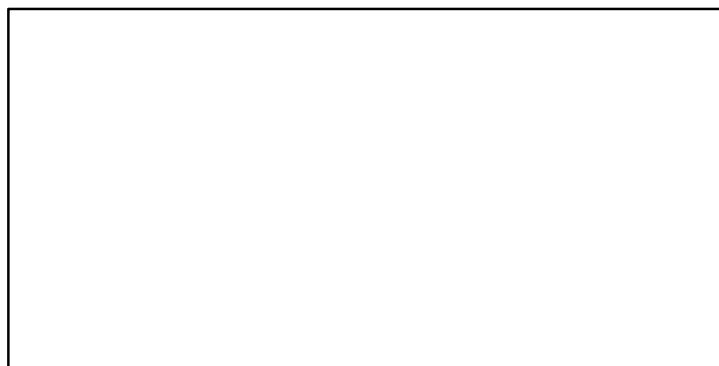
TAC\*, Cpair\*, Cadv\*



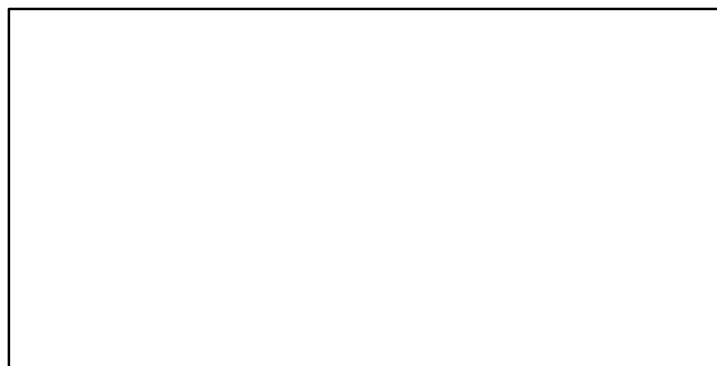
CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Norway lobster Balearic Island [NEPHMEDGSA5]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Nephrops norvegicus   |
| <b>Current Assess ID</b>    | STECF-NEPHMEDGSA5-2002-2013-OSIO  |
| <b>Area</b>                 | Balearic Island   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011, 2013  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2013      | 0.17  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | TB-MT            | 2011      | 100        | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2013      | 31         | -   | 4+  |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2013      | 1,620,000  | -   | -   |
| <b>F</b>          | F-1/yr           | 2013      | 0.287      | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2011      | 0.321      | -   | -   |
| <b>TC</b>         | TC-MT            | 2013      | 10         |     |     |
| <b>TL</b>         | TL-MT            | 2011      | 32         |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2013      | 1.688      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

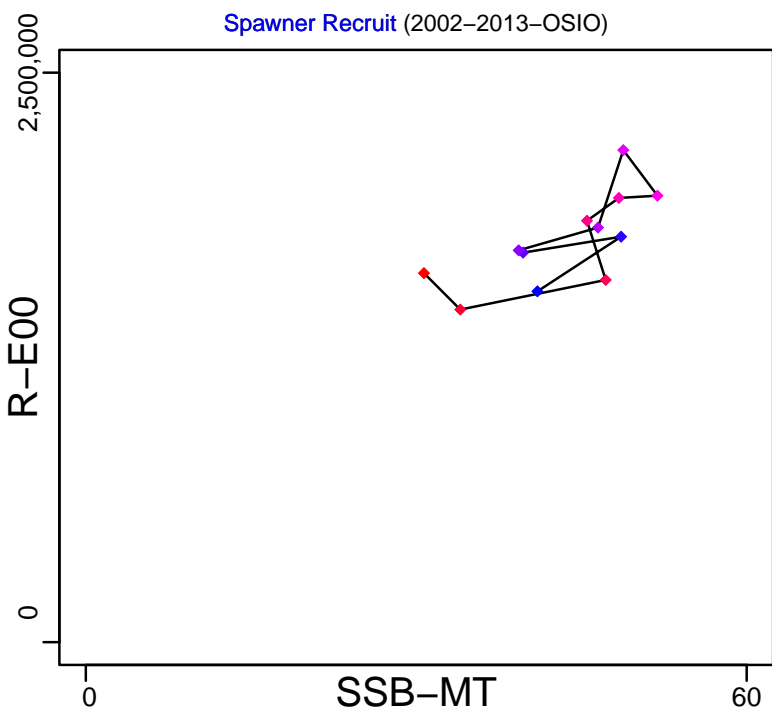
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2002–2013–OSIO)



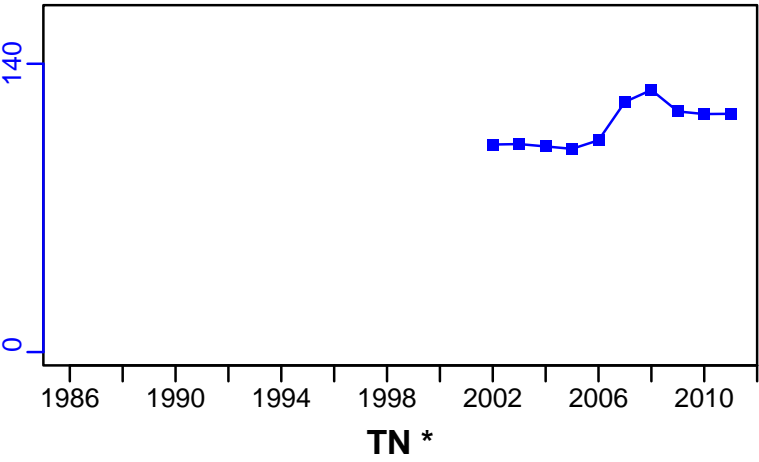
Production\*



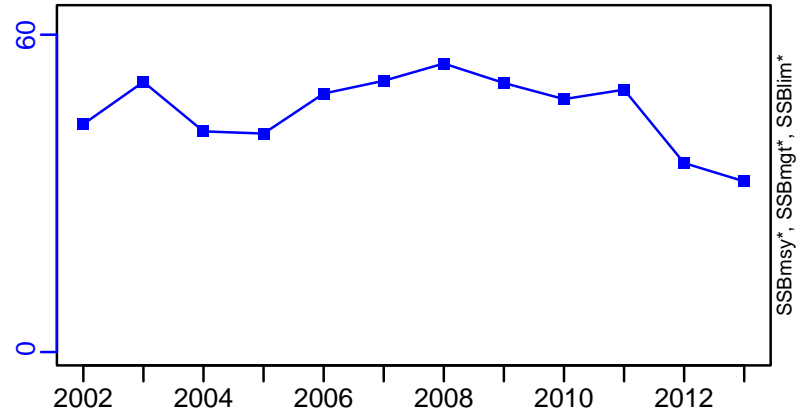
◆ Start Year ◆ End Year \* No Data

# Norway lobster Balearic Island [NEPHMEDGSA5]

TB-MT (1986–2011–BANOB)



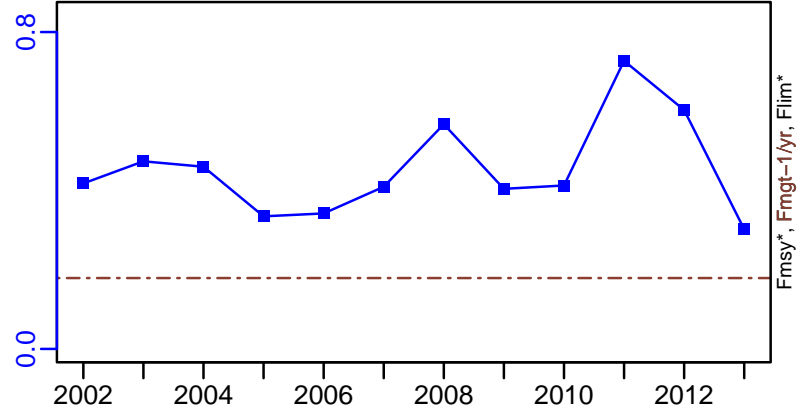
SSB-MT (2002–2013–OSIO)



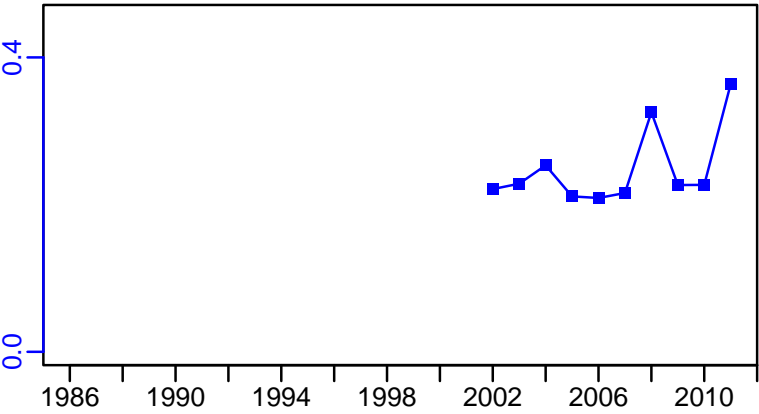
TN \*



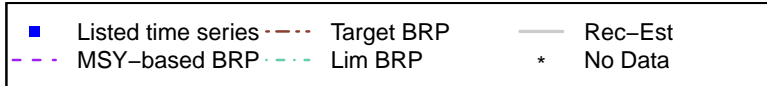
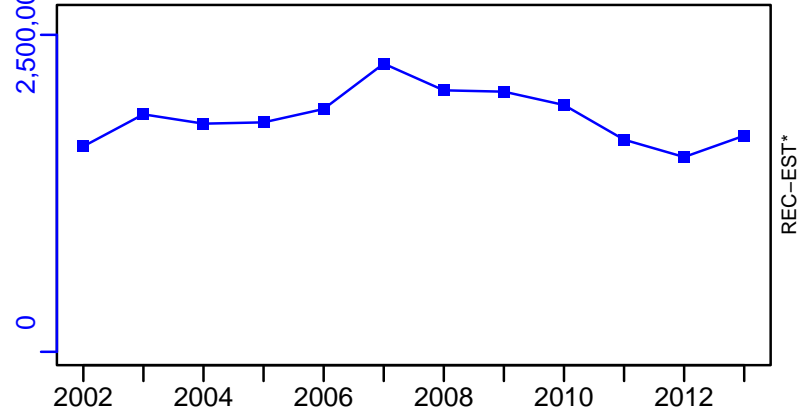
F-1/yr (2002–2013–OSIO)



ER-calc-ratio (1986–2011–BANOB)



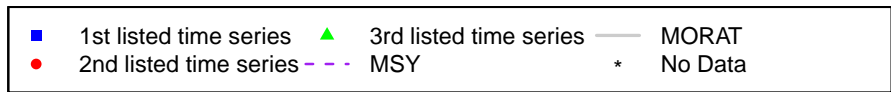
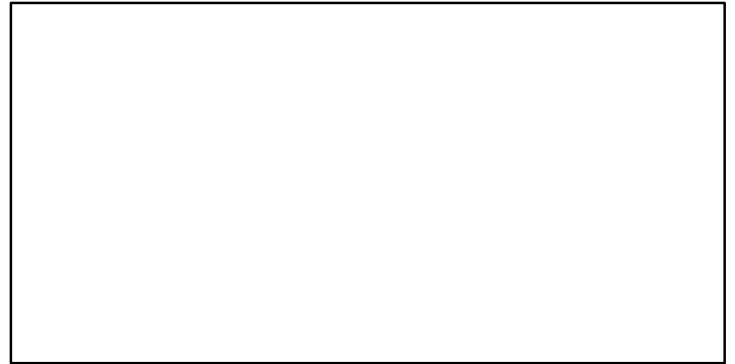
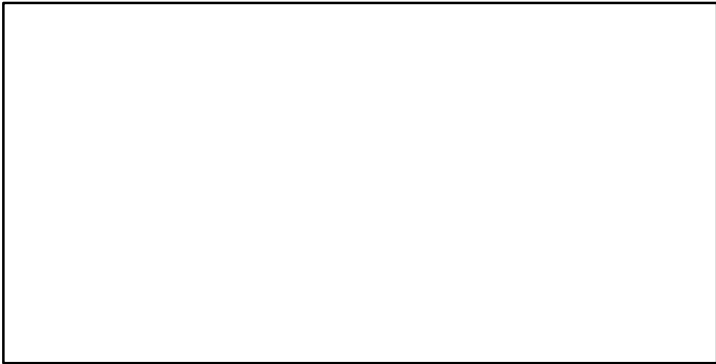
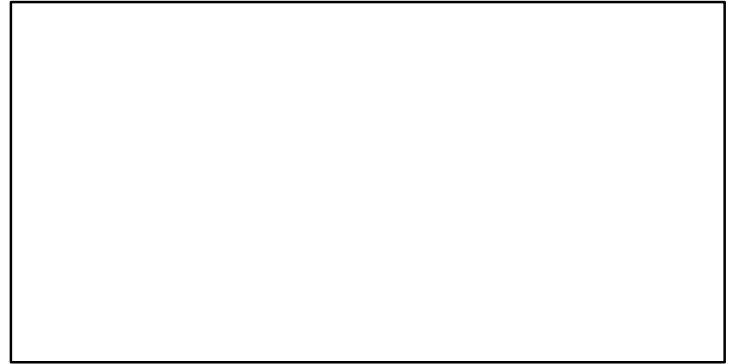
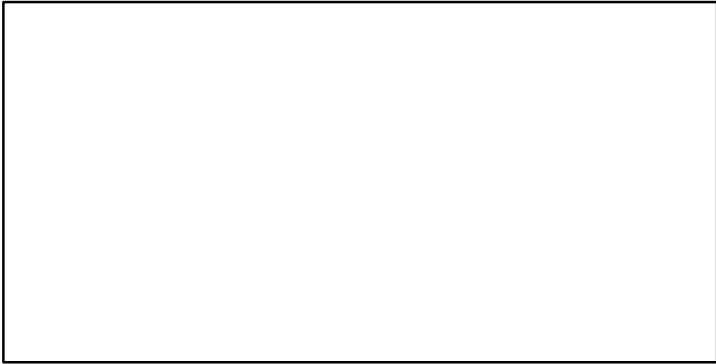
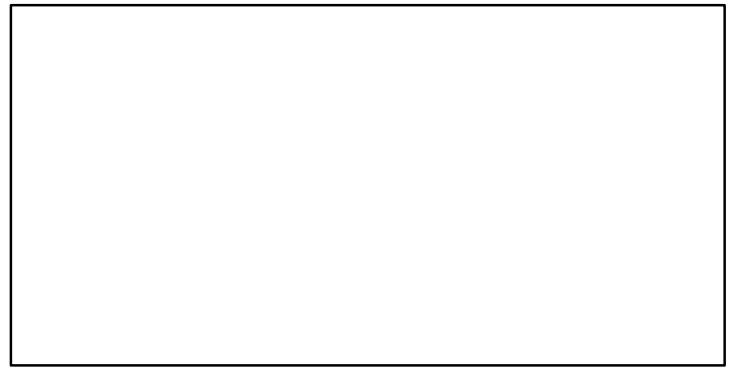
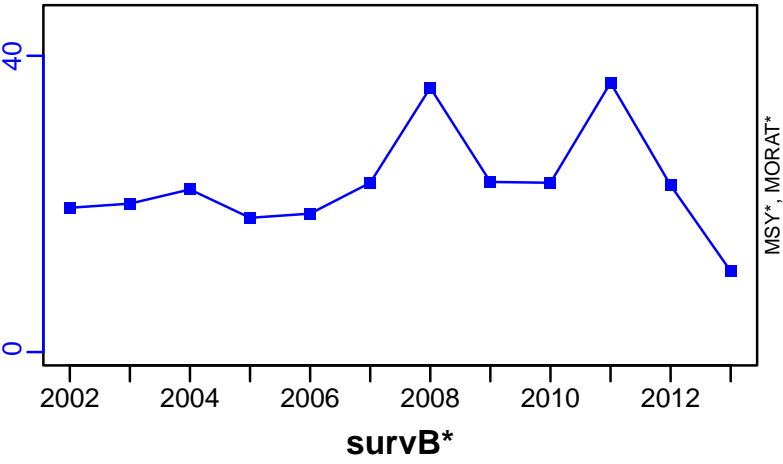
R-E00 (2002–2013–OSIO)



# Norway lobster Balearic Island [NEPHMEDGSA5]

TC-MT, TL\*, RecC\* (2002–2013–OSIO)

TAC\*, Cpair\*, Cadv\*



## Norway lobster Northern Spain [NEPHMEDGSA6]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Nephrops norvegicus   |
| <b>Current Assess ID</b>    | STECF-NEPHMEDGSA6-2009-2019-MEDIMP2021-2                                      |
| <b>Area</b>                 | Northern Spain  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011, 2015, 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.109 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

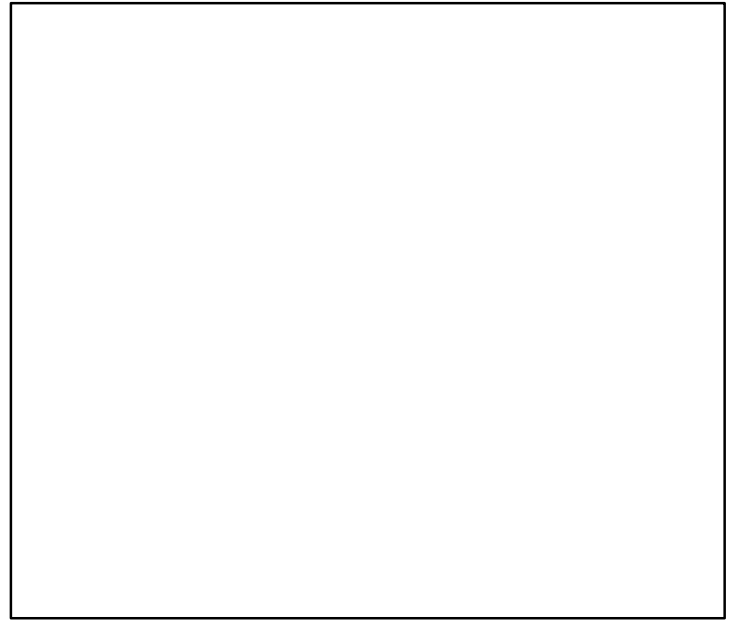
| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 431        | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 42,451,480 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.617      | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 245        |     |     |
| <b>TL</b>         | TL-MT            | 2015      | 355        |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 5.644      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



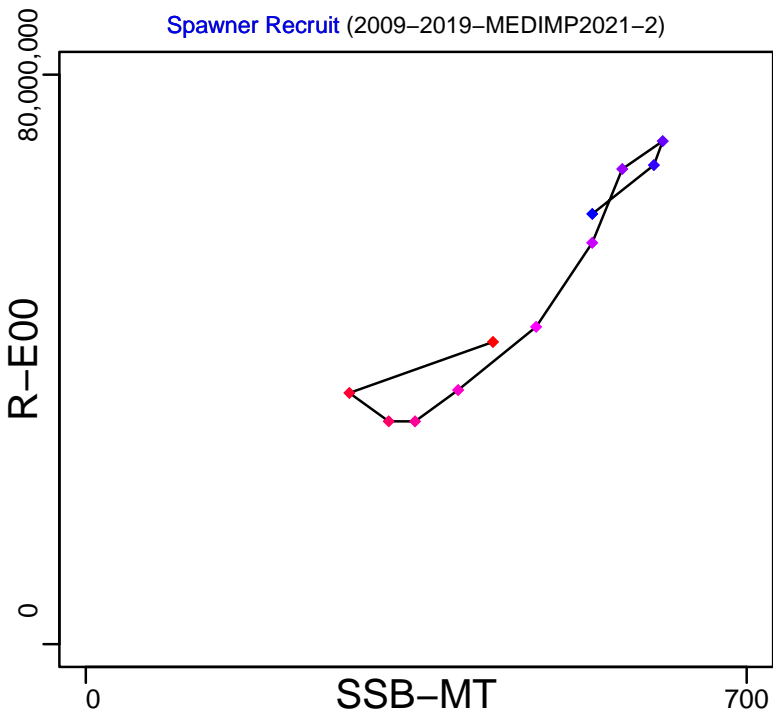
Kobe MSY\*



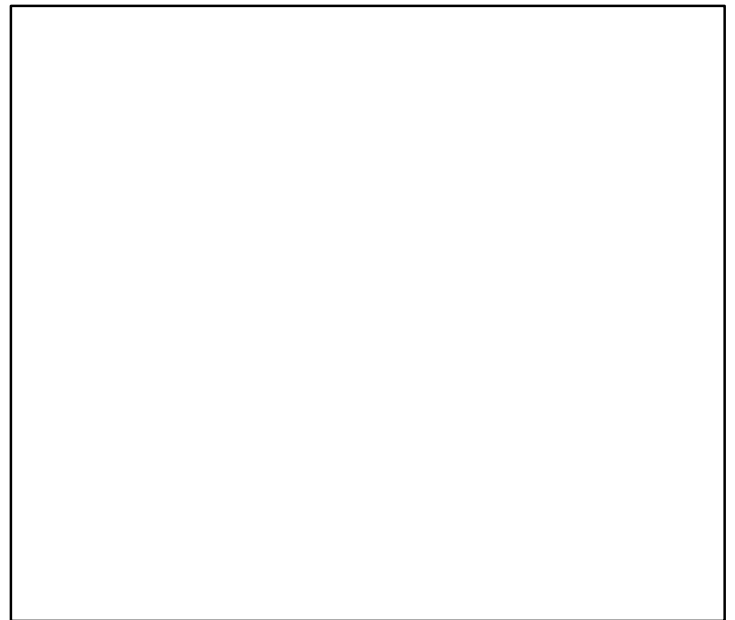
Kobe MGT\*



Spawner Recruit (2009–2019–MEDIMP2021–2)



Production\*



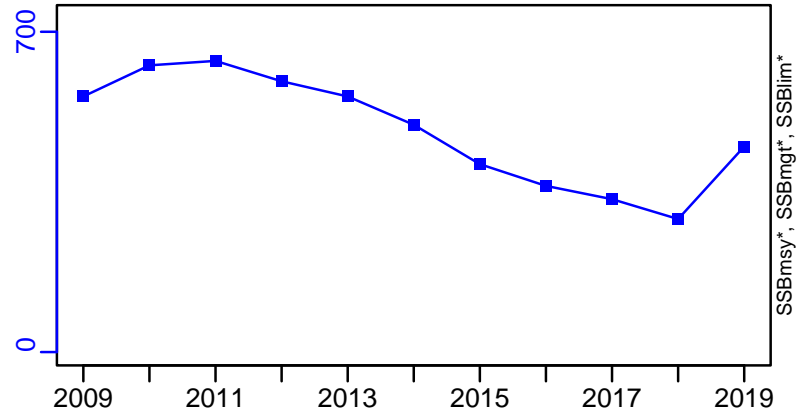
◆ Start Year ◆ End Year \* No Data

# Norway lobster Northern Spain [NEPHMEDGSA6]

TB\*



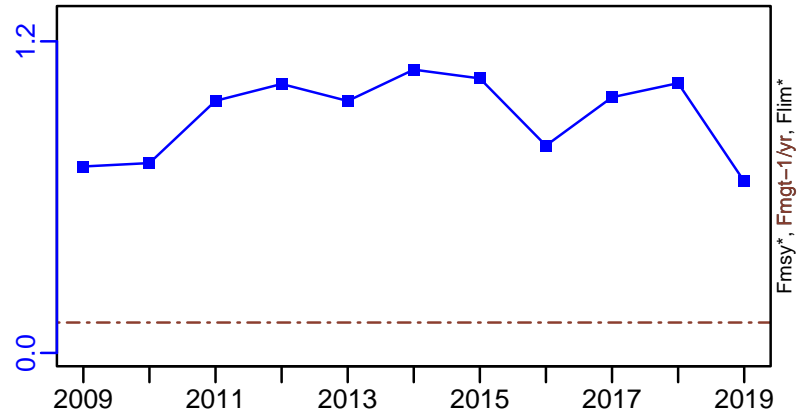
SSB-MT (2009-2019-MEDIMP2021-2)



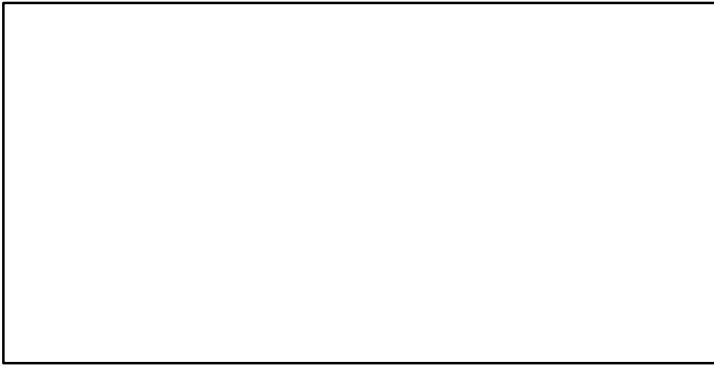
TN \*



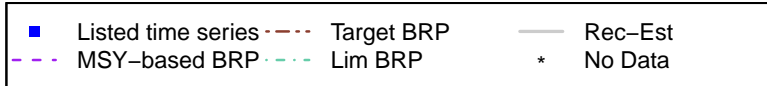
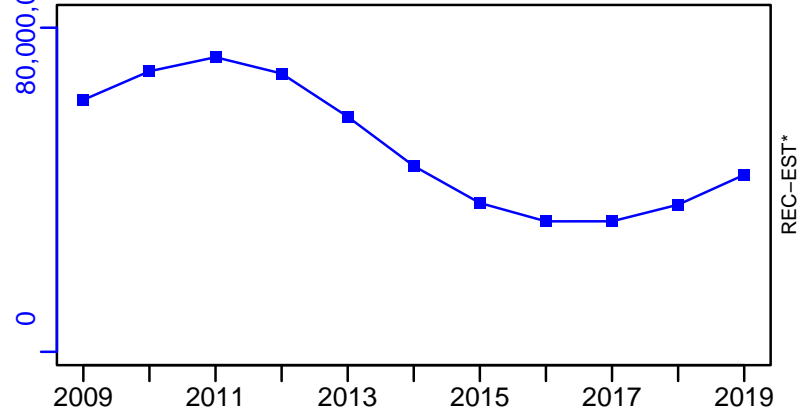
F-1/yr (2009-2019-MEDIMP2021-2)



ER\*



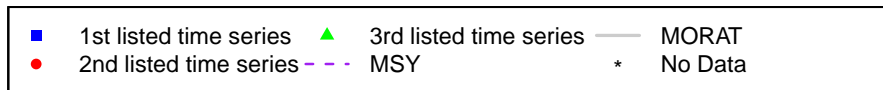
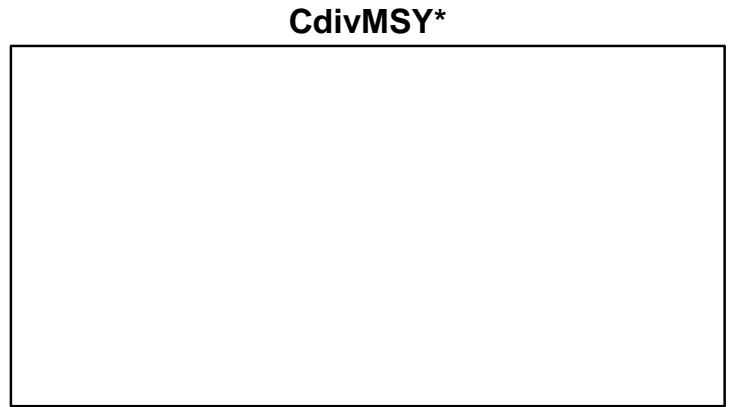
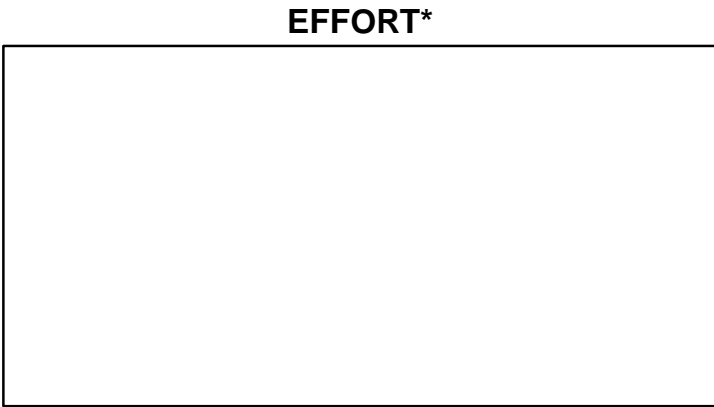
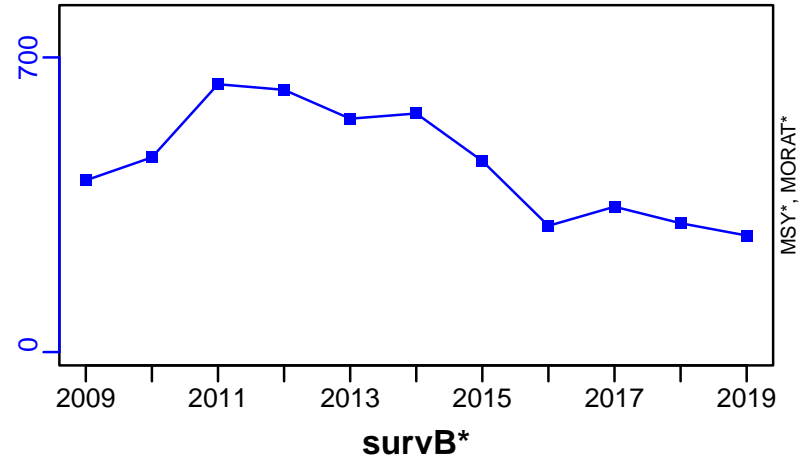
R-E00 (2009-2019-MEDIMP2021-2)



# Norway lobster Northern Spain [NEPHMEDGSA6]

TC-MT, TL\*, RecC\* (2009-2019-MEDIMP2021-2)

TAC\*, Cpair\*, Cadv\*



## Norway lobster Ligurian and North Tyrrhenian Sea [NEPHMEDGSA9]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Nephrops norvegicus   |
| <b>Current Assess ID</b>    | STECF-NEPHMEDGSA9-1994-2019-MEDIMP2021-2                                      |
| <b>Area</b>                 | Ligurian and North Tyrrhenian Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019, 2015, 2013  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.284 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | TB-MT            | 2015      | 638        | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 1056       | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 43,411,451 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.275      | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2015      | 0.145      | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 193        |     |     |
| <b>TL</b>         | TL-MT            | 2015      | 114        |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 0.969      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

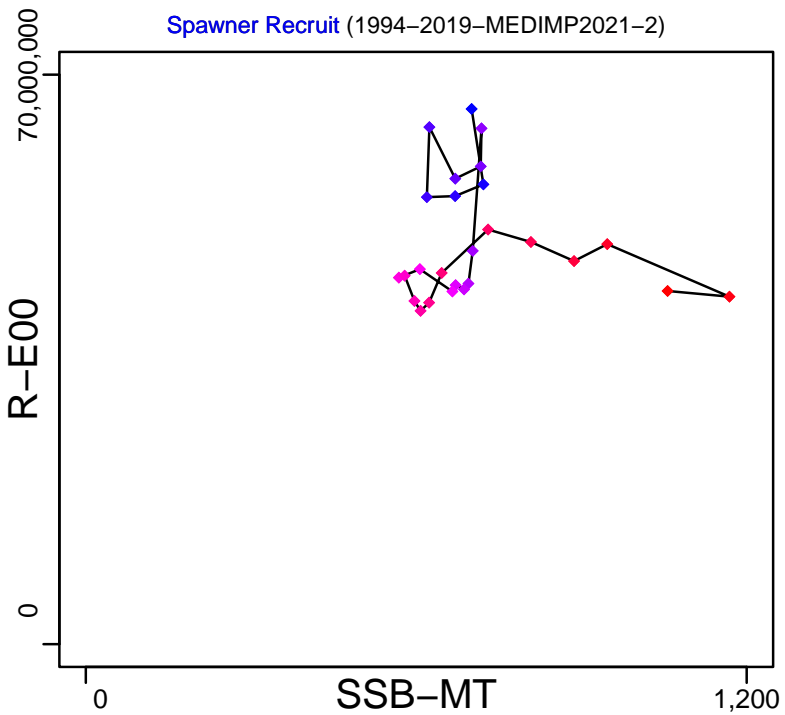
Kobe MSY\*



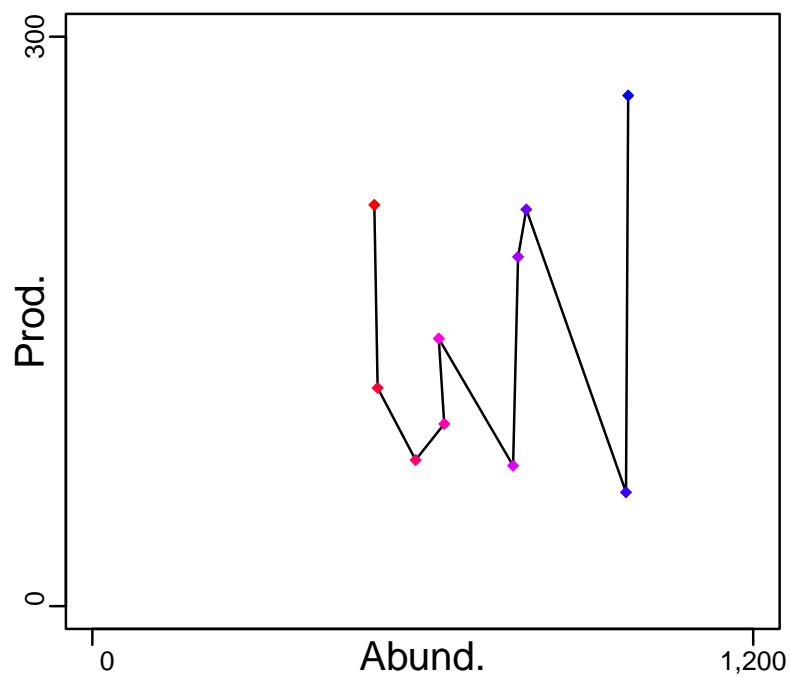
Kobe MGT\*



Spawner Recruit (1994–2019–MEDIMP2021–2)



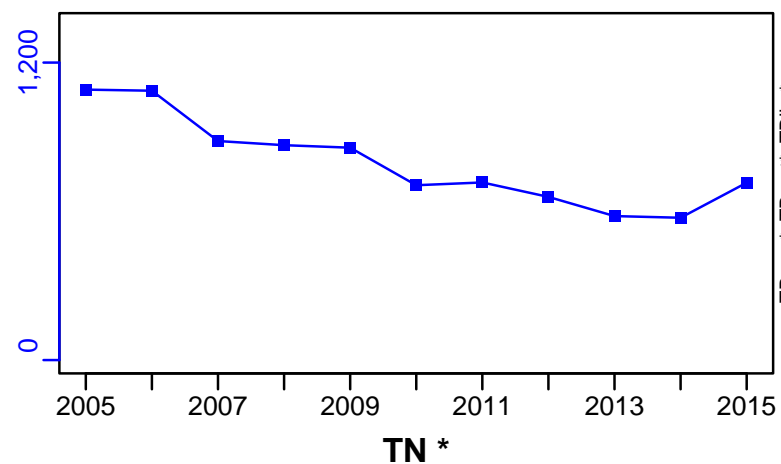
Production (2005–2015–OSIO)



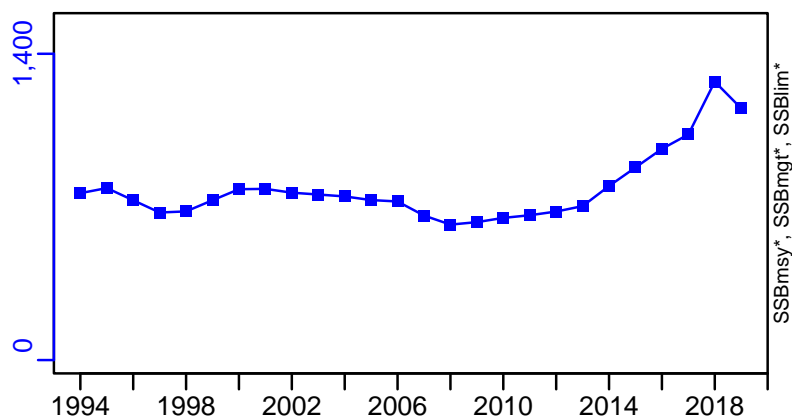
◆ Start Year ◆ End Year \* No Data

# Norway lobster Ligurian and North Tyrrhenian Sea [NEPHMEDGSA9]

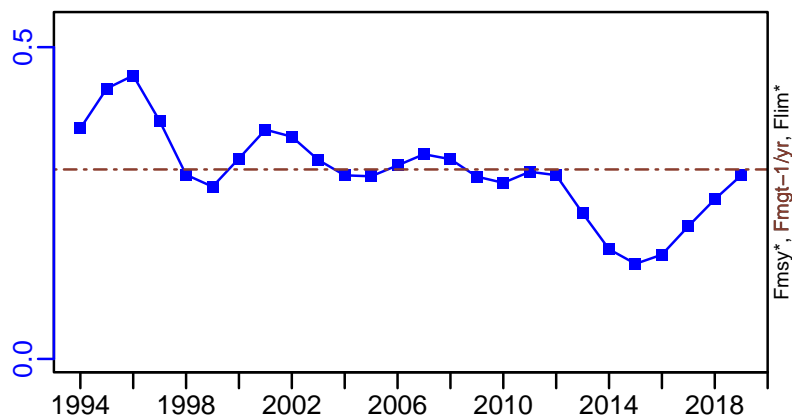
TB-MT (2005–2015–OSIO)



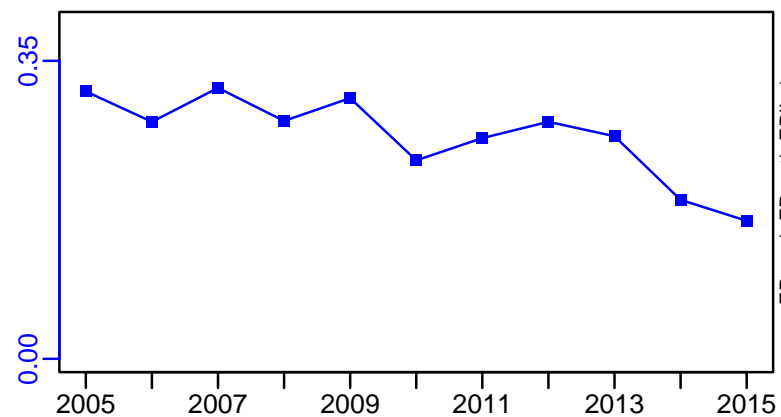
SSB-MT (1994–2019–MEDIMP2021–2)



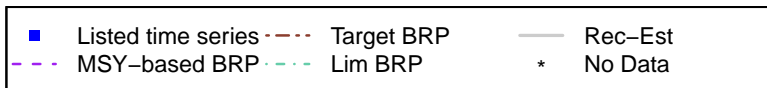
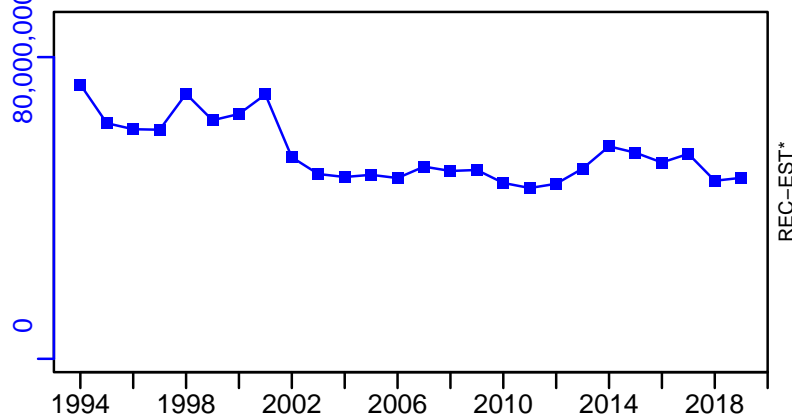
F–1/yr (1994–2019–MEDIMP2021–2)



ER–calc–ratio (2005–2015–OSIO)



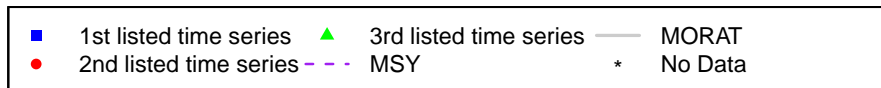
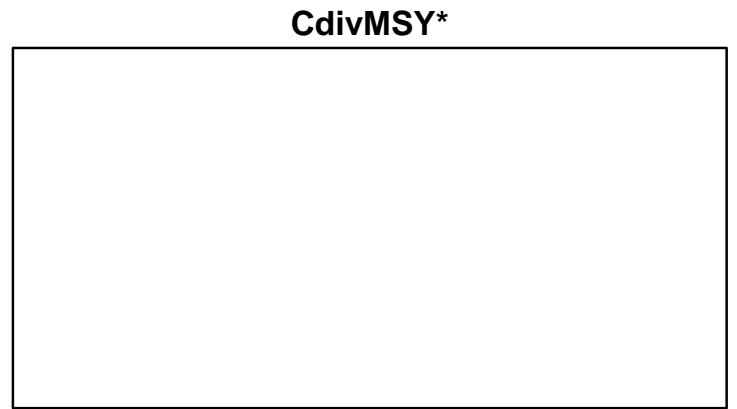
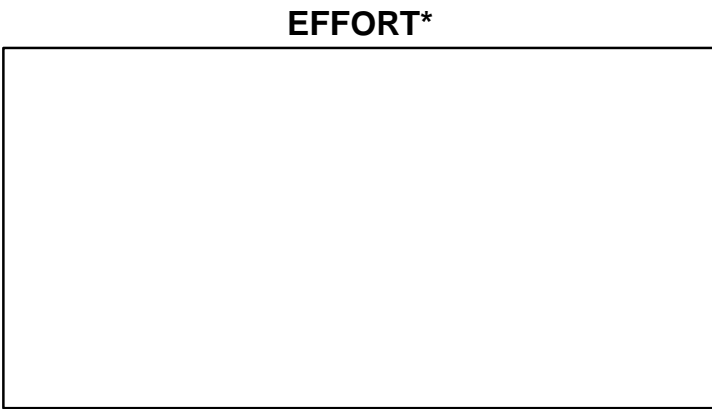
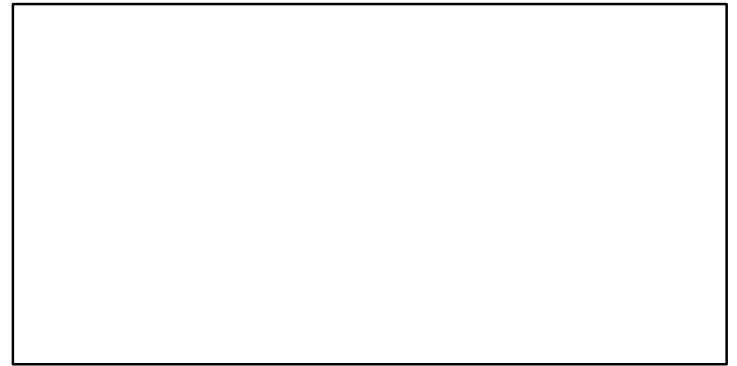
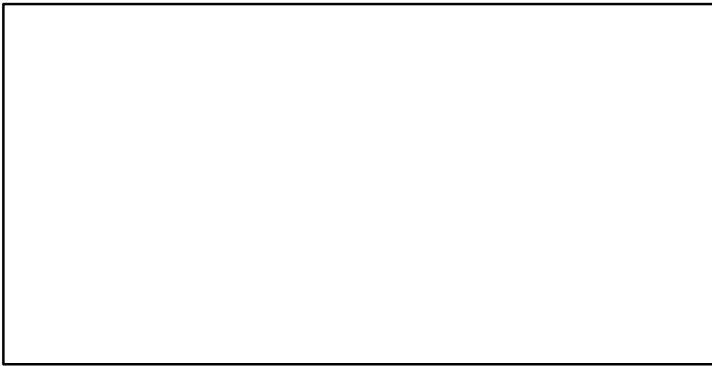
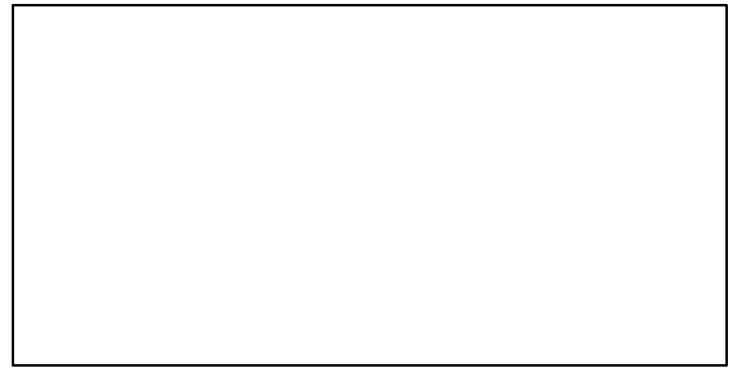
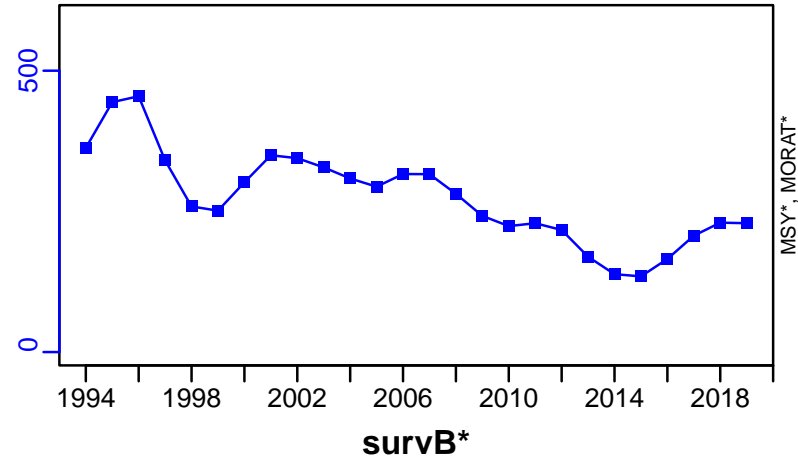
R–E00 (1994–2019–MEDIMP2021–2)



# Norway lobster Ligurian and North Tyrrhenian Sea [NEPHMEDGSA9]

TC-MT, TL\*, RecC\* (1994-2019-MEDIMP2021-2)

TAC\*, Cpair\*, Cadv\*



## Picarel Cyprus Island [PICAMEDGSA25]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Spicara smaris  |
| <b>Current Assess ID</b>    | STECF-PICAMEDGSA25-2005-2010-OSIO   |
| <b>Area</b>                 | Cyprus Island   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2010  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2010      | 0.31  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2010      | 1350       | -   | 0+  |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | -                | -         | -          | -   | -   |
| <b>F</b>          | F-1/yr           | 2010      | 0.08       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2010      | 245        |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2010      | 0.258      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



**Kobe MSY\***



**Kobe MGT\***



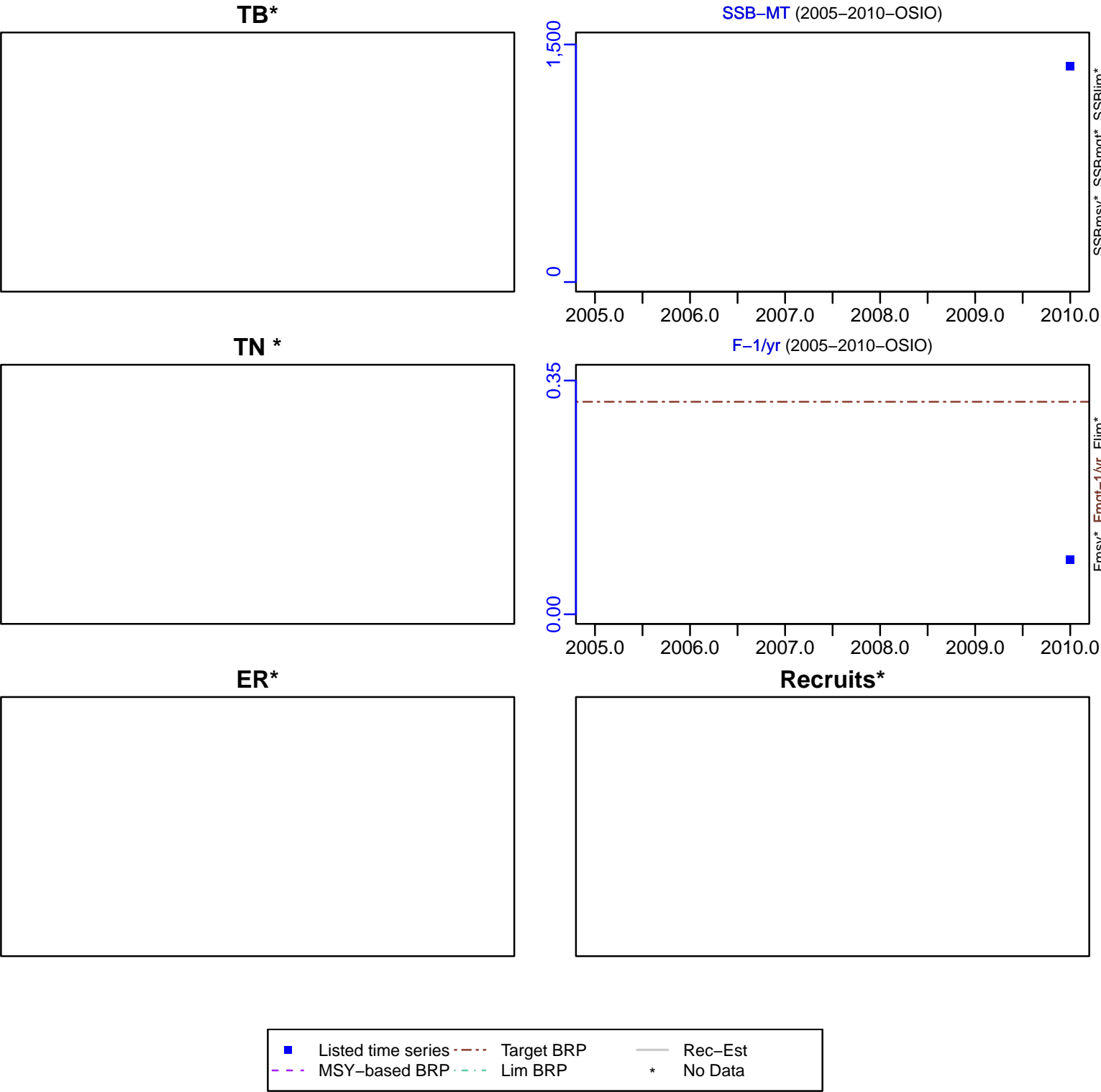
**Spawner Recruit\***



**Production\***



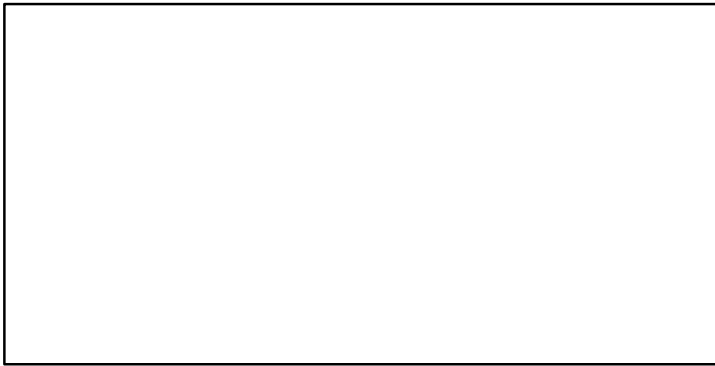
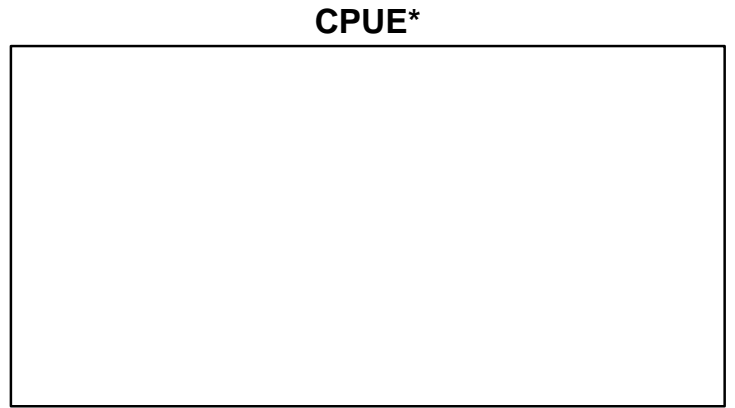
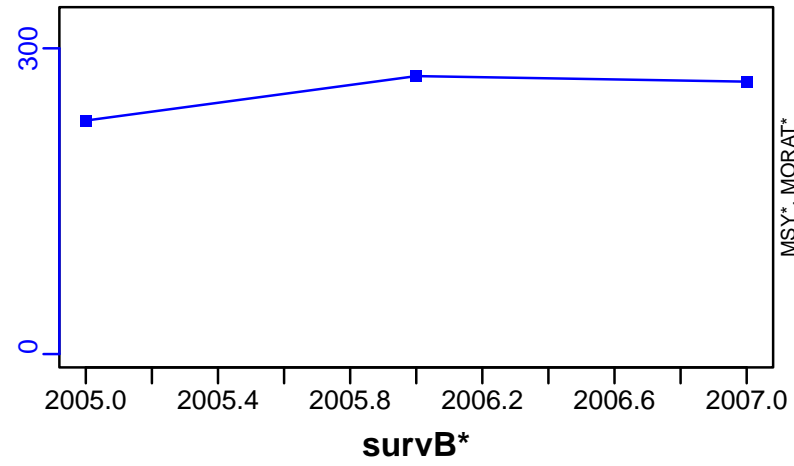
◆ Start Year ◆ End Year \* No Data



Picarel Cyprus Island [PICAMEDGSA25]

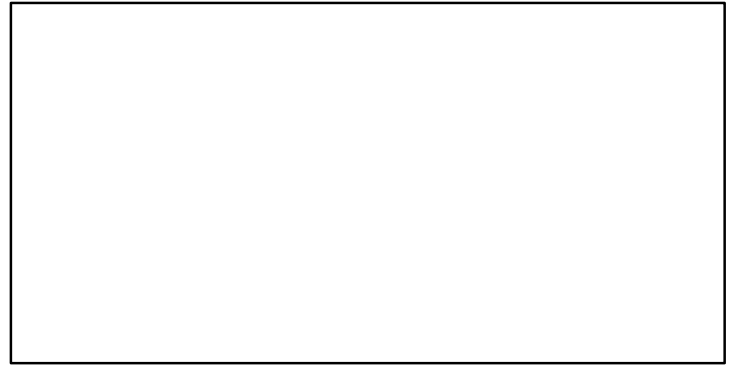
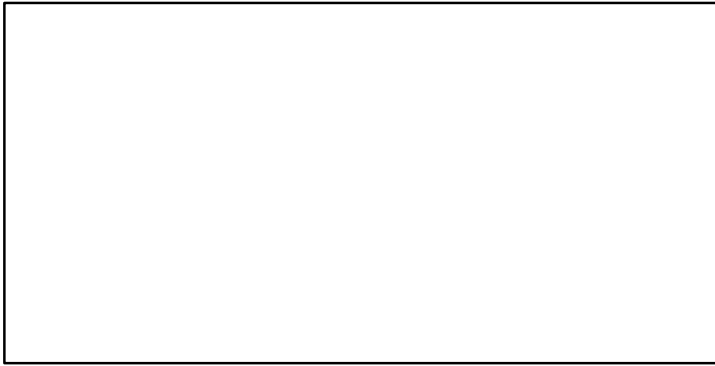
TC-MT, TL\*, RecC\* (2005–2010–OSIO)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CdivMSY\*



## Poor cod Ligurian and North Tyrrhenian Sea [PRCODMEDGSA9]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Trisopterus minutus   |
| <b>Current Assess ID</b>    | STECF-PRCODMEDGSA9-2004-2011-OSIO   |
| <b>Area</b>                 | Ligurian and North Tyrrhenian Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2011      | 0.74  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |                 |     |     |
|-------------------|------------------|-----------|-----------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value      | Sex | Age |
| <b>TB</b>         | -                | -         | -               | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2011      | 163             | -   | 0+  |
| <b>TN</b>         | -                | -         | -               | -   | -   |
| <b>R</b>          | R-E00            | 2011      | $3 \times 10^6$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2011      | 0.9             | -   | -   |
| <b>ER</b>         | -                | -         | -               | -   | -   |
| <b>TC</b>         | TC-MT            | 2011      | 105             |     |     |
| <b>TL</b>         | -                | -         | -               |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -               |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -               |     |     |
| <b>F/Fmsy</b>     | -                | -         | -               |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -               |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -               |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -               |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2011      | 1.216           |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -               |     |     |

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



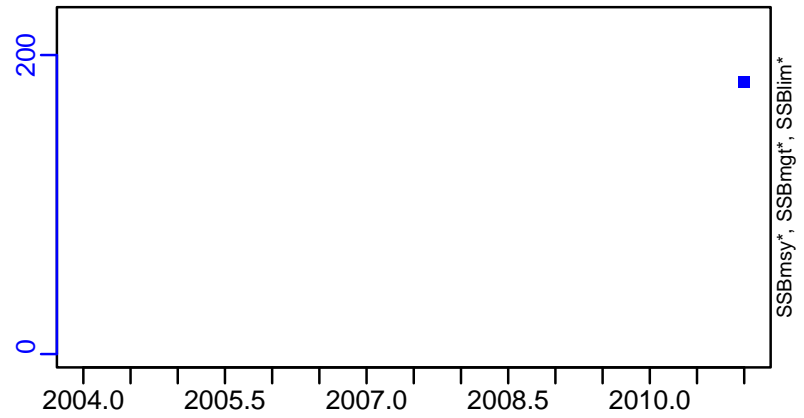
◆ Start Year ◆ End Year \* No Data

Poor cod Ligurian and North Tyrrhenian Sea [PRCODMEDGSA9]

TB\*



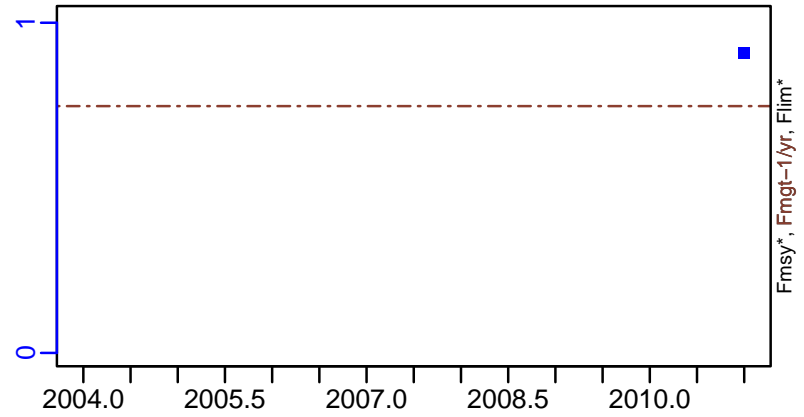
SSB-MT (2004–2011–OSIO)



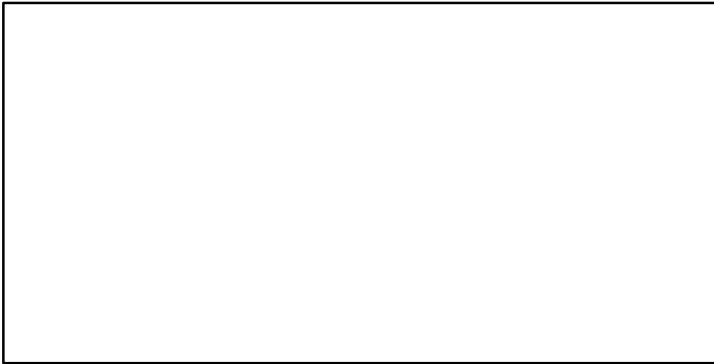
TN \*



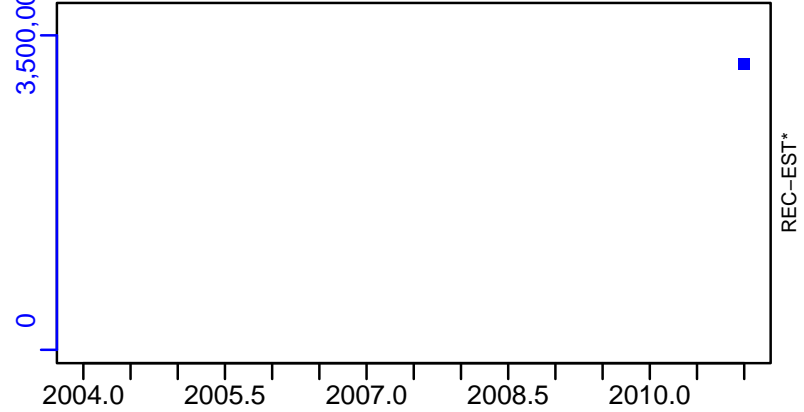
F-1/yr (2004–2011–OSIO)



ER\*

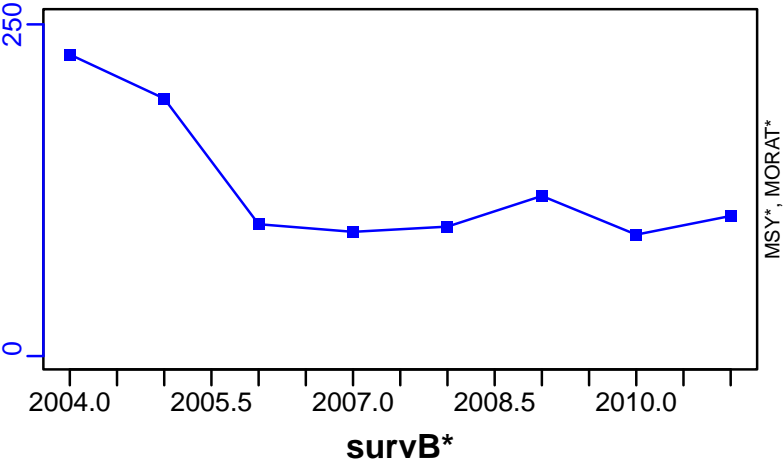


R-E00 (2004–2011–OSIO)



Poor cod Ligurian and North Tyrrhenian Sea [PRCODMEDGSA9]

TC-MT, TL\*, RecC\* (2004–2011–OSIO)



TAC\*, Cpair\*, Cadv\*



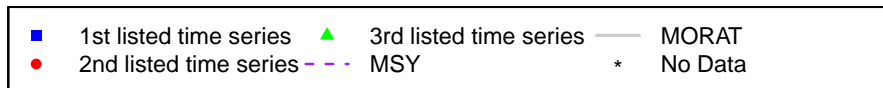
CPUE\*



EFFORT\*



CdivMSY\*



## Deep water rose shrimp Northern Spain [PSHRMPMEDGSA6]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Parapenaeus longirostris  |
| <b>Current Assess ID</b>    | STECF-PSHRMPMEDGSA6-2001-2012-OSIO  |
| <b>Area</b>                 | Northern Spain  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011, 2012  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2012      | 0.27  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |                    |     |     |
|-------------------|------------------|-----------|--------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value         | Sex | Age |
| <b>TB</b>         | -                | -         | -                  | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2012      | 145                | -   | 2+  |
| <b>TN</b>         | -                | -         | -                  | -   | -   |
| <b>R</b>          | R-E00            | 2012      | $1.26 \times 10^8$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2012      | 1.48               | -   | -   |
| <b>ER</b>         | -                | -         | -                  | -   | -   |
| <b>TC</b>         | TC-MT            | 2012      | 120                |     |     |
| <b>TL</b>         | TL-MT            | 2011      | 92                 |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                  |     |     |
| <b>F/Fmsy</b>     | -                | -         | -                  |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                  |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                  |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2012      | 5.481              |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                  |     |     |



Deep water rose shrimp Northern Spain [PSHRMPMEDGSA6]

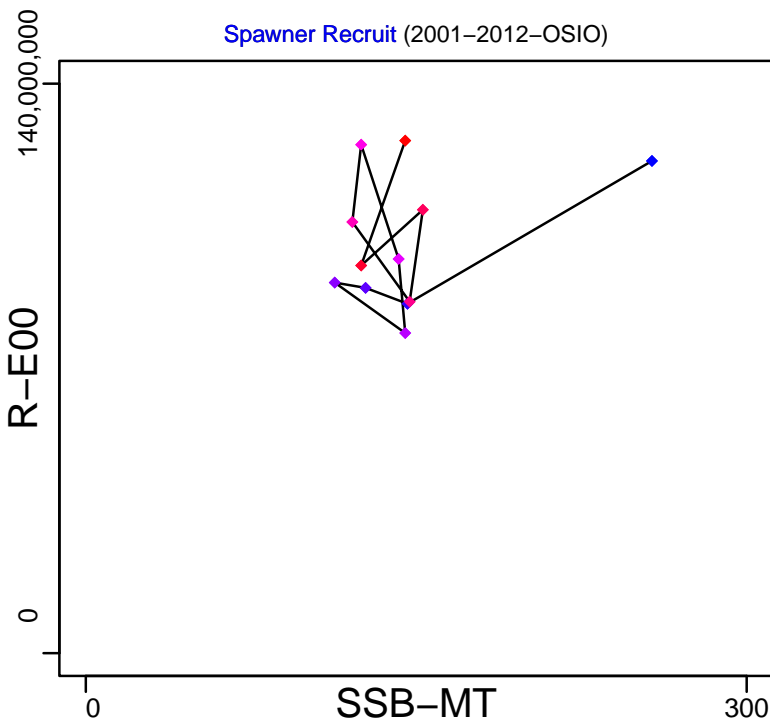
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2001–2012–OSIO)



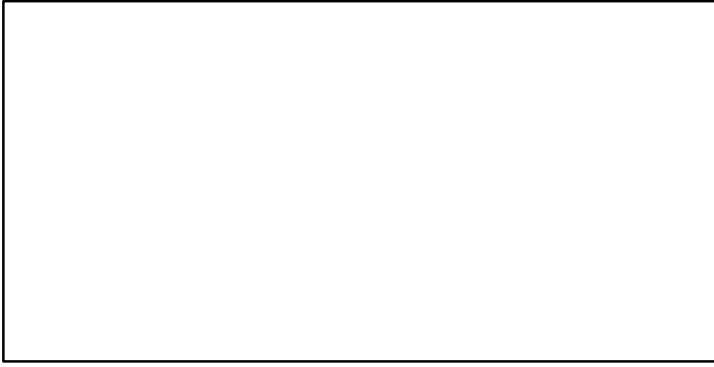
Production\*



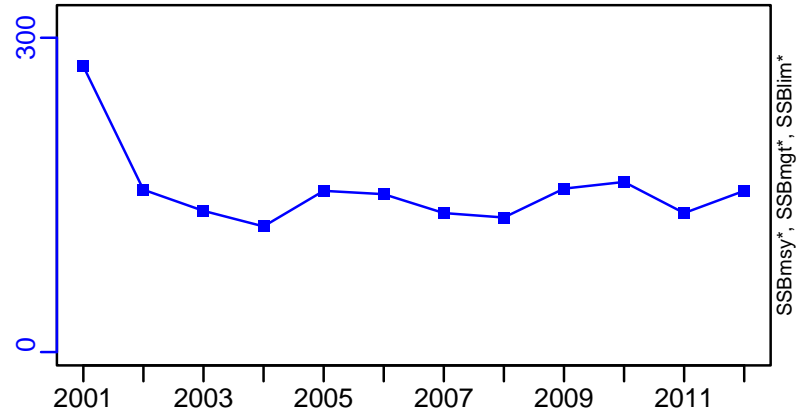
◆ Start Year ◆ End Year \* No Data

# Deep water rose shrimp Northern Spain [PSHRMPMEDGSA6]

TB\*



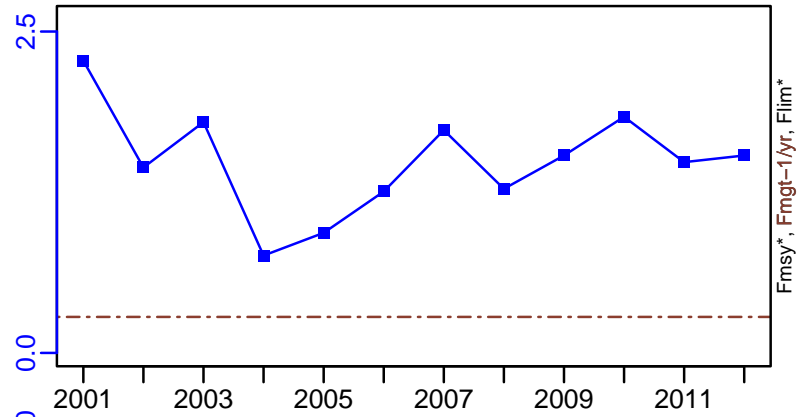
SSB-MT (2001–2012–OSIO)



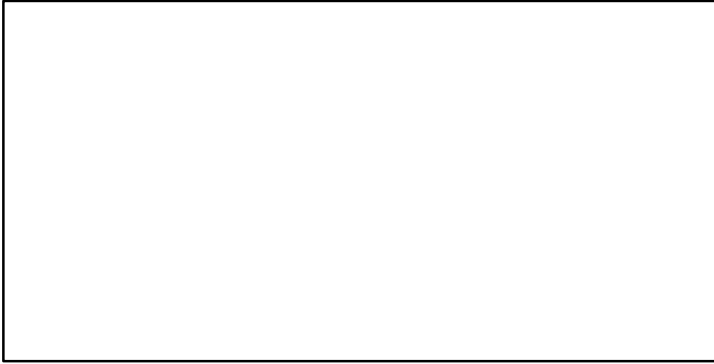
TN \*



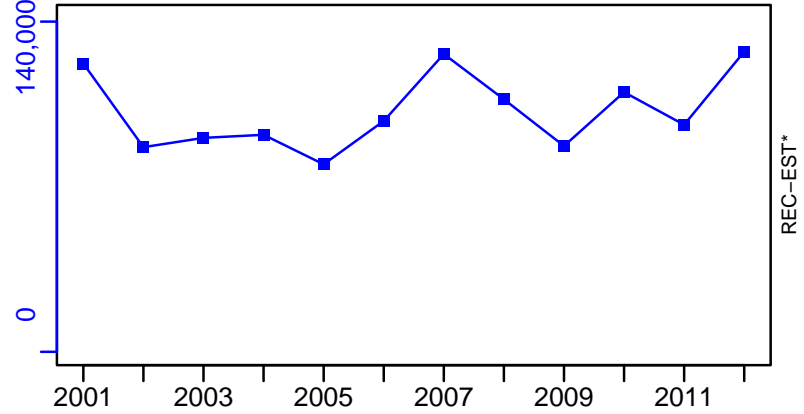
F-1/yr (2001–2012–OSIO)



ER\*



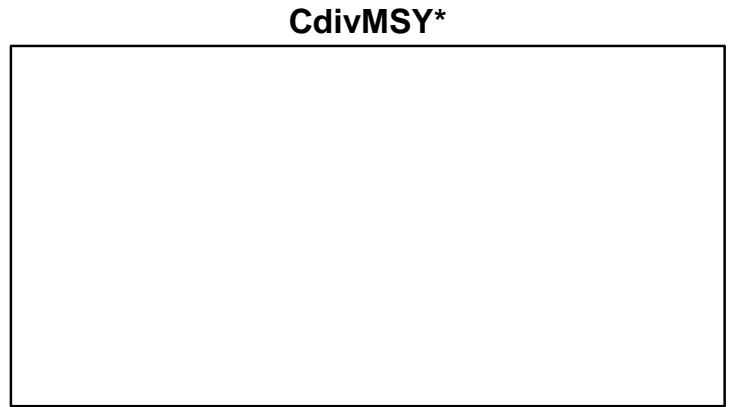
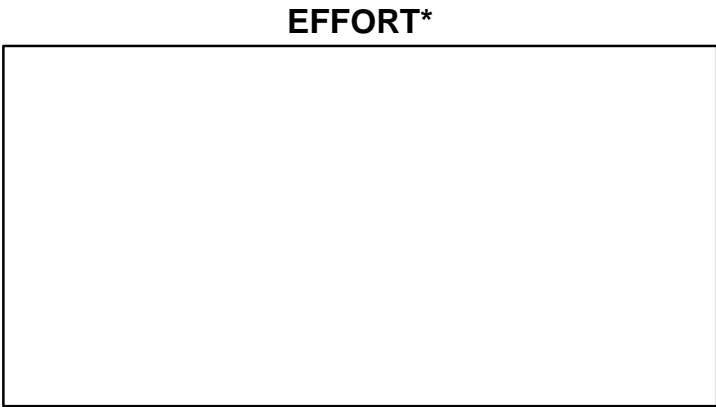
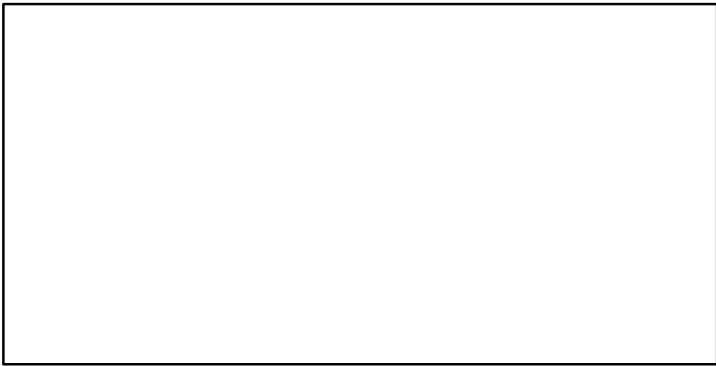
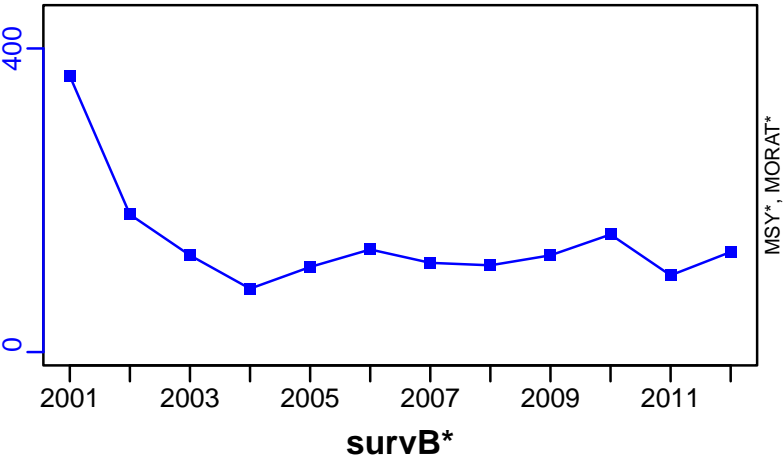
R-E00 (2001–2012–OSIO)



# Deep water rose shrimp Northern Spain [PSHRMPMEDGSA6]

TC-MT, TL\*, RecC\* (2001-2012-OSIO)

TAC\*, Cpair\*, Cadv\*



## Red seabream Alboran Island Sea (GSA 1,3) [RBRMMEDGSA1-3]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Pagellus bogaraveo  |
| <b>Current Assess ID</b>    | GRP7-RBRMMEDGSA1-3-2009-2011-BANOBI   |
| <b>Area</b>                 | Alboran Island Sea (GSA 1,3)  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | INRH-NADOR, IEO-MALAGA  |
| <b>Asmts in RAM</b>         | 2011  |

| Reference Points |        |           |       |
|------------------|--------|-----------|-------|
| Type             | ID     | Asmt Year | Value |
| TBmsy            | -      | -         | -     |
| SSBmsy           | -      | -         | -     |
| Fmsy             | -      | -         | -     |
| ERmsy            | -      | -         | -     |
| TBmgt            | -      | -         | -     |
| SSBmgt           | -      | -         | -     |
| Fmgt             | -      | -         | -     |
| ERmgt            | -      | -         | -     |
| TB0              | -      | -         | -     |
| SSB0             | -      | -         | -     |
| MSY              | -      | -         | -     |
| M                | M-1/yr | 2011      | 0.2   |
| TBlim            | -      | -         | -     |
| SSBlim           | -      | -         | -     |
| Flim             | -      | -         | -     |
| ERlim            | -      | -         | -     |

| Time Series |        |           |            |     |        |
|-------------|--------|-----------|------------|-----|--------|
| Type        | ID     | Asmt Year | Curr Value | Sex | Age    |
| TB          | -      | -         | -          | -   | -      |
| SSB         | -      | -         | -          | -   | -      |
| TN          | -      | -         | -          | -   | -      |
| R           | -      | -         | -          | -   | -      |
| F           | F-1/yr | 2011      | 0.194      | -   | 2 to 6 |
| ER          | -      | -         | -          | -   | -      |
| TC          | TC-MT  | 2011      | 258        |     |        |
| TL          | -      | -         | -          |     |        |
| TB/TBmsy    | -      | -         | -          |     |        |
| SSB/SSBmsy  | -      | -         | -          |     |        |
| F/Fmsy      | -      | -         | -          |     |        |
| ER/ERmsy    | -      | -         | -          |     |        |
| TB/TBmgt    | -      | -         | -          |     |        |
| SSB/SSBmgt  | -      | -         | -          |     |        |
| F/Fmgt      | -      | -         | -          |     |        |
| ER/ERmgt    | -      | -         | -          |     |        |

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year ◆ End Year \* No Data

TB\*



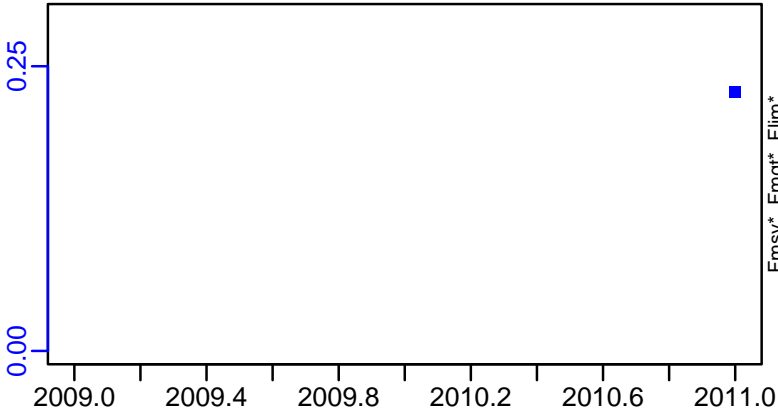
SSB\*



TN \*



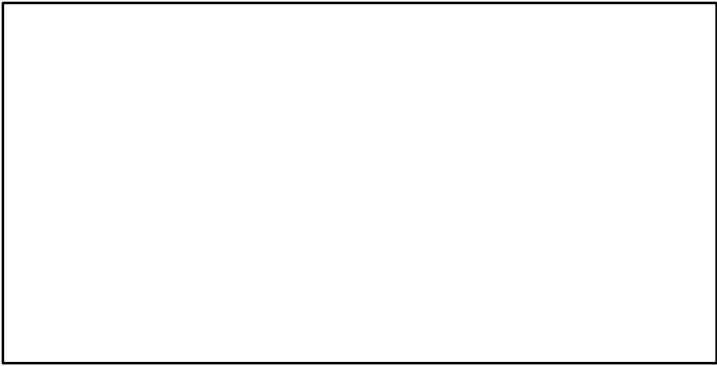
F-1/yr (2009-2011-BANOBI)



ER\*

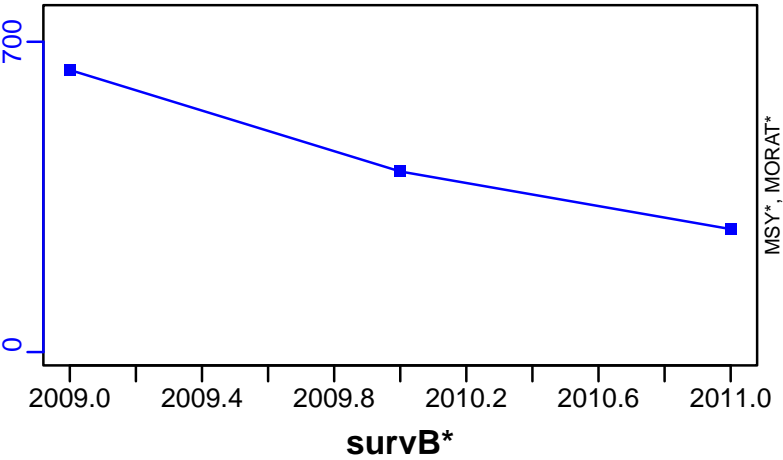


Recruits\*

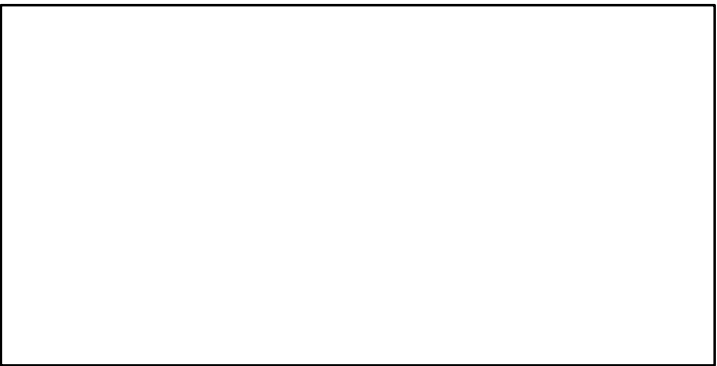


Red seabream Alboran Island Sea (GSA 1,3) [RBRMMEDGSA1-3]

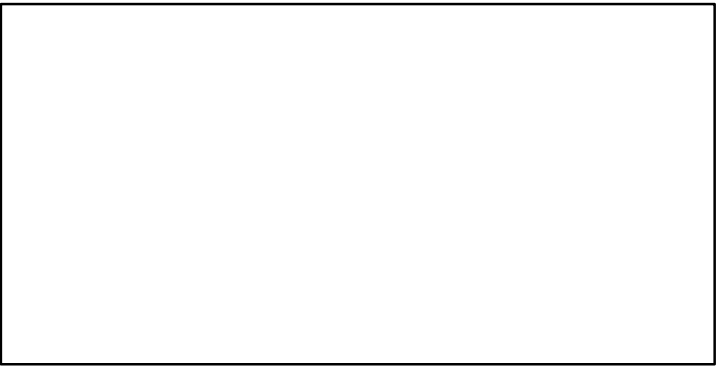
TC-MT, TL\*, RecC\* (2009-2011-BANOBI)



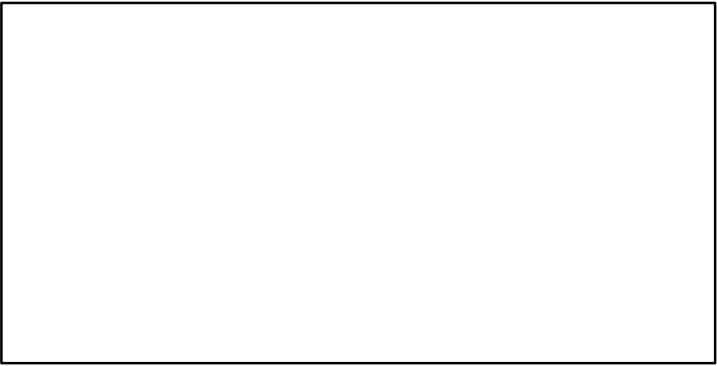
TAC\*, Cpair\*, Cadv\*



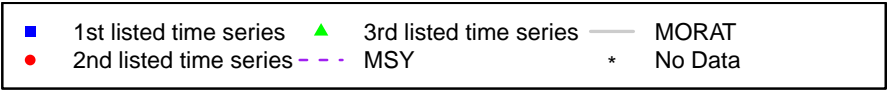
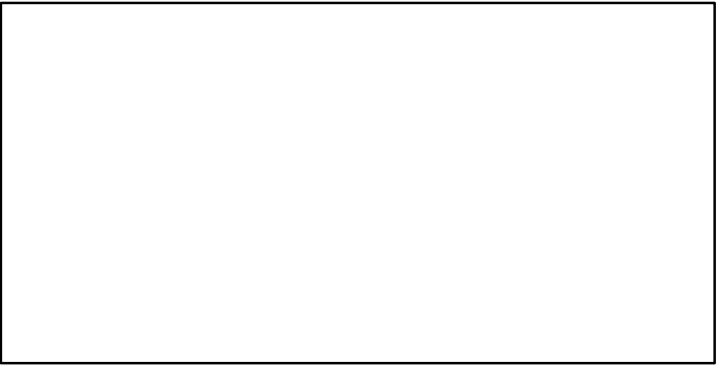
CPUE\*



EFFORT\*



CdivMSY\*



## Red shrimp Northern Alboran Sea [RDSHRMPMEDGSA1]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Aristeus antennatus   |
| <b>Current Assess ID</b>    | WGSAD-RDSHRMPMEDGSA1-2002-2022-HIVELY   |
| <b>Area</b>                 | Northern Alboran Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Demersal Species                         |
| <b>Asmts in RAM</b>         | 2014, 2019, 2021, 2022  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2022      | 0.7   |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | SSBlim-MT | 2014      | 1287  |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |             |     |        |
|-------------------|------------------|-----------|-------------|-----|--------|
| Type              | ID               | Asmt Year | Curr Value  | Sex | Age    |
| <b>TB</b>         | TB-MT            | 2022      | 1141        | -   | -      |
| <b>SSB</b>        | SSB-MT           | 2022      | 197         | -   | -      |
| <b>TN</b>         | -                | -         | -           | -   | -      |
| <b>R</b>          | R-E00            | 2022      | 153,132,000 | -   | -      |
| <b>F</b>          | F-1/yr           | 2022      | 0.542       | -   | 1 to 2 |
| <b>ER</b>         | ER-calc-ratio    | 2022      | 0.094       | -   | -      |
| <b>TC</b>         | TC-MT            | 2022      | 108         |     |        |
| <b>TL</b>         | TL-MT            | 2022      | 108         |     |        |
| <b>TB/TBmsy</b>   | -                | -         | -           |     |        |
| <b>SSB/SSBmsy</b> | -                | -         | -           |     |        |
| <b>F/Fmsy</b>     | -                | -         | -           |     |        |
| <b>ER/ERmsy</b>   | -                | -         | -           |     |        |
| <b>TB/TBmgt</b>   | -                | -         | -           |     |        |
| <b>SSB/SSBmgt</b> | -                | -         | -           |     |        |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2022      | 0.775       |     |        |
| <b>ER/ERmgt</b>   | -                | -         | -           |     |        |



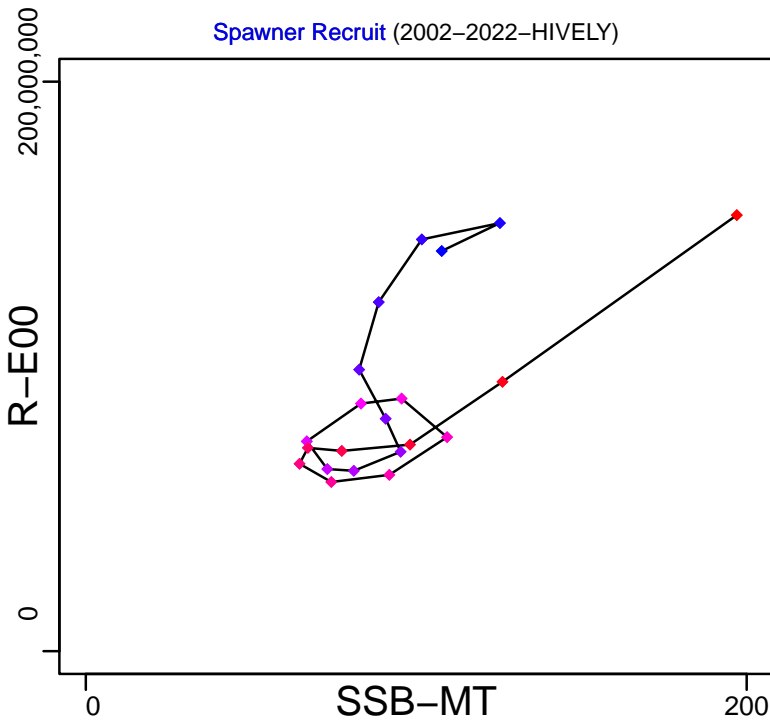
Kobe MSY\*



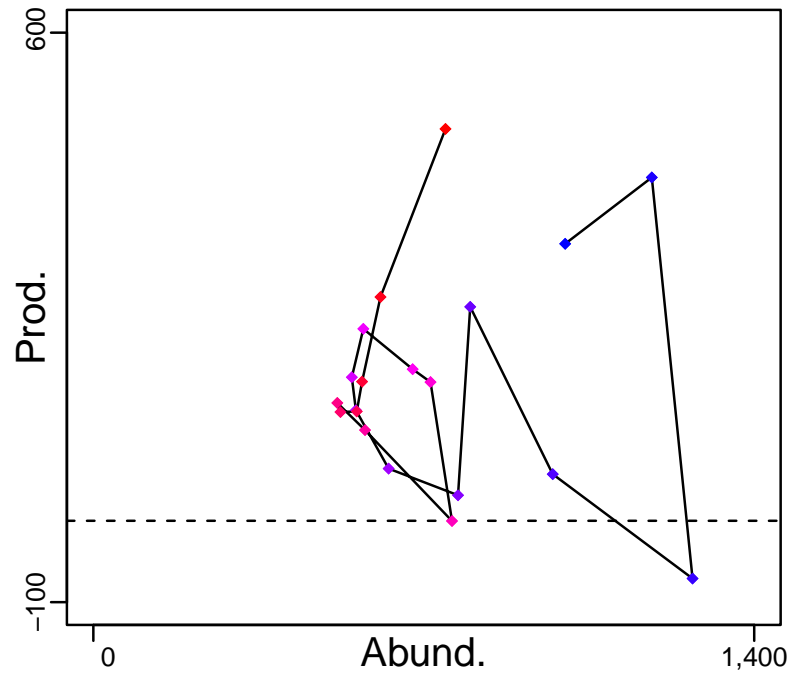
Kobe MGT\*



Spawner Recruit (2002–2022–HIVELY)



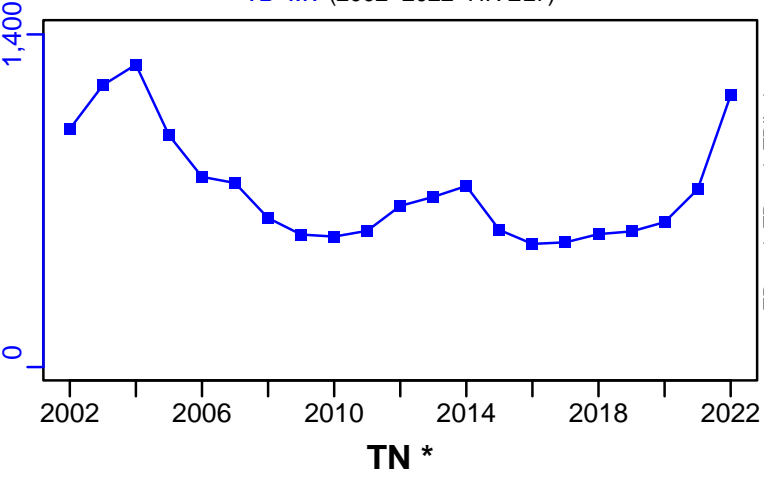
Production (2002–2022–HIVELY)



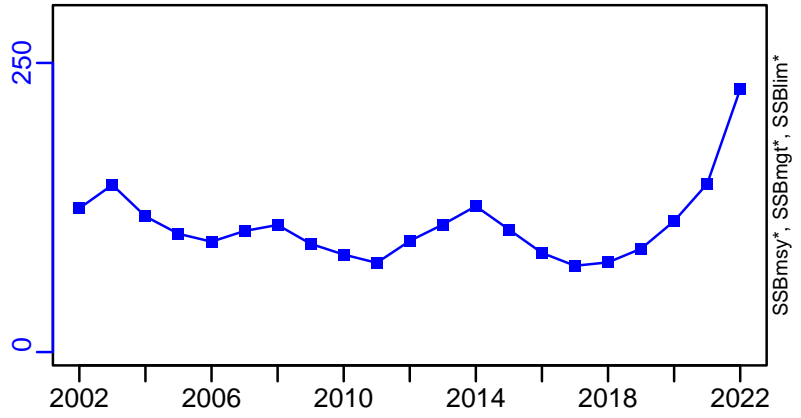
◆ Start Year ◆ End Year \* No Data

# Red shrimp Northern Alboran Sea [RDSHRMPMEDGSA1]

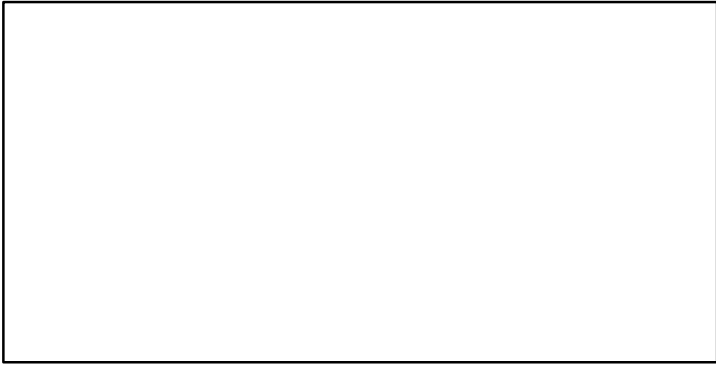
TB-MT (2002–2022–HIVELY)



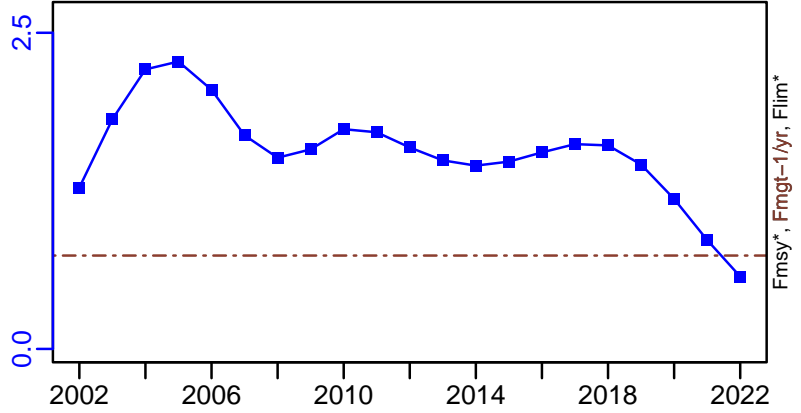
SSB-MT (2002–2022–HIVELY)



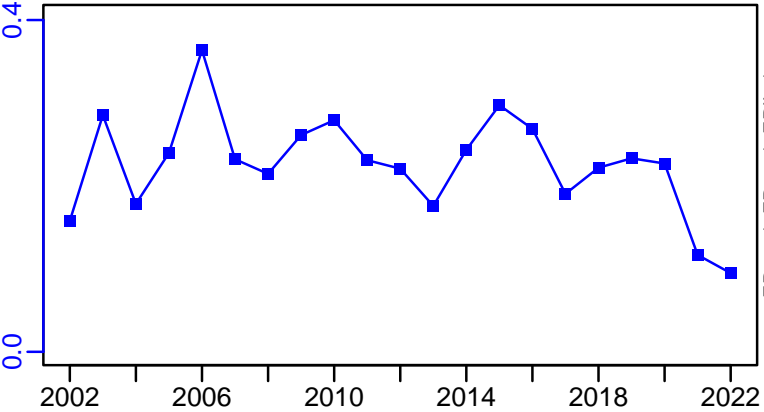
TN \*



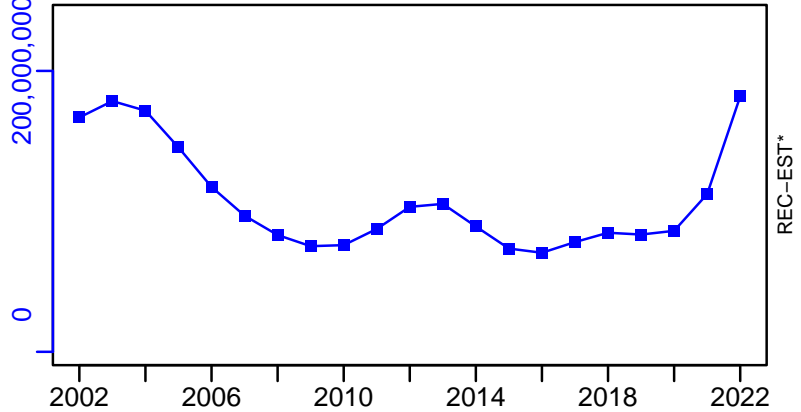
F-1/yr (2002–2022–HIVELY)



ER-calc-ratio (2002–2022–HIVELY)



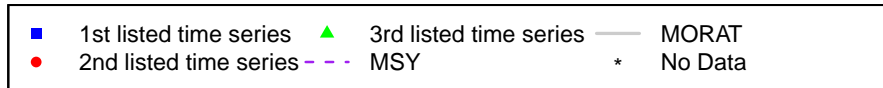
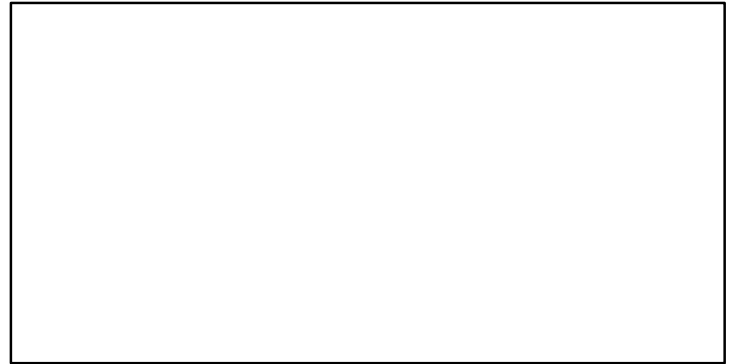
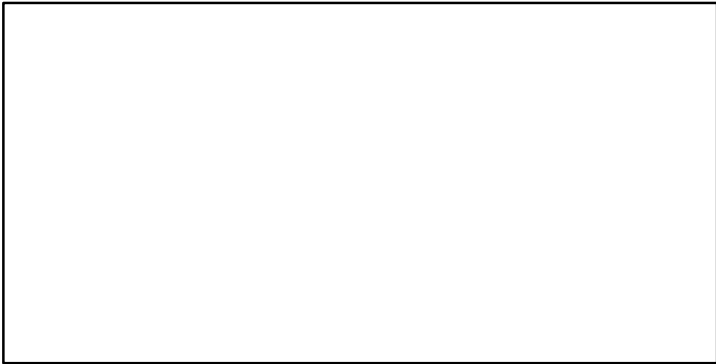
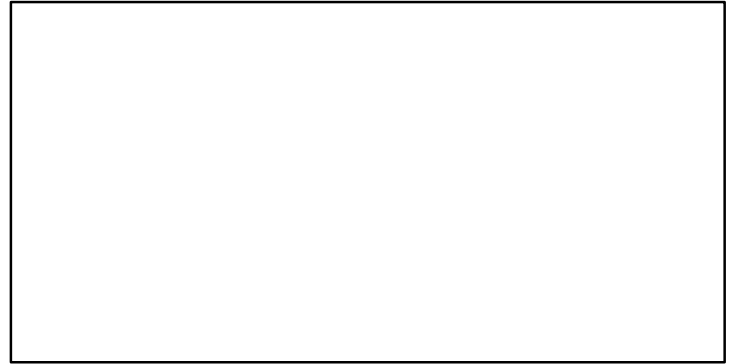
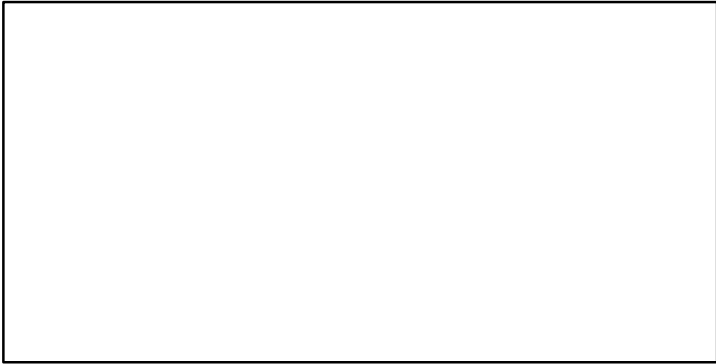
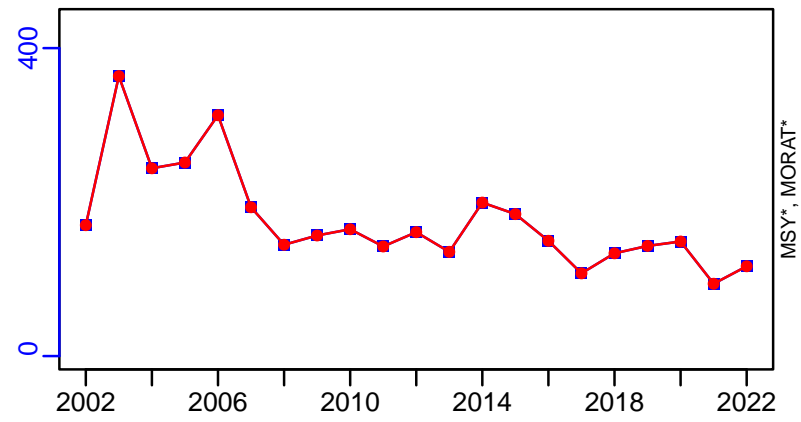
R-E00 (2002–2022–HIVELY)



# Red shrimp Northern Alboran Sea [RDSHRMPMEDGSA1]

TC-MT, TL-MT, RecC\* (2002-2022-HIVELY)

TAC\*, Cpair\*, Cadv\*



**Red shrimp Malta Island and South of Sicily (GSA 15, 16)**  
**[RDSHRMPMEDGSA15-16]**

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Aristeus antennatus   |
| <b>Current Assess ID</b>    | STECF-RDSHRMPMEDGSA15-16-2009-2012-OSIO                                       |
| <b>Area</b>                 | Malta Island and South of Sicily (GSA 15, 16)                                 |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2012      | 0.26  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |       |           |            |     |     |
|-------------|-------|-----------|------------|-----|-----|
| Type        | ID    | Asmt Year | Curr Value | Sex | Age |
| TB          | -     | -         | -          | -   | -   |
| SSB         | -     | -         | -          | -   | -   |
| TN          | -     | -         | -          | -   | -   |
| R           | -     | -         | -          | -   | -   |
| F           | -     | -         | -          | -   | -   |
| ER          | -     | -         | -          | -   | -   |
| TC          | TC-MT | 2012      | 94         |     |     |
| TL          | -     | -         | -          |     |     |
| TB/TBmsy    | -     | -         | -          |     |     |
| SSB/SSBmsy  | -     | -         | -          |     |     |
| F/Fmsy      | -     | -         | -          |     |     |
| ER/ERmsy    | -     | -         | -          |     |     |
| TB/TBmgt    | -     | -         | -          |     |     |
| SSB/SSBmgt  | -     | -         | -          |     |     |
| F/Fmgt      | -     | -         | -          |     |     |
| ER/ERmgt    | -     | -         | -          |     |     |

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***

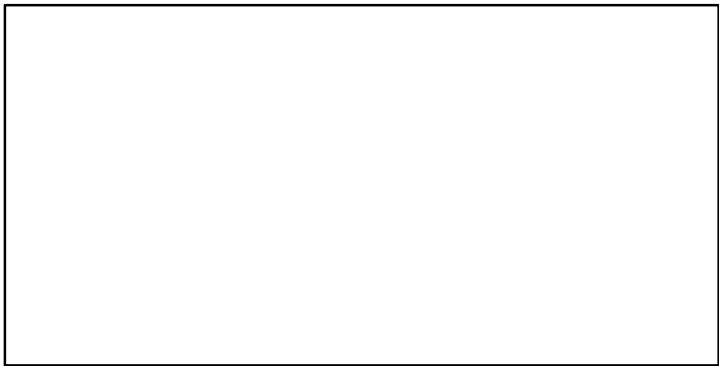


◆ Start Year ◆ End Year \* No Data

**TB\***



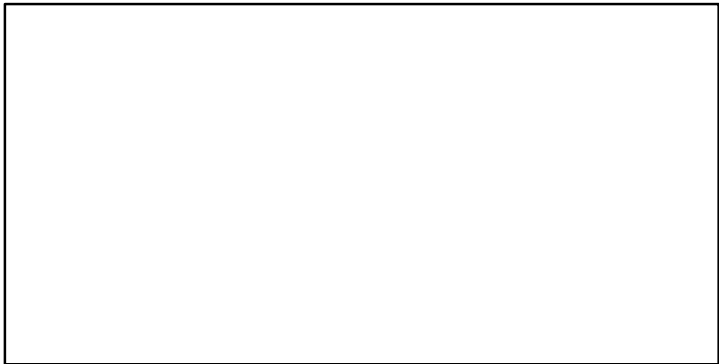
**SSB\***



**TN \***



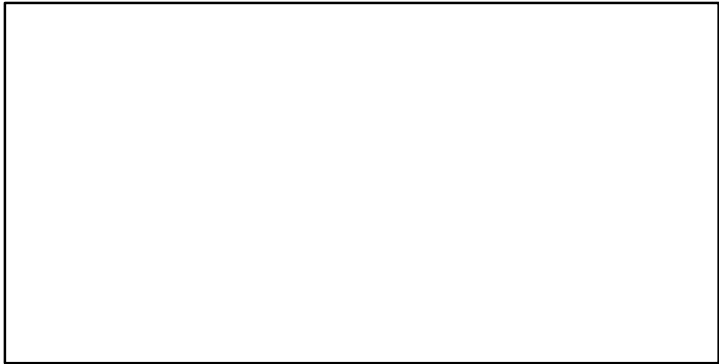
**F\***



**ER\***

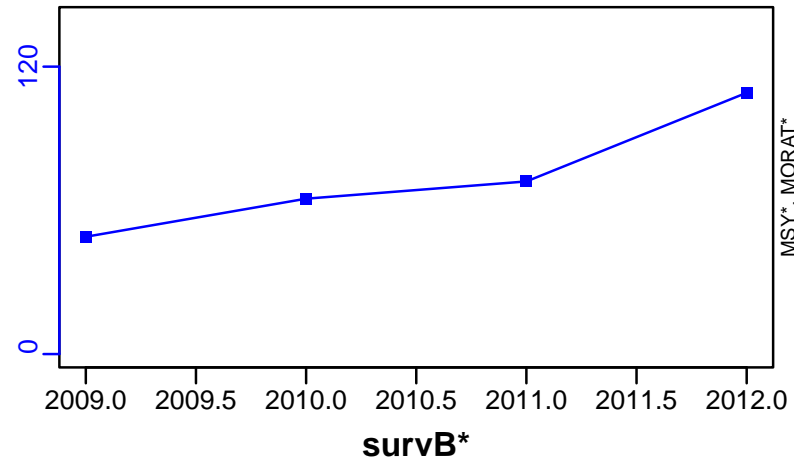


**Recruits\***



Red shrimp Malta Island and South of Sicily (GSA 15, 16) [RDSHRMPMEDGSA15-16]

TC-MT, TL\*, RecC\* (2009-2012-OSIO)



TAC\*, Cpair\*, Cadv\*



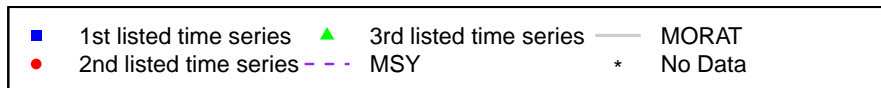
CPUE\*



EFFORT\*



CdivMSY\*



## Red shrimp Geographical Sub-Areas 6-7 [RDSHRMPMEDGSA6-7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Aristeus antennatus   |
| <b>Current Assess ID</b>    | STECF-RDSHRMPMEDGSA6-7-2002-2019-MEDIMP2021-2                                 |
| <b>Area</b>                 | Geographical Sub-Areas 6-7  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.288 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |             |     |     |
|-------------------|------------------|-----------|-------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value  | Sex | Age |
| <b>TB</b>         | -                | -         | -           | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 348         | -   | -   |
| <b>TN</b>         | -                | -         | -           | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 678,770,728 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 1.305       | -   | -   |
| <b>ER</b>         | -                | -         | -           | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 566         |     |     |
| <b>TL</b>         | -                | -         | -           |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -           |     |     |
| <b>F/Fmsy</b>     | -                | -         | -           |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -           |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -           |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 4.538       |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -           |     |     |



Red shrimp Geographical Sub-Areas 6-7 [RDSHRMPMEDGSA6-7]

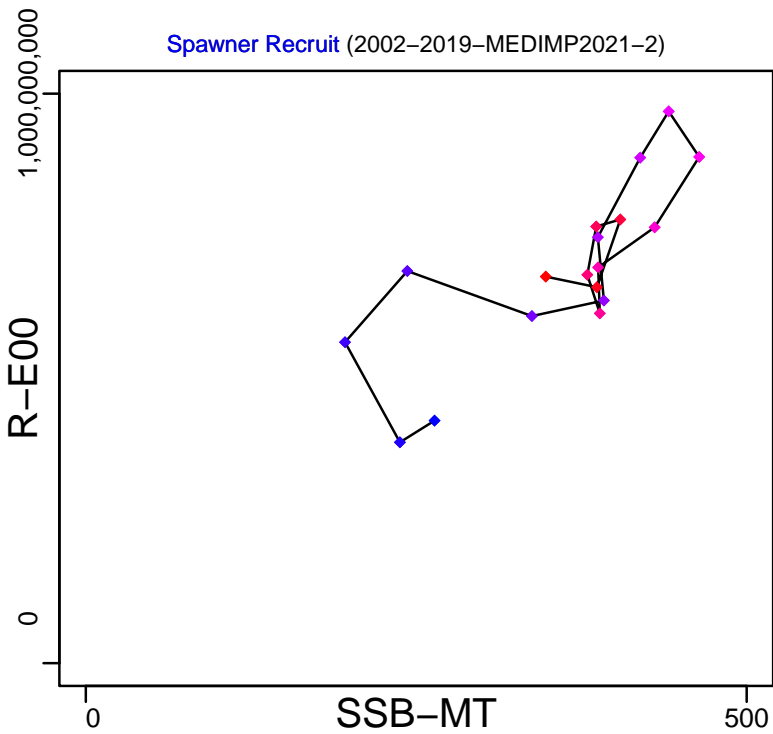
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2002-2019-MEDIMP2021-2)



Production\*



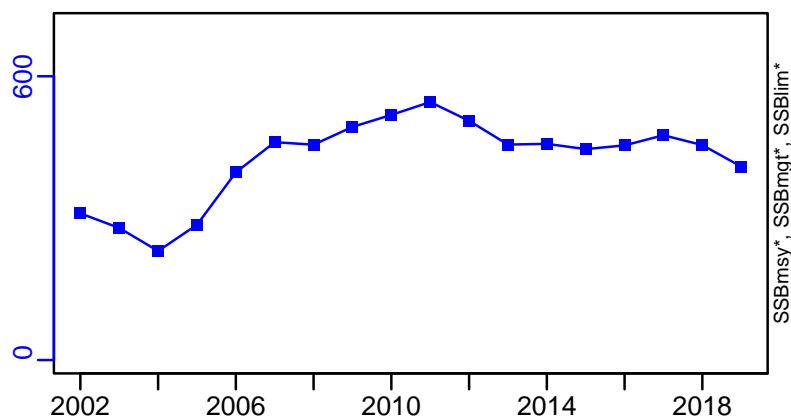
◆ Start Year ◆ End Year \* No Data

# Red shrimp Geographical Sub-Areas 6-7 [RDSHRMPMEDGSA6-7]

TB\*



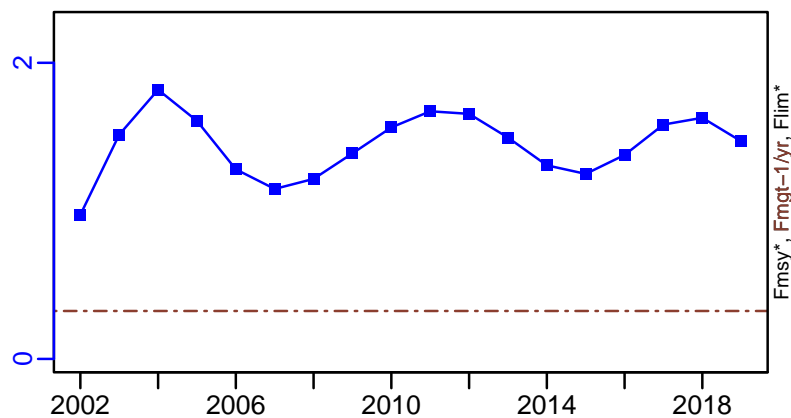
SSB-MT (2002-2019-MEDIMP2021-2)



TN \*



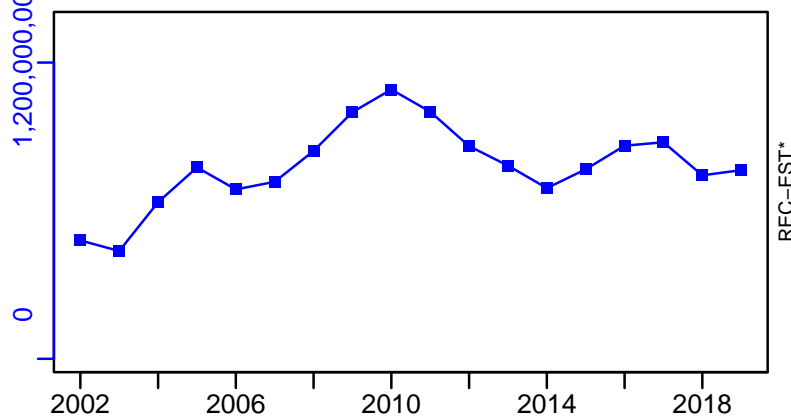
F-1/yr (2002-2019-MEDIMP2021-2)



ER\*



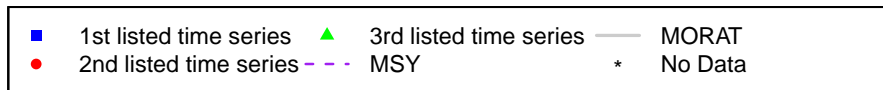
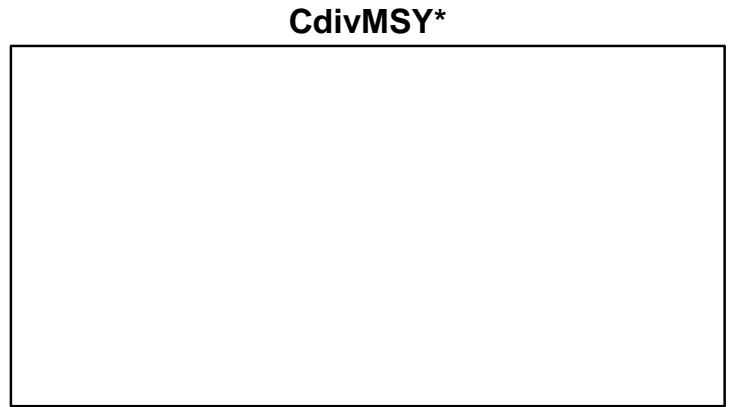
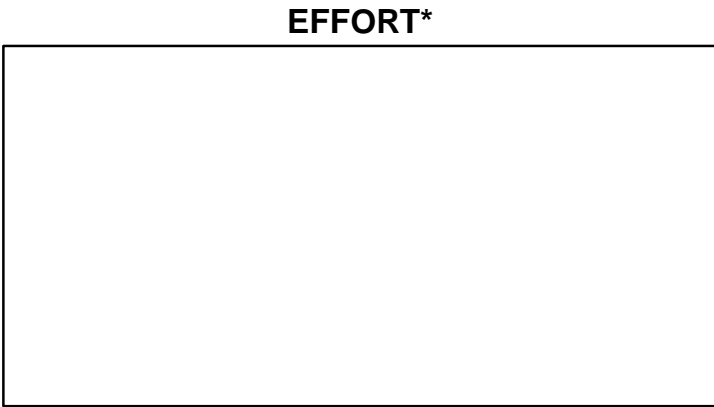
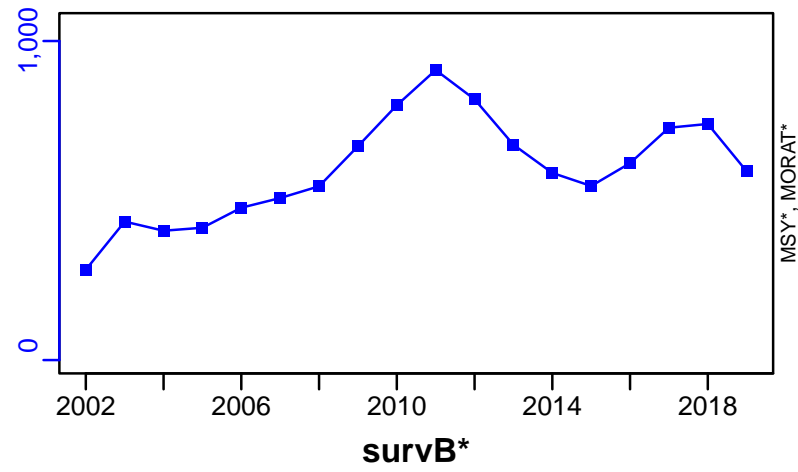
R-E00 (2002-2019-MEDIMP2021-2)



# Red shrimp Geographical Sub-Areas 6-7 [RDSHRMPMEDGSA6-7]

TC-MT, TL\*, RecC\* (2002-2019-MEDIMP2021-2)

TAC\*, Cpair\*, Cadv\*



## Red shrimp Geographical Sub-Areas 9-11 [RDSHRMPMEDGSA9-11]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Aristeus antennatus   |
| <b>Current Assess ID</b>    | STECF-RDSHRMPMEDGSA9-11-2006-2019-MEDIMP2021-2                                |
| <b>Area</b>                 | Geographical Sub-Areas 9-11   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2019      | 0.328 |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |            |     |     |
|-------------|------------------|-----------|------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value | Sex | Age |
| TB          | -                | -         | -          | -   | -   |
| SSB         | SSB-MT           | 2019      | 232        | -   | -   |
| TN          | -                | -         | -          | -   | -   |
| R           | R-E00            | 2019      | 43,108,168 | -   | -   |
| F           | F-1/yr           | 2019      | 1.778      | -   | -   |
| ER          | -                | -         | -          | -   | -   |
| TC          | TC-MT            | 2019      | 366        |     |     |
| TL          | -                | -         | -          |     |     |
| TB/TBmsy    | -                | -         | -          |     |     |
| SSB/SSBmsy  | -                | -         | -          |     |     |
| F/Fmsy      | -                | -         | -          |     |     |
| ER/ERmsy    | -                | -         | -          |     |     |
| TB/TBmgt    | -                | -         | -          |     |     |
| SSB/SSBmgt  | -                | -         | -          |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2019      | 5.418      |     |     |
| ER/ERmgt    | -                | -         | -          |     |     |

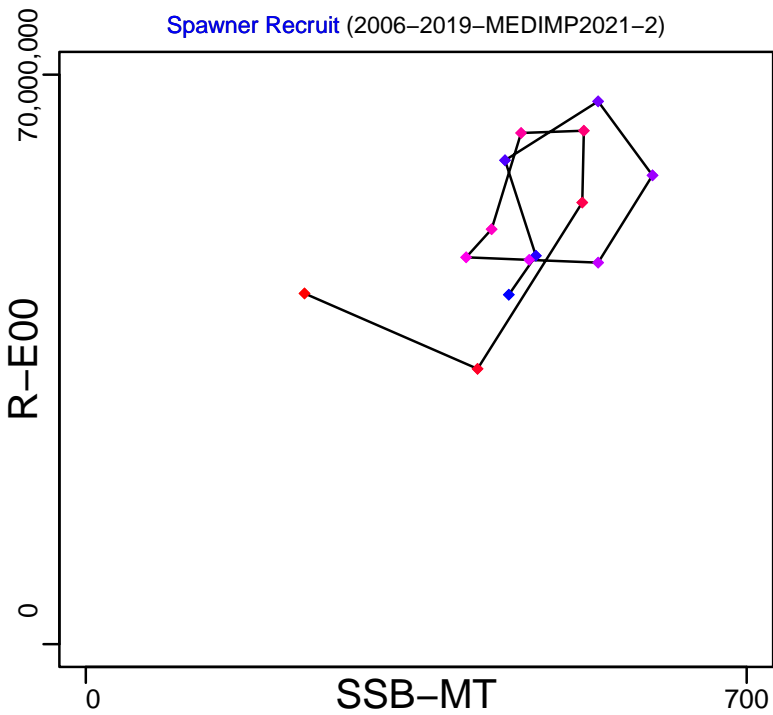
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit** (2006–2019–MEDIMP2021–2)



**Production\***



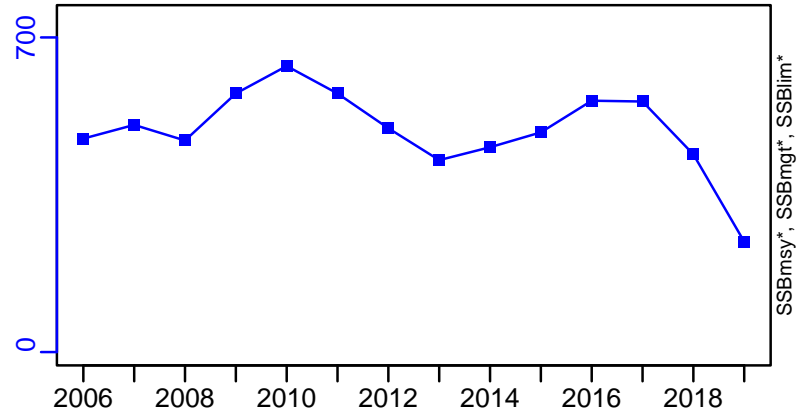
◆ Start Year ◆ End Year \* No Data

Red shrimp Geographical Sub-Areas 9–11 [RDSHRMPMEDGSA9–11]

TB\*



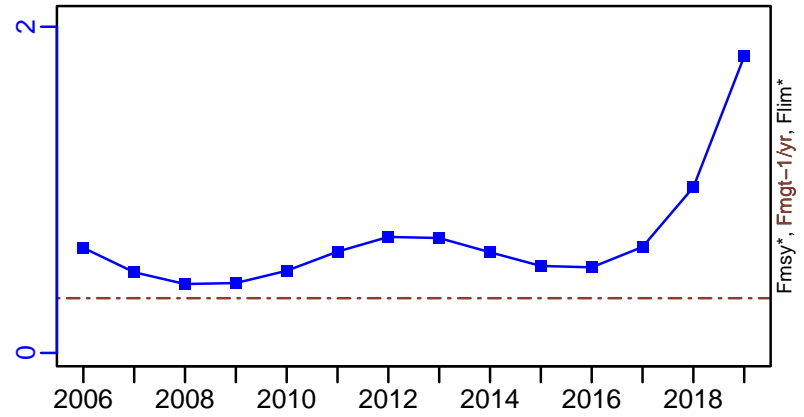
SSB-MT (2006–2019–MEDIMP2021–2)



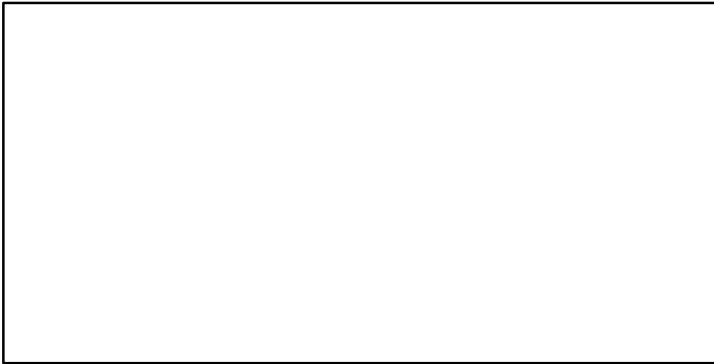
TN \*



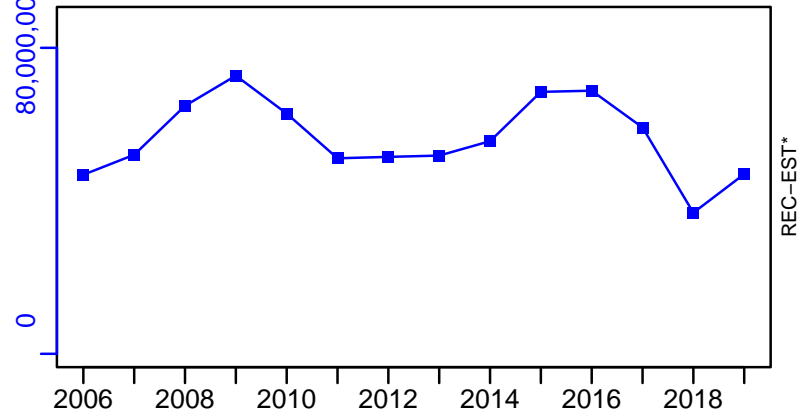
F-1/yr (2006–2019–MEDIMP2021–2)



ER\*



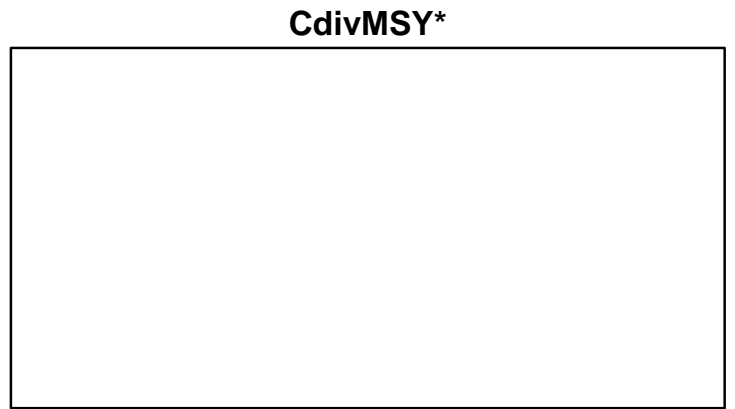
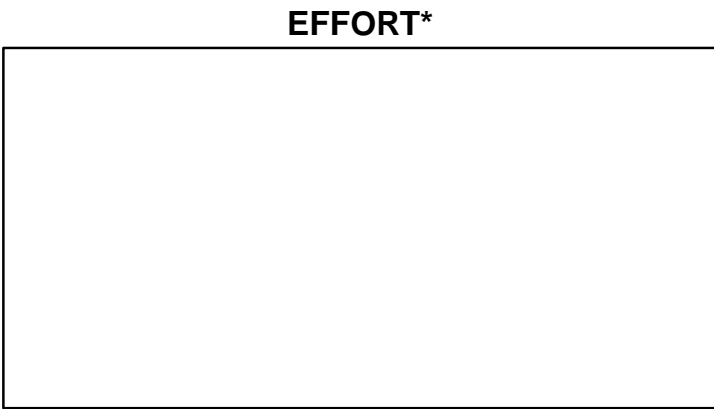
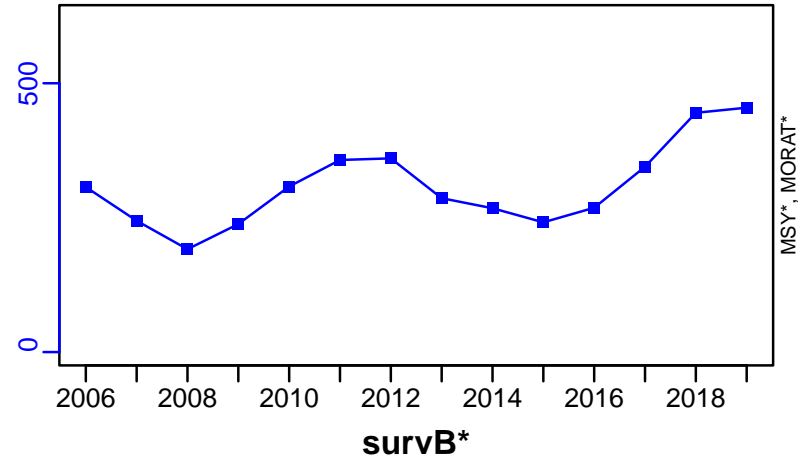
R-E00 (2006–2019–MEDIMP2021–2)



# Red shrimp Geographical Sub-Areas 9–11 [RDSHRMPMEDGSA9–11]

TC–MT, TL\*, RecC\* (2006–2019–MEDIMP2021–2)

TAC\*, Cpair\*, Cadv\*



## Red mullet Northern Alboran Sea [RMULLMEDGSA1]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA1-2004-2019-MEDIMP2021-2                                     |
| <b>Area</b>                 | Northern Alboran Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2013, 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.702 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 161        | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 3,890,013  | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 1.028      | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 115        |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 1.463      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



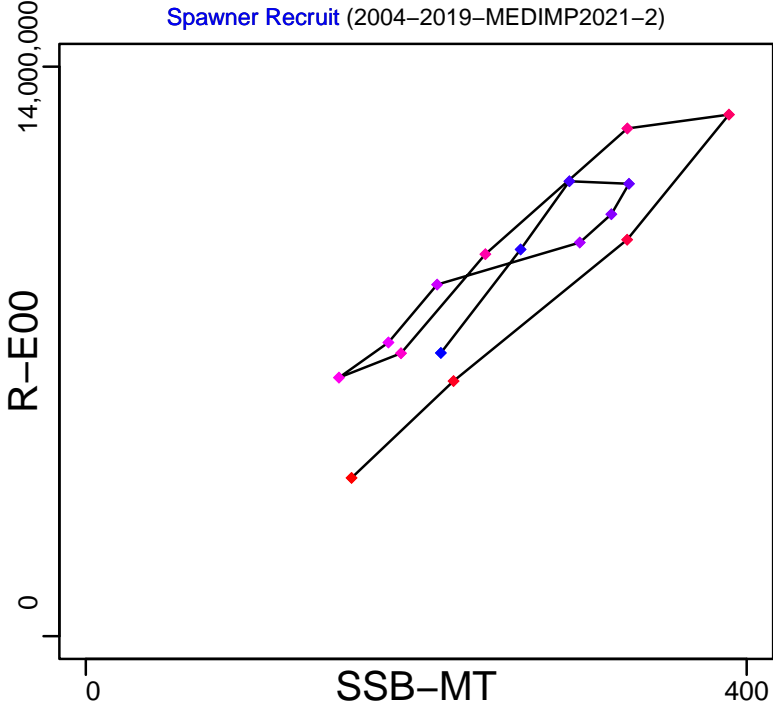
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2004–2019–MEDIMP2021–2)



Production\*



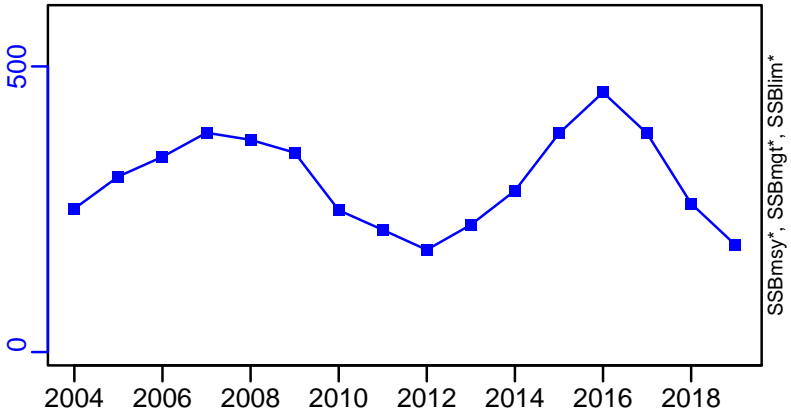
◆ Start Year ◆ End Year \* No Data

Red mullet Northern Alboran Sea [RMULLMEDGSA1]

TB\*



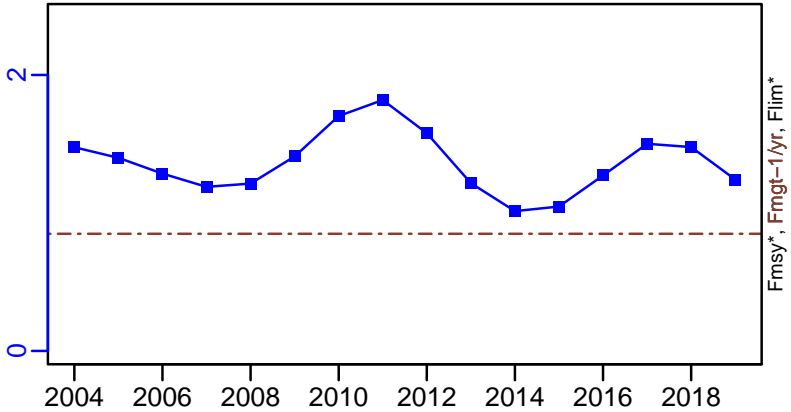
SSB-MT (2004-2019-MEDIMP2021-2)



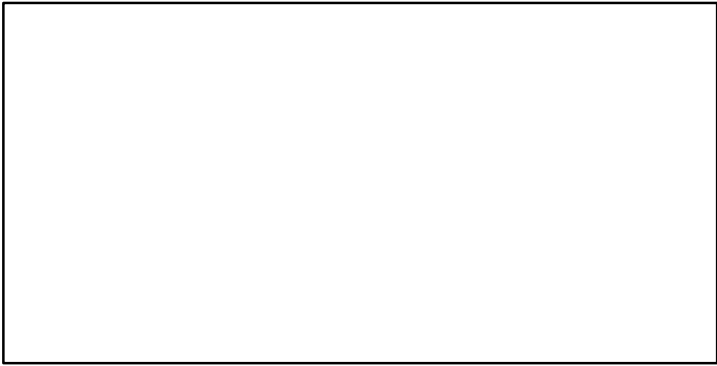
TN \*



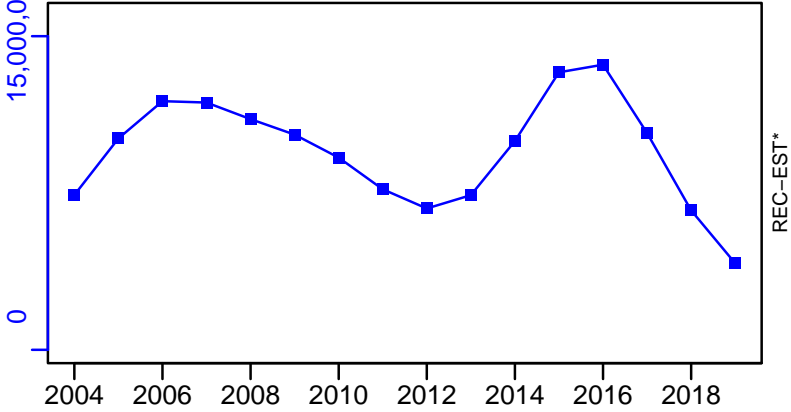
F-1/yr (2004-2019-MEDIMP2021-2)



ER\*

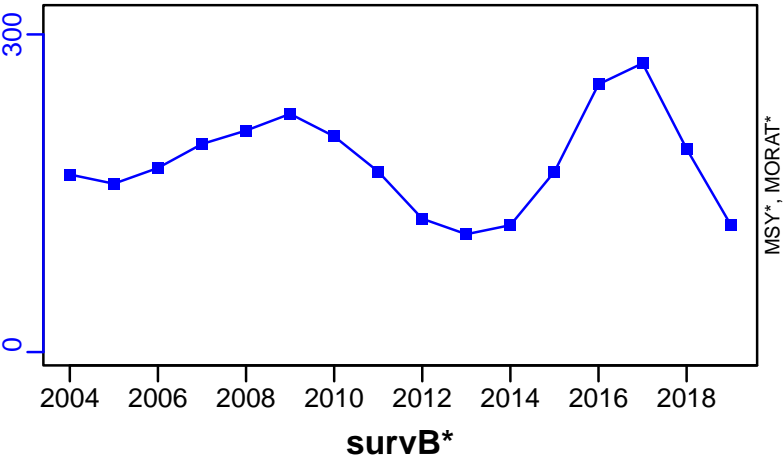


R-E00 (2004-2019-MEDIMP2021-2)



Red mullet Northern Alboran Sea [RMULLMEDGSA1]

TC-MT, TL\*, RecC\* (2004-2019-MEDIMP2021-2)



TAC\*, Cpair\*, Cadv\*



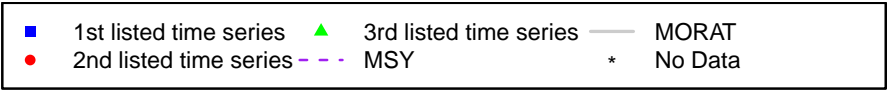
CPUE\*



EFFORT\*



CdivMSY\*



## Red mullet South Tyrrhenian Sea [RMULLMEDGSA10]

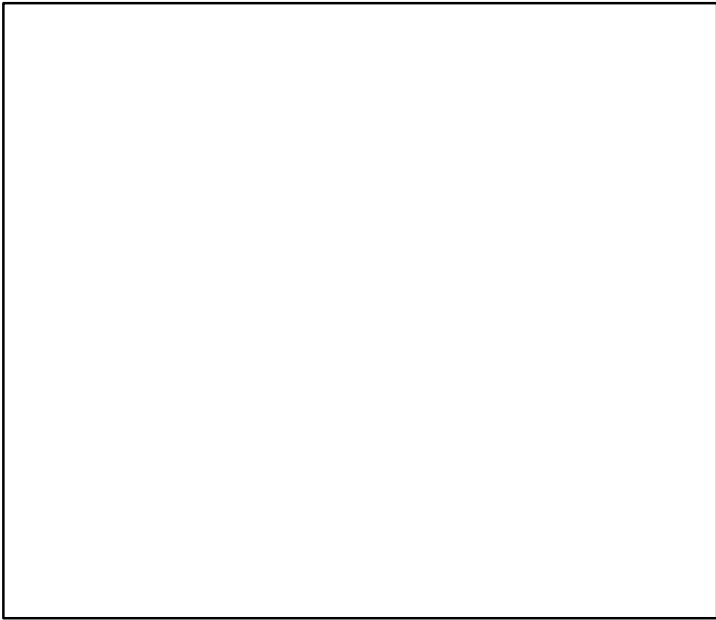
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA10-2002-2019-MEDIMP2021-2                                    |
| <b>Area</b>                 | South Tyrrhenian Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019, 2010  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.393 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |             |     |     |
|-------------------|------------------|-----------|-------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value  | Sex | Age |
| <b>TB</b>         | -                | -         | -           | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 661         | -   | -   |
| <b>TN</b>         | -                | -         | -           | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 124,069,753 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.475       | -   | -   |
| <b>ER</b>         | -                | -         | -           | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 334         |     |     |
| <b>TL</b>         | -                | -         | -           |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -           |     |     |
| <b>F/Fmsy</b>     | -                | -         | -           |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -           |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -           |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 1.207       |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -           |     |     |

Red mullet South Tyrrhenian Sea [RMULLMEDGSA10]

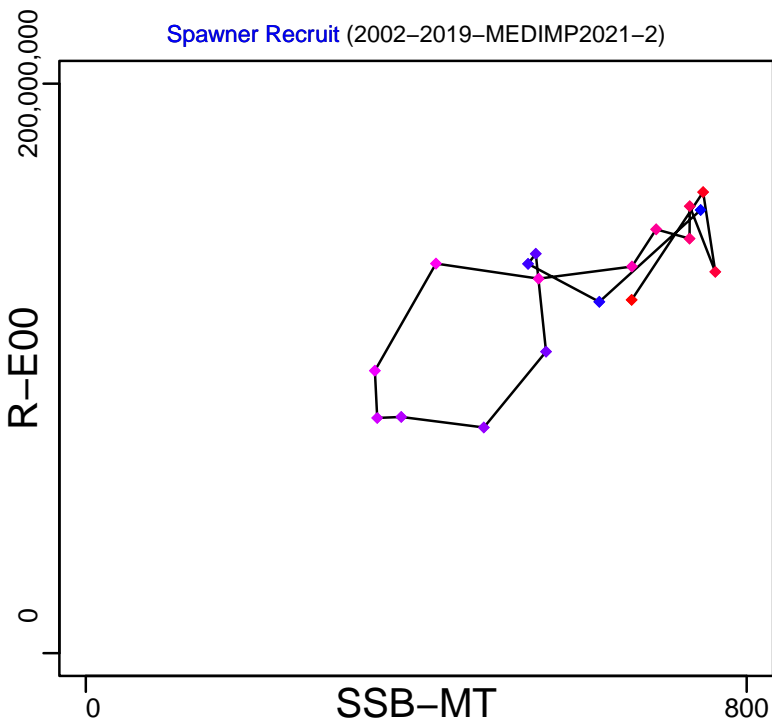
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2002–2019–MEDIMP2021–2)



Production\*



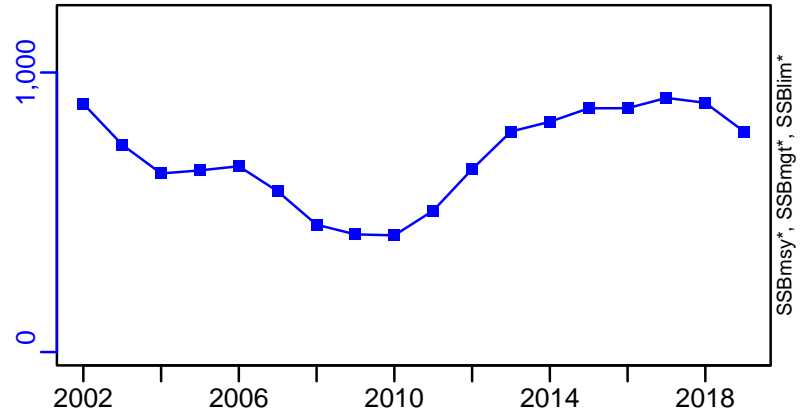
◆ Start Year ◆ End Year \* No Data

# Red mullet South Tyrrhenian Sea [RMULLMEDGSA10]

TB\*



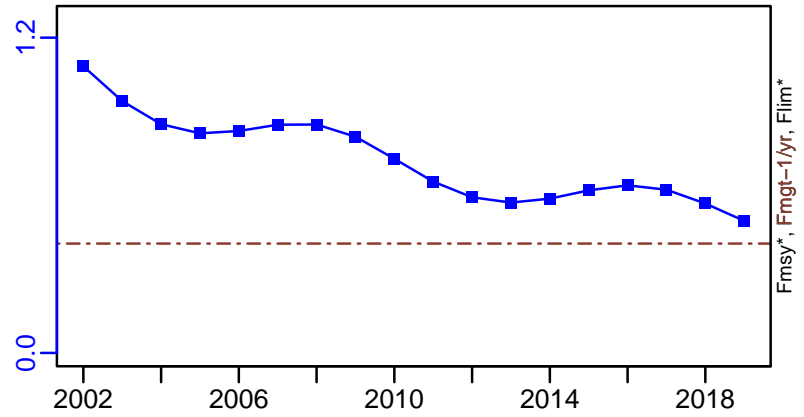
SSB-MT (2002-2019-MEDIMP2021-2)



TN \*



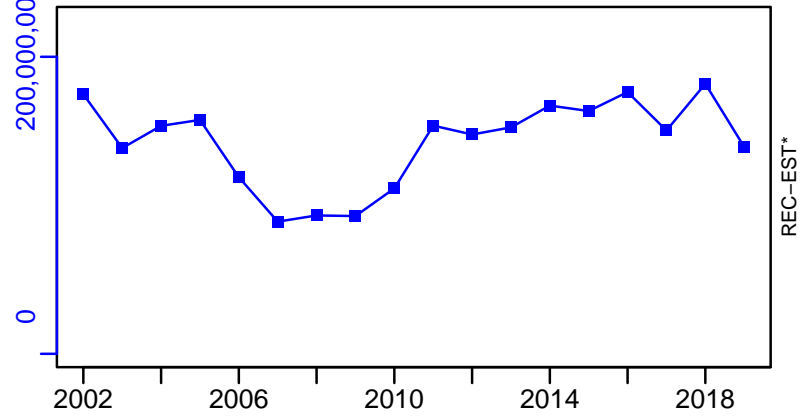
F-1/yr (2002-2019-MEDIMP2021-2)



ER\*

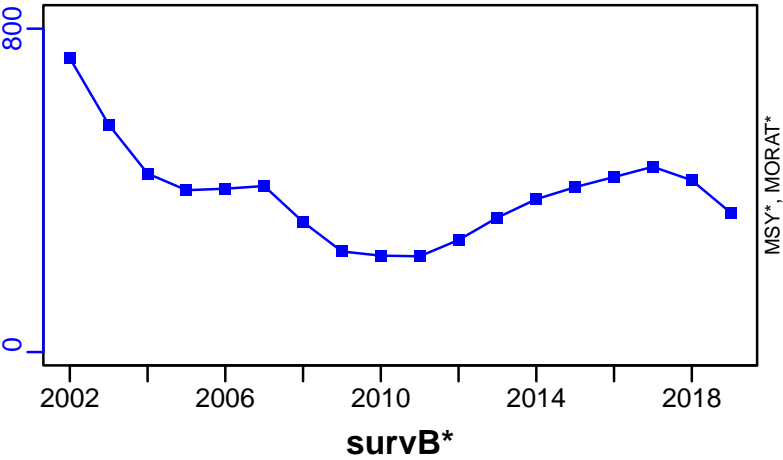


R-E00 (2002-2019-MEDIMP2021-2)



Red mullet South Tyrrhenian Sea [RMULLMEDGSA10]

TC-MT, TL\*, RecC\* (2002-2019-MEDIMP2021-2)



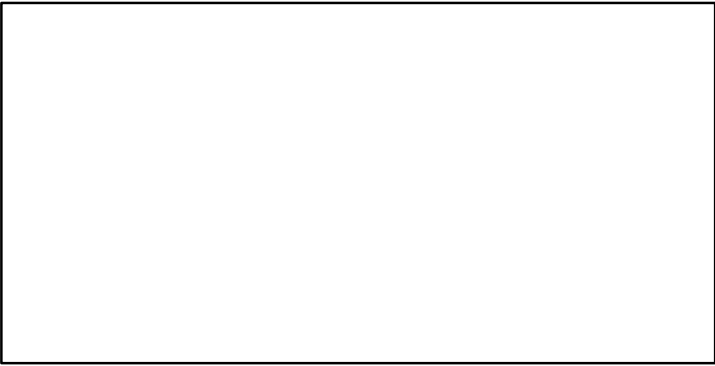
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Red mullet Sardinia [RMULLMEDGSA11]

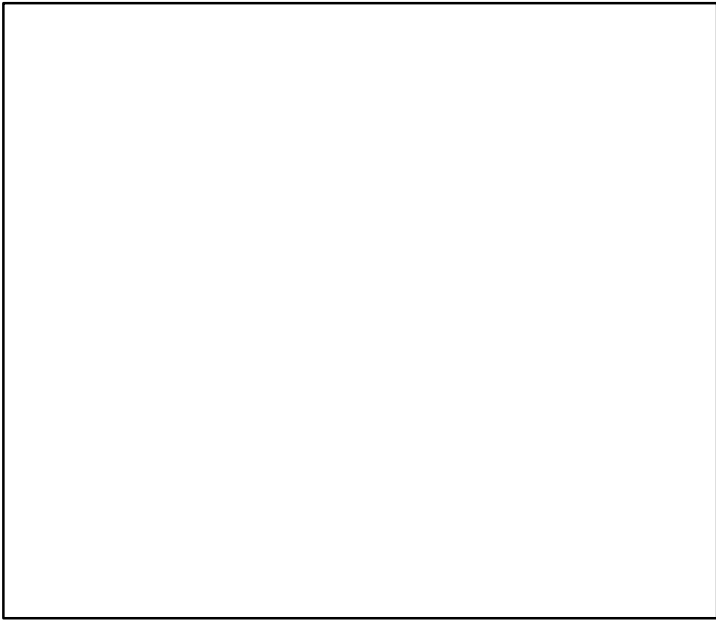
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA11-2005-2012-OSIO  |
| <b>Area</b>                 | Sardinia  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2012      | 0.11  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |            |     |     |
|-------------|------------------|-----------|------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value | Sex | Age |
| TB          | -                | -         | -          | -   | -   |
| SSB         | SSB-MT           | 2012      | 94         | -   | 1+  |
| TN          | -                | -         | -          | -   | -   |
| R           | R-E00            | 2012      | 26,600,000 | -   | -   |
| F           | F-1/yr           | 2012      | 1.05       | -   | -   |
| ER          | -                | -         | -          | -   | -   |
| TC          | TC-MT            | 2012      | 136        |     |     |
| TL          | -                | -         | -          |     |     |
| TB/TBmsy    | -                | -         | -          |     |     |
| SSB/SSBmsy  | -                | -         | -          |     |     |
| F/Fmsy      | -                | -         | -          |     |     |
| ER/ERmsy    | -                | -         | -          |     |     |
| TB/TBmgt    | -                | -         | -          |     |     |
| SSB/SSBmgt  | -                | -         | -          |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2012      | 9.545      |     |     |
| ER/ERmgt    | -                | -         | -          |     |     |



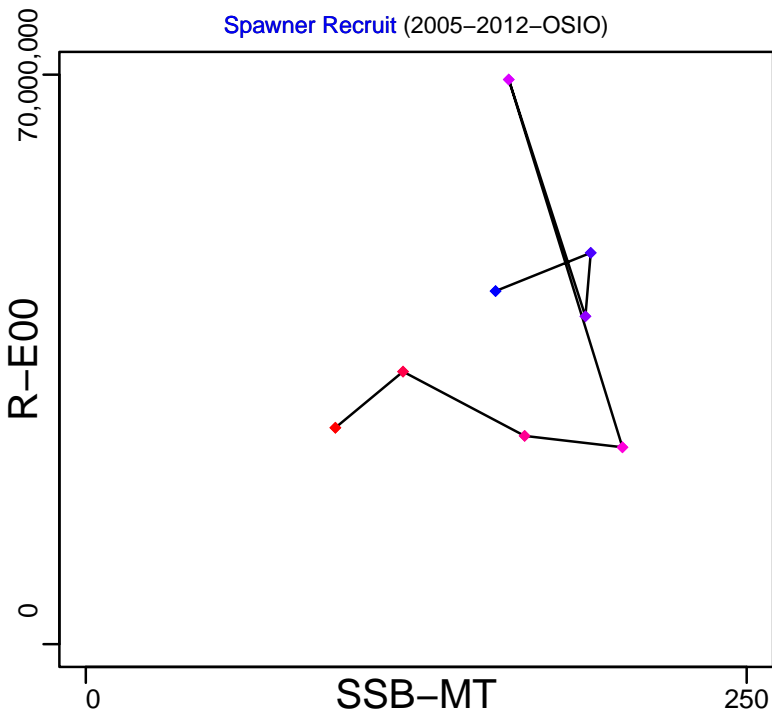
**Kobe MSY\***



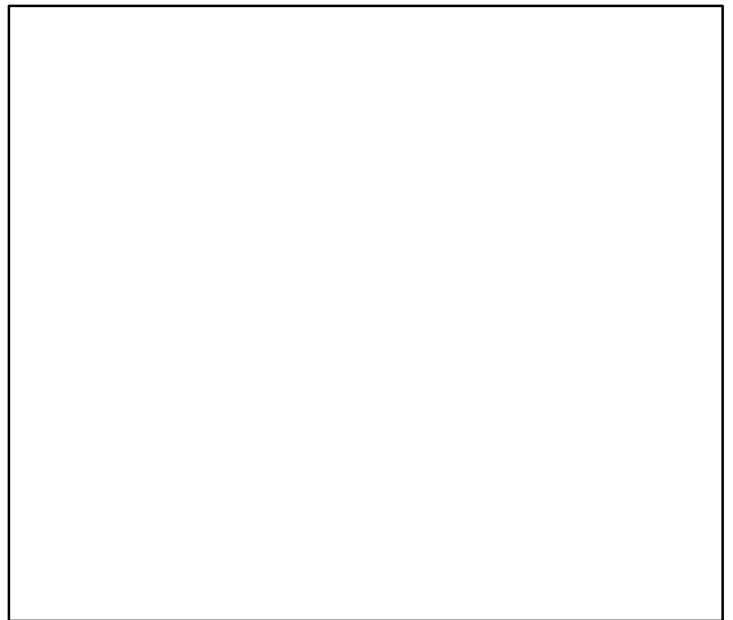
**Kobe MGT\***



**Spawner Recruit (2005–2012–OSIO)**



**Production\***



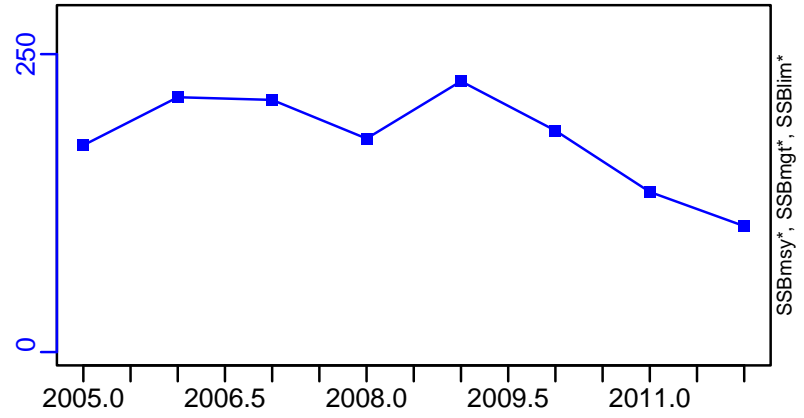
◆ Start Year ◆ End Year \* No Data

# Red mullet Sardinia [RMULLMEDGSA11]

TB\*



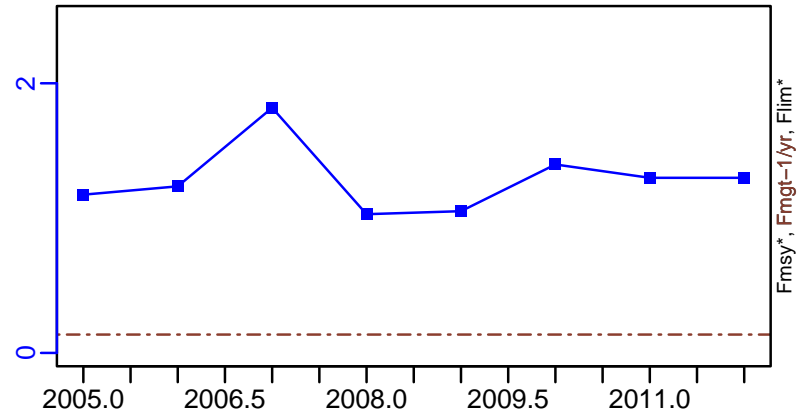
SSB-MT (2005–2012–OSIO)



TN \*



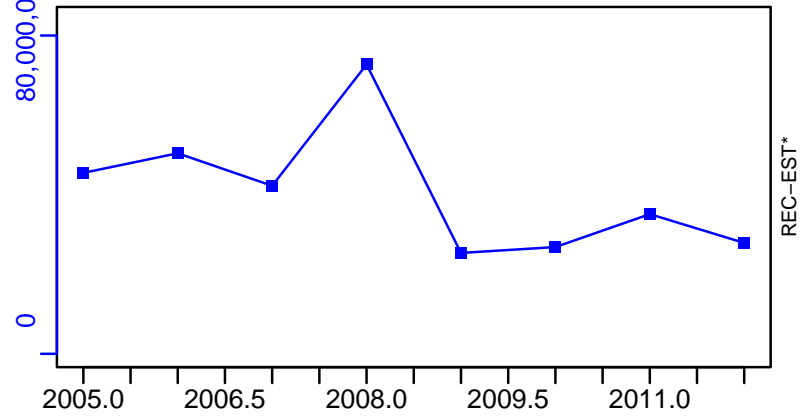
F-1/yr (2005–2012–OSIO)



ER\*



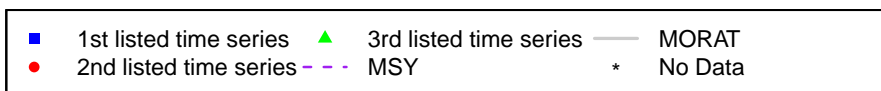
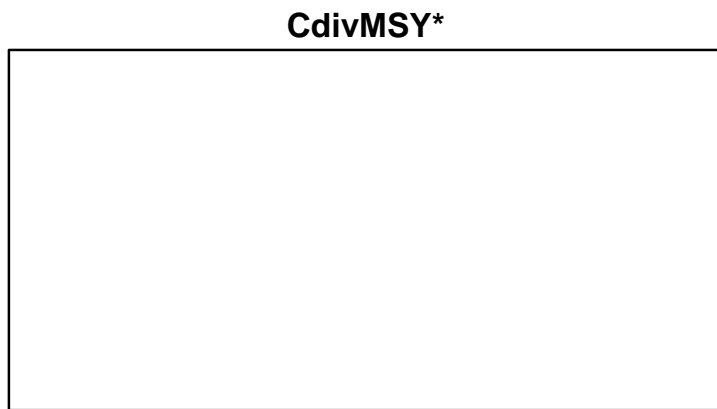
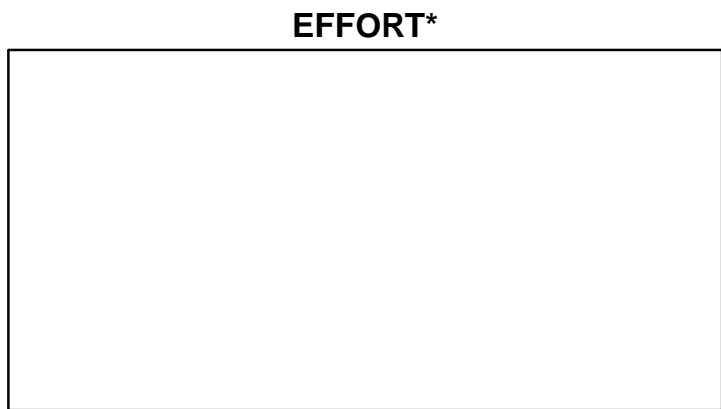
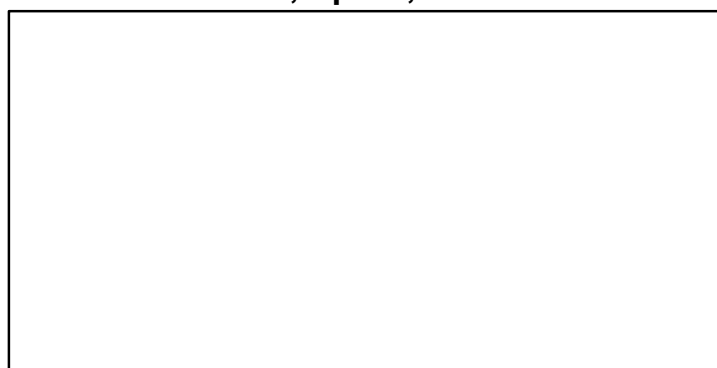
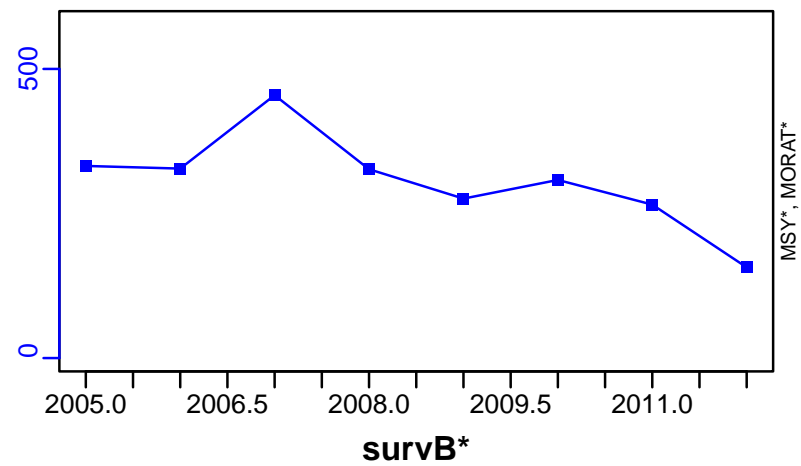
R-E00 (2005–2012–OSIO)



# Red mullet Sardinia [RMULLMEDGSA11]

TC-MT, TL\*, RecC\* (2005–2012–OSIO)

TAC\*, Cpair\*, Cadv\*



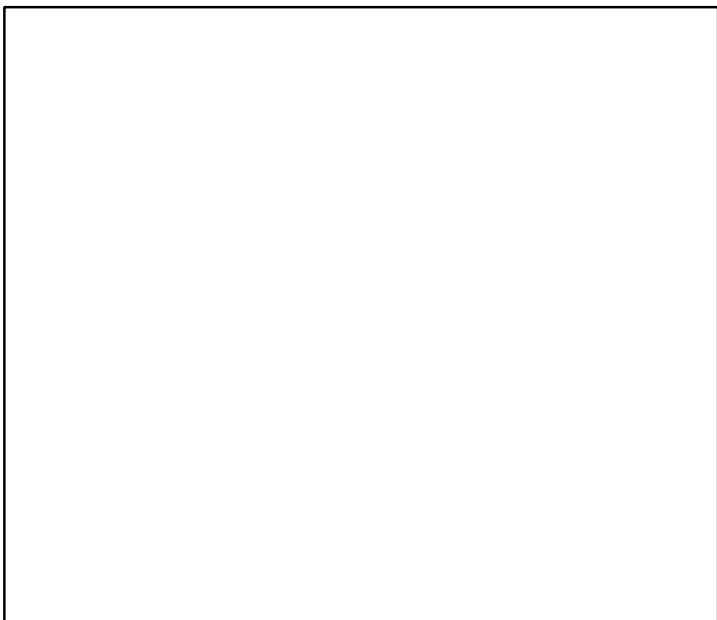
## Red mullet Malta Island and South of Sicily (GSA 15, 16) [RMULLMEDGSA15-16]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA15-16-2005-2011-OSIO   |
| <b>Area</b>                 | Malta Island and South of Sicily (GSA 15, 16)                                 |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011  |

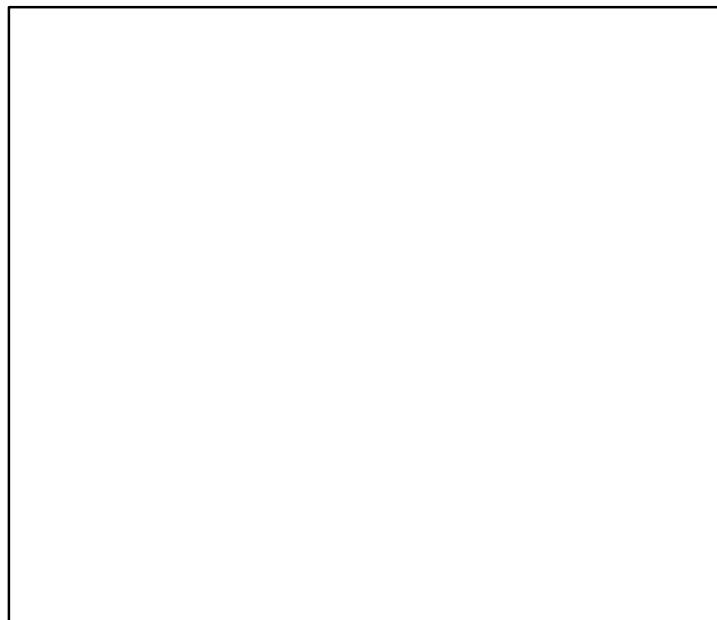
| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2011      | 0.45  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |      |
|-------------------|------------------|-----------|------------|-----|------|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age  |
| <b>TB</b>         | -                | -         | -          | -   | -    |
| <b>SSB</b>        | SSB-MT           | 2011      | 1150       | -   | 1.5+ |
| <b>TN</b>         | -                | -         | -          | -   | -    |
| <b>R</b>          | R-E00            | 2011      | 68,900,000 | -   | -    |
| <b>F</b>          | F-1/yr           | 2011      | 1.3        | -   | -    |
| <b>ER</b>         | -                | -         | -          | -   | -    |
| <b>TC</b>         | TC-MT            | 2011      | 609        |     |      |
| <b>TL</b>         | -                | -         | -          |     |      |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |      |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |      |
| <b>F/Fmsy</b>     | -                | -         | -          |     |      |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |      |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |      |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |      |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2011      | 2.889      |     |      |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |      |

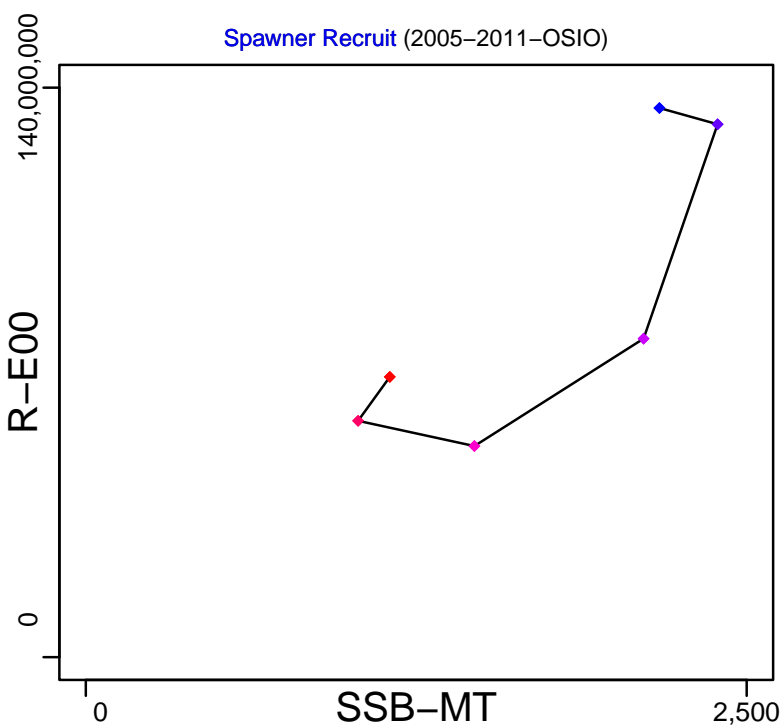
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit (2005-2011-OSIO)**



**Production\***

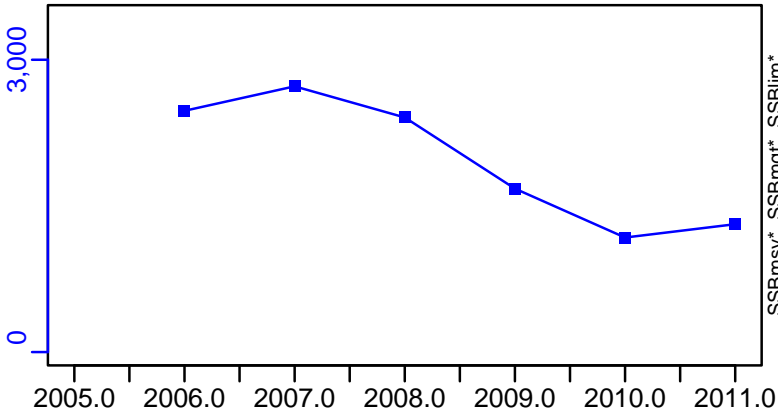


◆ Start Year ◆ End Year \* No Data

TB\*



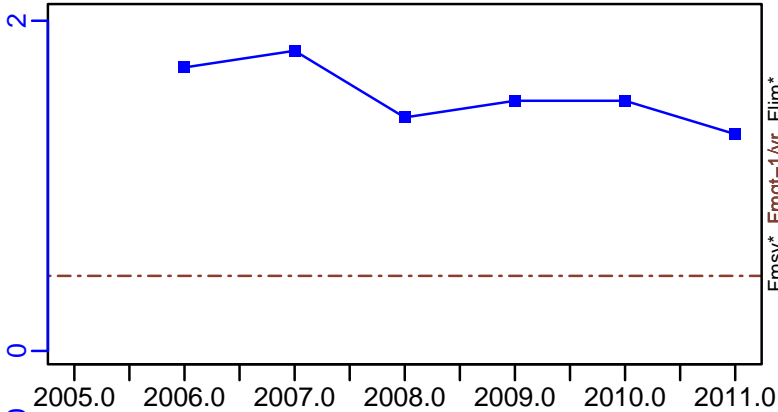
SSB-MT (2005-2011-OSIO)



TN \*



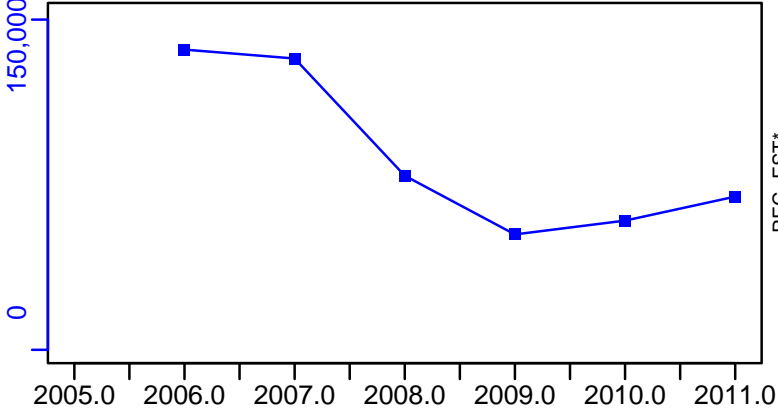
F-1/yr (2005-2011-OSIO)



ER\*

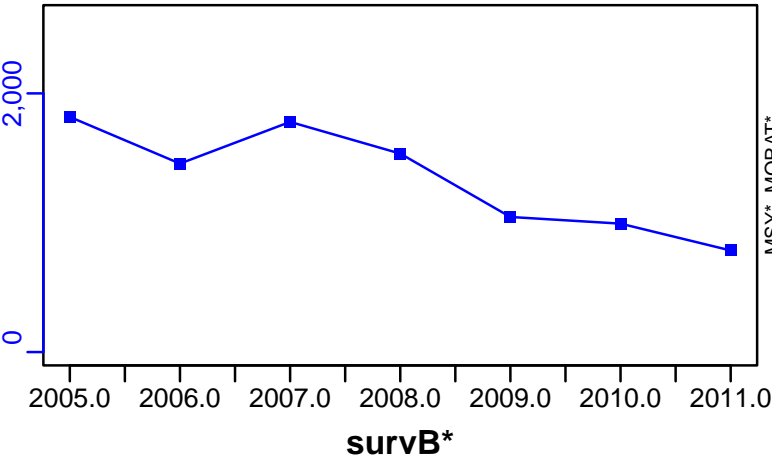


R-E00 (2005-2011-OSIO)



Red mullet Malta Island and South of Sicily (GSA 15, 16) [RMULLMEDGSA15-16]

TC-MT, TL\*, RecC\* (2005-2011-OSIO)



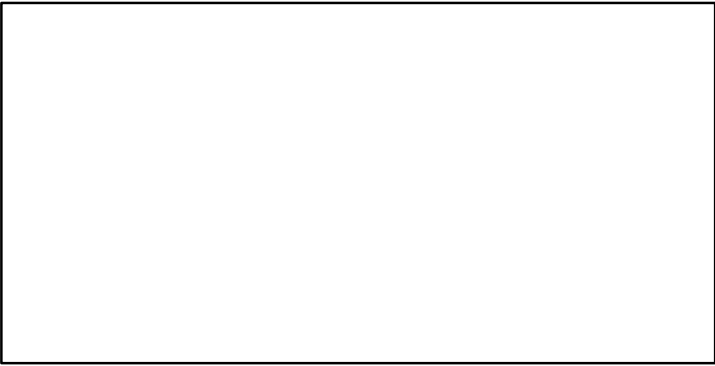
TAC\*, Cpair\*, Cadv\*



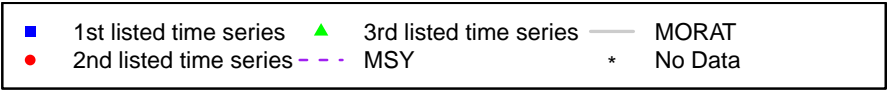
CPUE\*



EFFORT\*



CdivMSY\*



## Red mullet Adriatic Sea (GSA 17,18) [RMULLMEDGSA17-18]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA17-18-2006-2019-MEDIMP2021-2                                 |
| <b>Area</b>                 | Adriatic Sea (GSA 17,18)  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019, 2014  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.34  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |             |     |     |
|-------------------|------------------|-----------|-------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value  | Sex | Age |
| <b>TB</b>         | -                | -         | -           | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 7587        | -   | -   |
| <b>TN</b>         | -                | -         | -           | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 955,114,012 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.687       | -   | -   |
| <b>ER</b>         | -                | -         | -           | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 4632        |     |     |
| <b>TL</b>         | -                | -         | -           |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -           |     |     |
| <b>F/Fmsy</b>     | -                | -         | -           |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -           |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -           |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 2.02        |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -           |     |     |



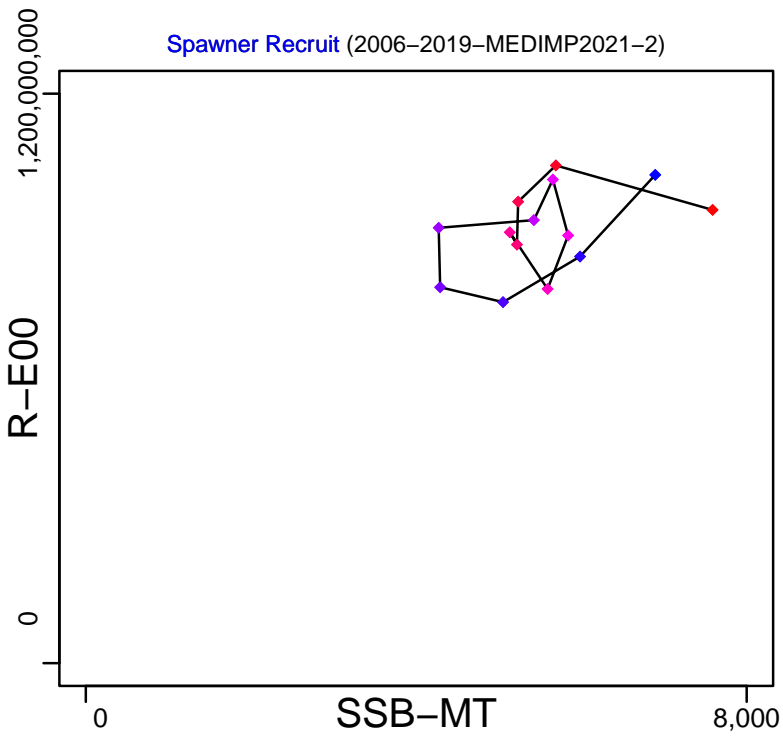
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit** (2006–2019–MEDIMP2021–2)



**Production\***



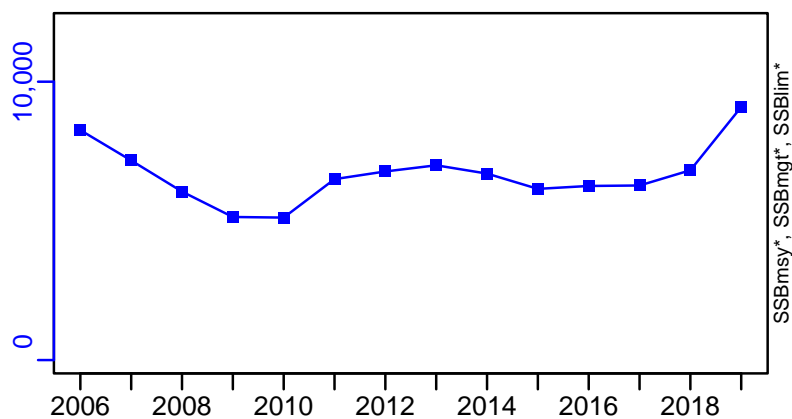
◆ Start Year ◆ End Year \* No Data

# Red mullet Adriatic Sea (GSA 17,18) [RMULLMEDGSA17-18]

TB\*



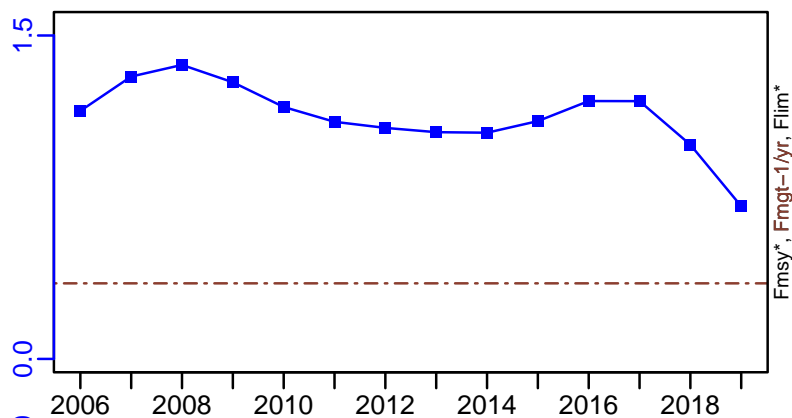
SSB-MT (2006-2019-MEDIMP2021-2)



TN \*



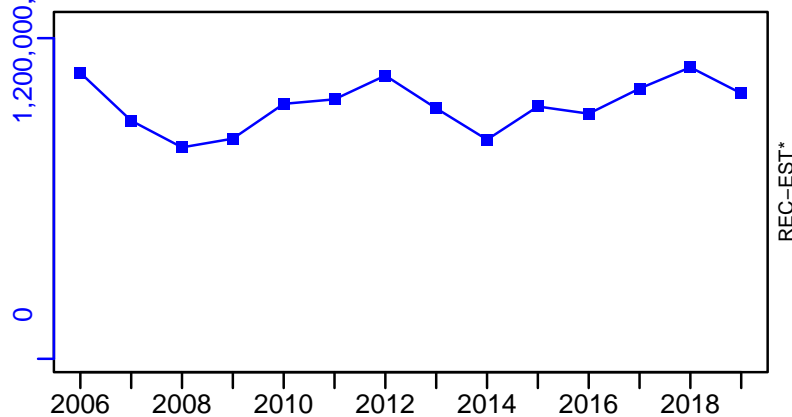
F-1/yr (2006-2019-MEDIMP2021-2)



ER\*



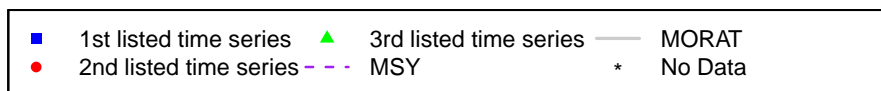
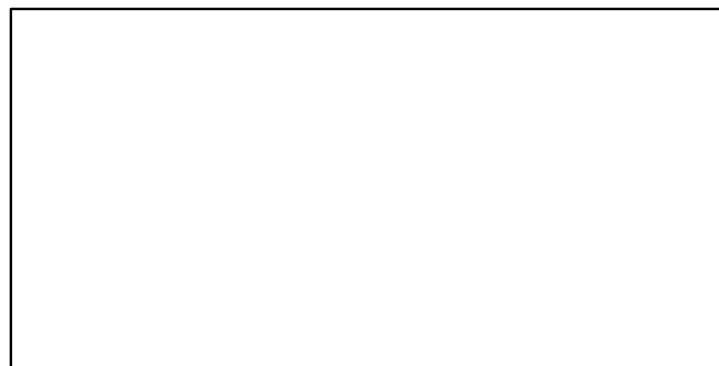
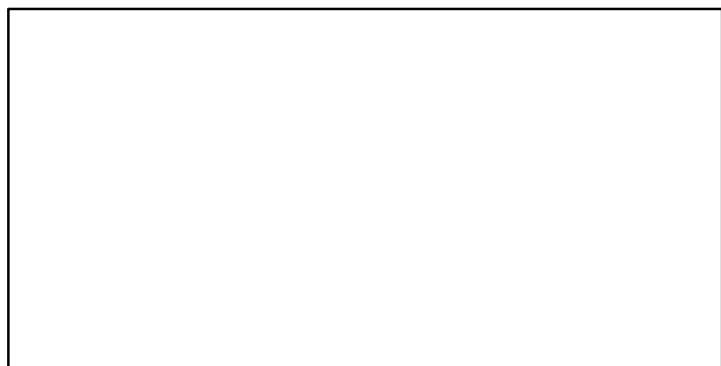
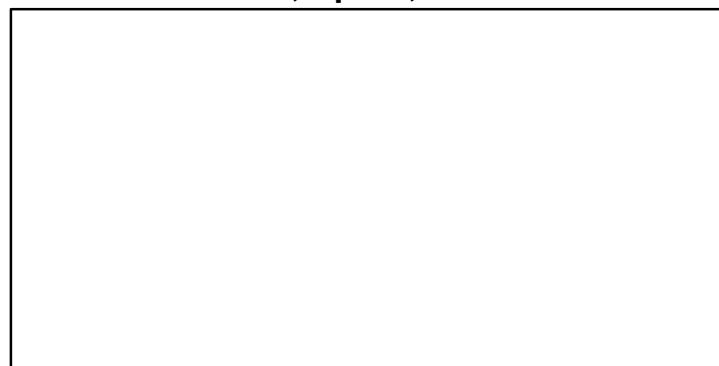
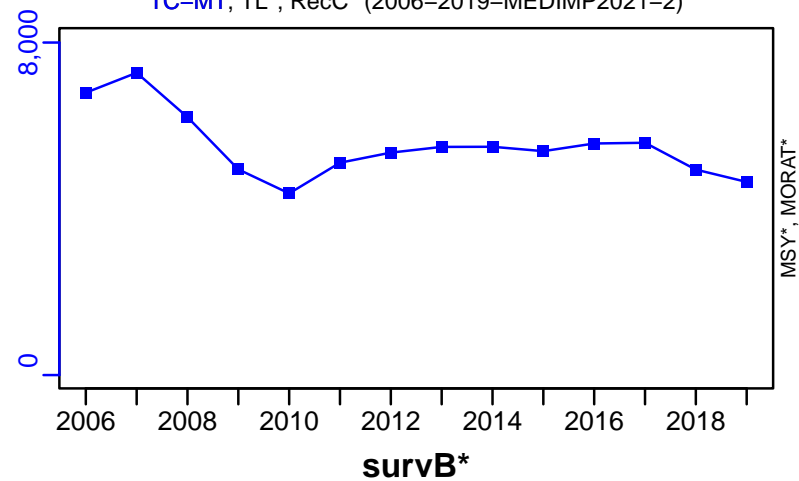
R-E00 (2006-2019-MEDIMP2021-2)



# Red mullet Adriatic Sea (GSA 17,18) [RMULLMEDGSA17-18]

TC-MT, TL\*, RecC\* (2006-2019-MEDIMP2021-2)

TAC\*, Cpair\*, Cadv\*



## Red mullet Western Ionian Sea [RMULLMEDGSA19]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA19-2006-2016-MEDIMP2021-2                                    |
| <b>Area</b>                 | Western Ionian Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2014, 2016  |

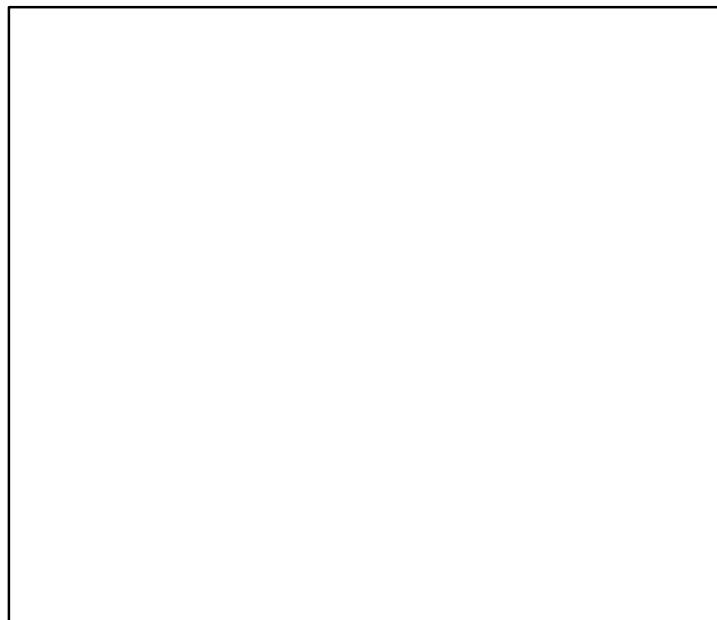
| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2016      | 0.36  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2016      | 641        | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2016      | 27,230,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2016      | 0.56       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 278        |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2016      | 1.556      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

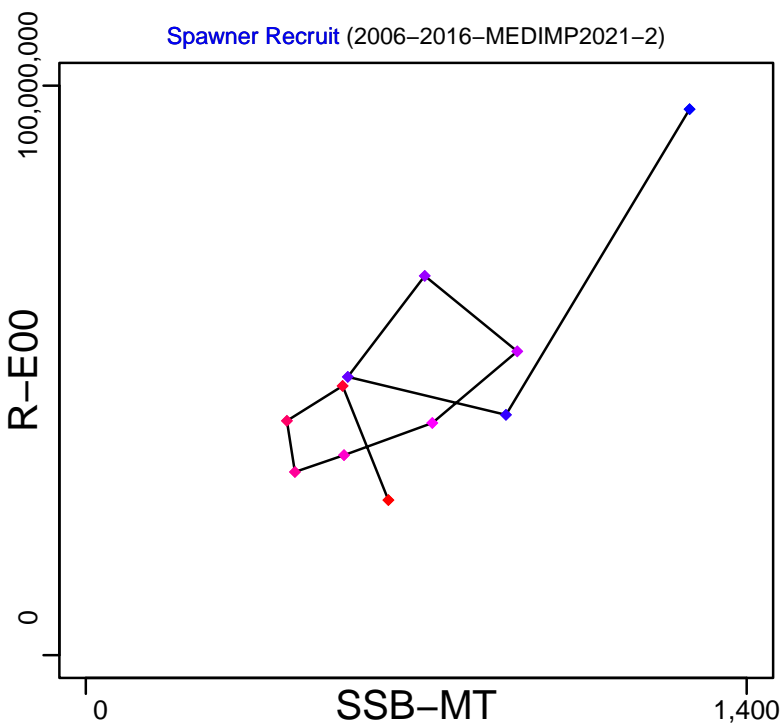
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit** (2006–2016–MEDIMP2021–2)



**Production\***



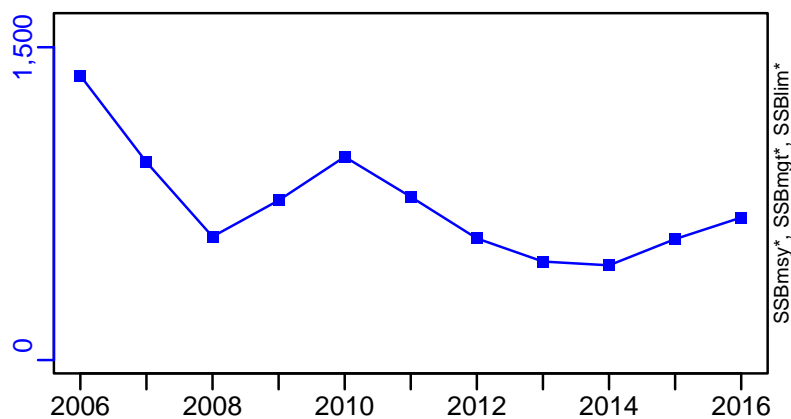
◆ Start Year ◆ End Year \* No Data

# Red mullet Western Ionian Sea [RMULLMEDGSA19]

TB\*



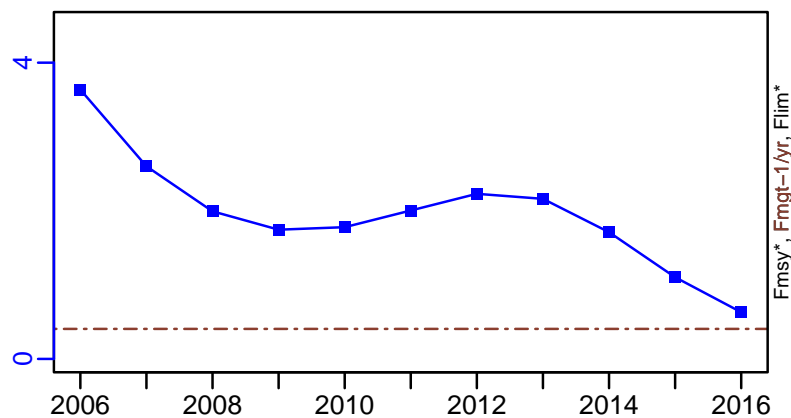
SSB-MT (2006-2016-MEDIMP2021-2)



TN \*



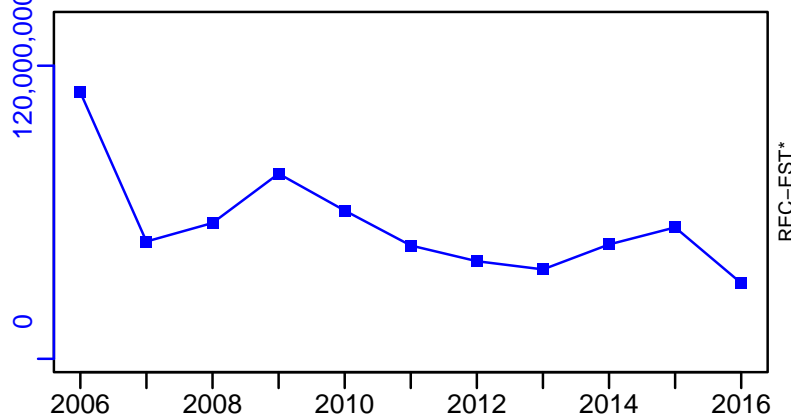
F-1/yr (2006-2016-MEDIMP2021-2)



ER\*

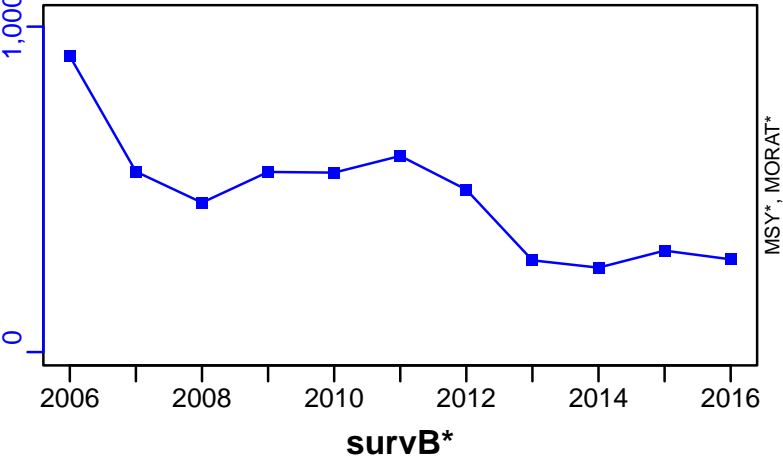


R-E00 (2006-2016-MEDIMP2021-2)



Red mullet Western Ionian Sea [RMULLMEDGSA19]

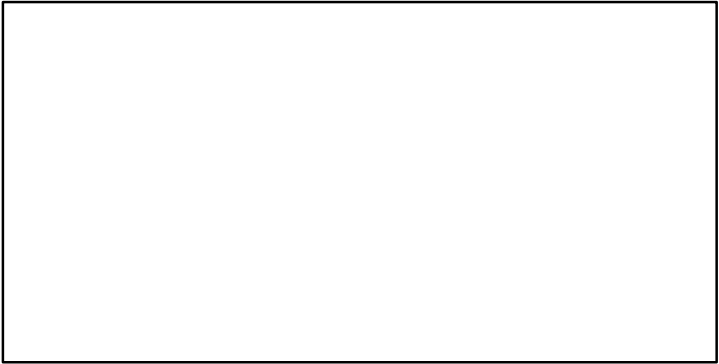
TC-MT, TL\*, RecC\* (2006–2016–MEDIMP2021–2)



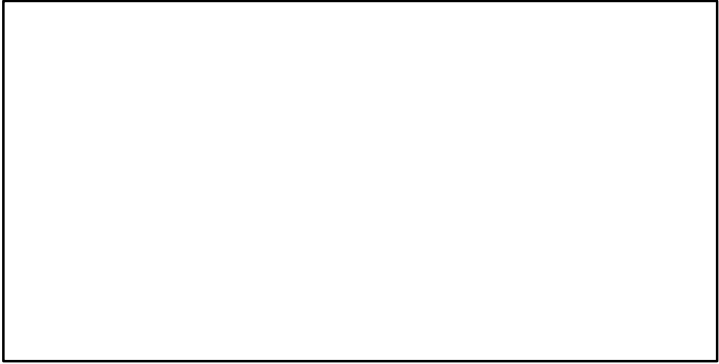
TAC\*, Cpair\*, Cadv\*



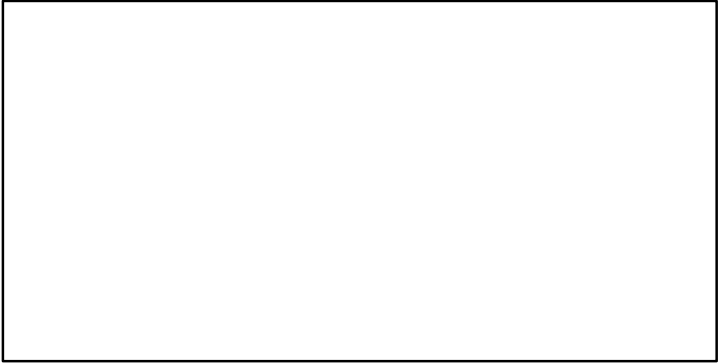
CPUE\*



EFFORT\*



CdivMSY\*



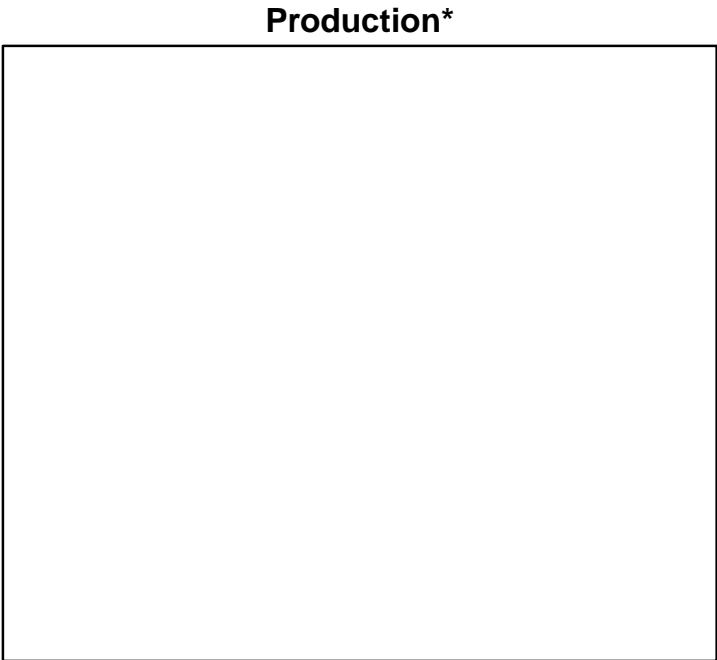
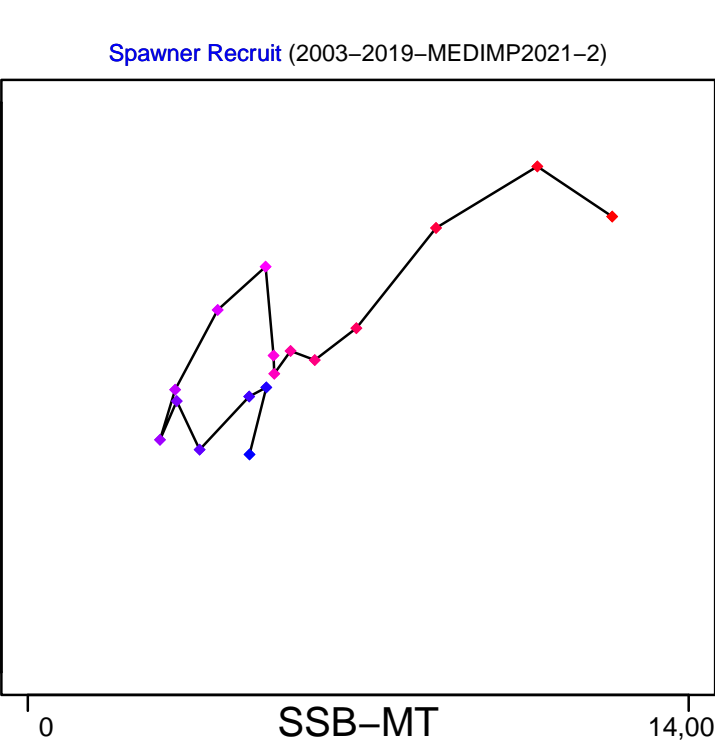
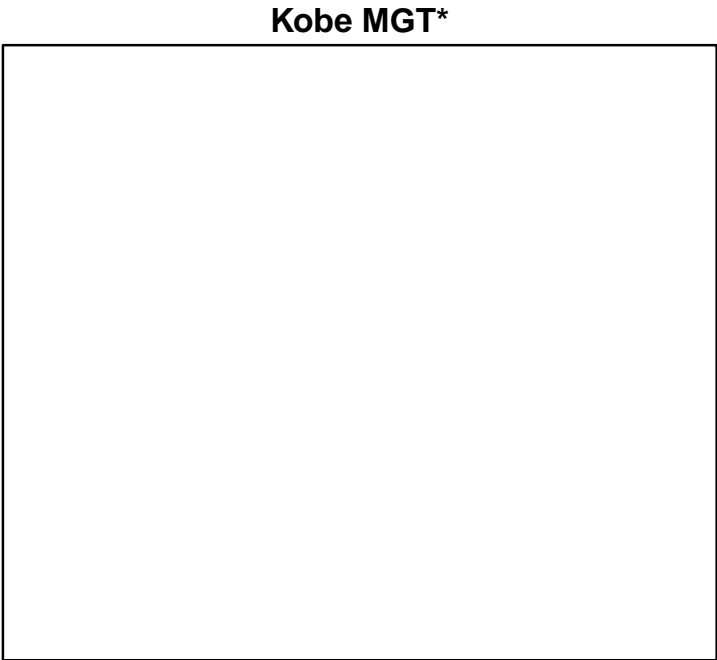
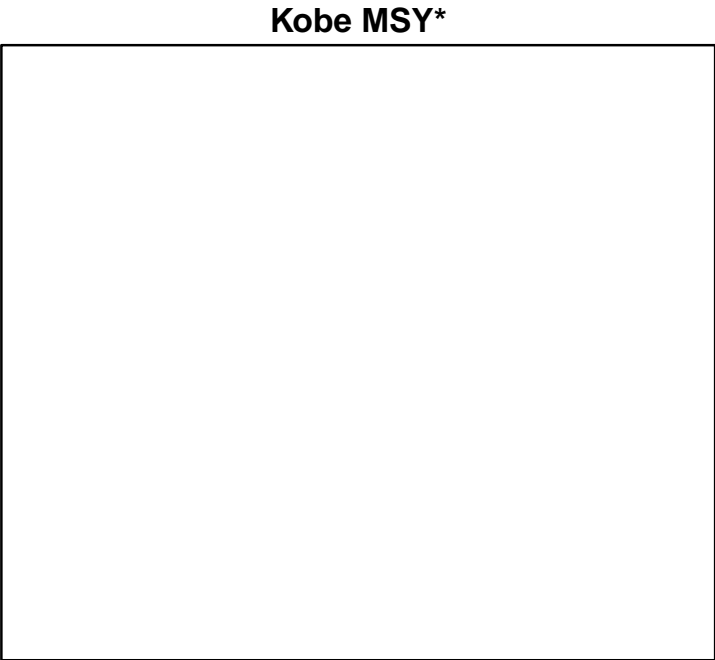
## Red mullet Aegean Sea [RMULLMEDGSA22]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA22-2003-2019-MEDIMP2021-2                                    |
| <b>Area</b>                 | Aegean Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.501 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |                    |     |     |
|-------------------|------------------|-----------|--------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value         | Sex | Age |
| <b>TB</b>         | -                | -         | -                  | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 12,379             | -   | -   |
| <b>TN</b>         | -                | -         | -                  | -   | -   |
| <b>R</b>          | R-E00            | 2019      | $2 \times 10^{11}$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.15               | -   | -   |
| <b>ER</b>         | -                | -         | -                  | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 1804               |     |     |
| <b>TL</b>         | -                | -         | -                  |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                  |     |     |
| <b>F/Fmsy</b>     | -                | -         | -                  |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                  |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -                  |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                  |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 0.299              |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                  |     |     |

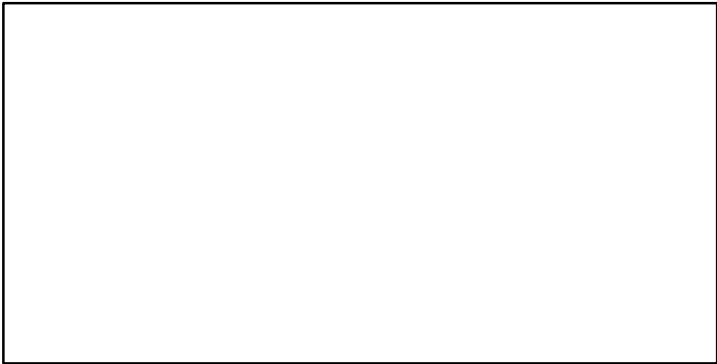




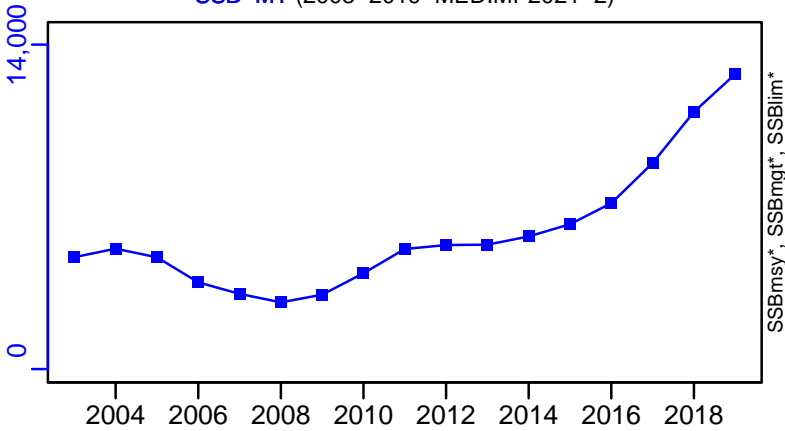
◆ Start Year ◆ End Year \* No Data

Red mullet Aegean Sea [RMULLMEDGSA22]

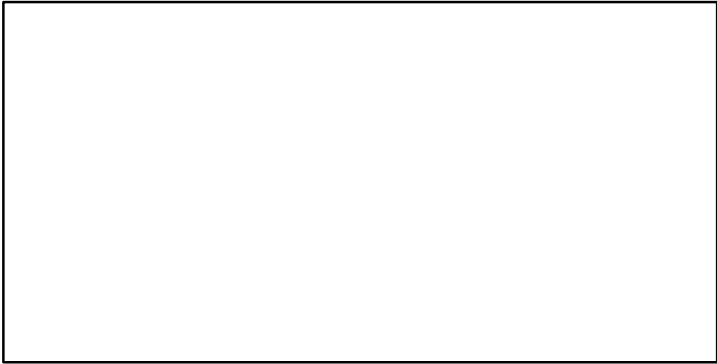
TB\*



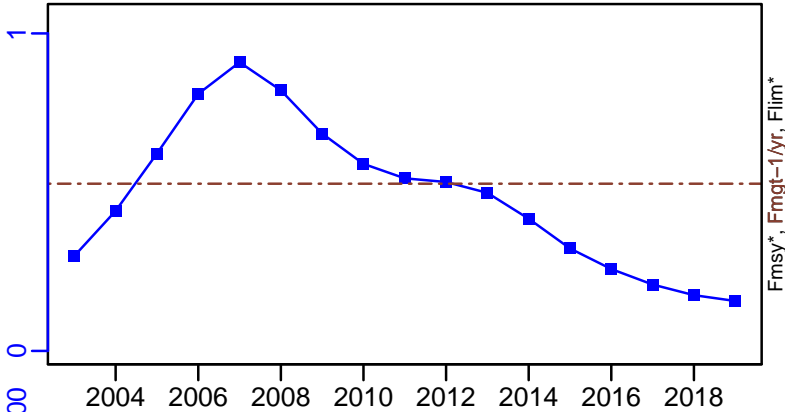
SSB-MT (2003-2019-MEDIMP2021-2)



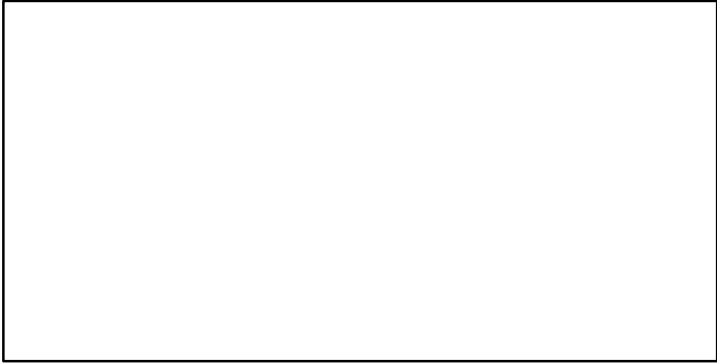
TN \*



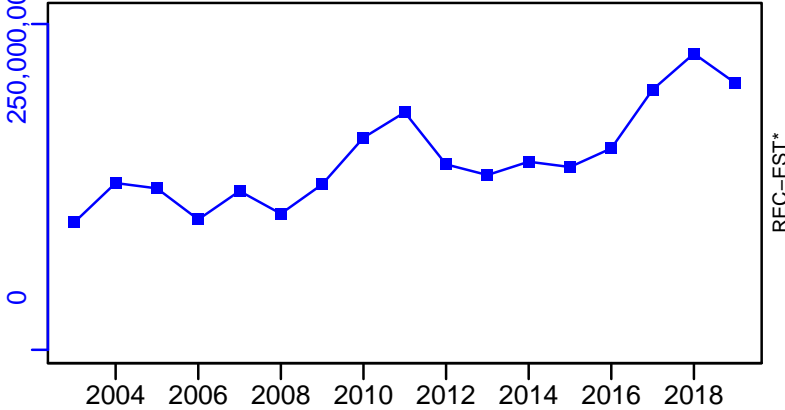
F-1/yr (2003-2019-MEDIMP2021-2)



ER\*

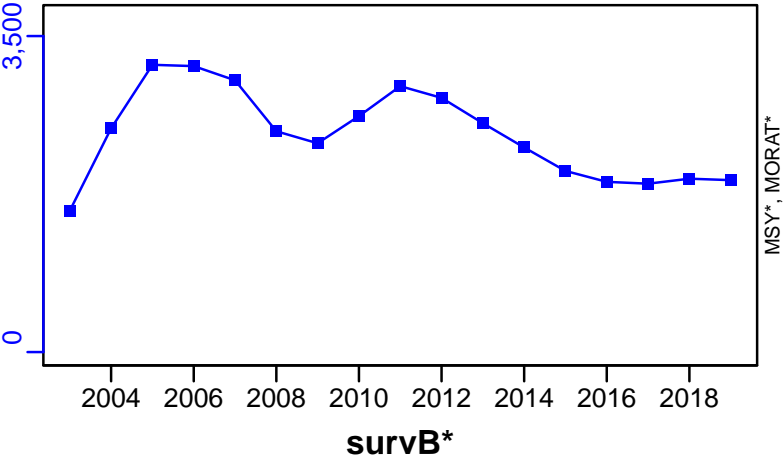


R-E00 (2003-2019-MEDIMP2021-2)



Red mullet Aegean Sea [RMULLMEDGSA22]

TC-MT, TL\*, RecC\* (2003-2019-MEDIMP2021-2)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Red mullet Cyprus Island [RMULLMEDGSA25]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA25-2005-2008-OSIO  |
| <b>Area</b>                 | Cyprus Island   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2008  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2008      | 0.22  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2008      | 58         | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2008      | 1,480,000  | -   | -   |
| <b>F</b>          | F-1/yr           | 2008      | 0.84       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2008      | 33         |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2008      | 3.818      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ◆ End Year \* No Data

# Red mullet Cyprus Island [RMULLMEDGSA25]

TB\*



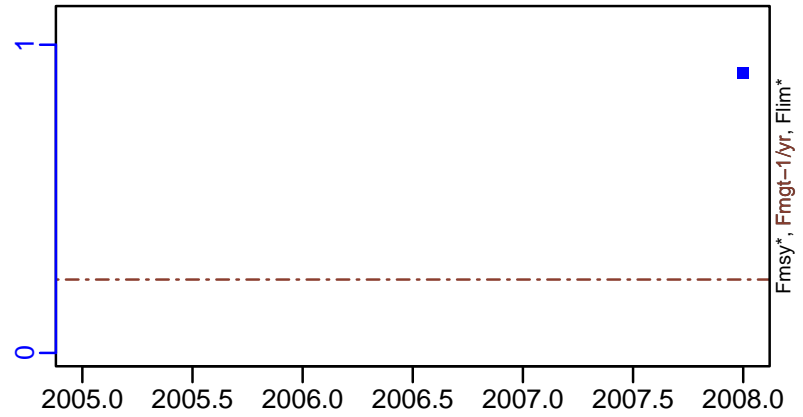
SSB-MT (2005–2008–OSIO)



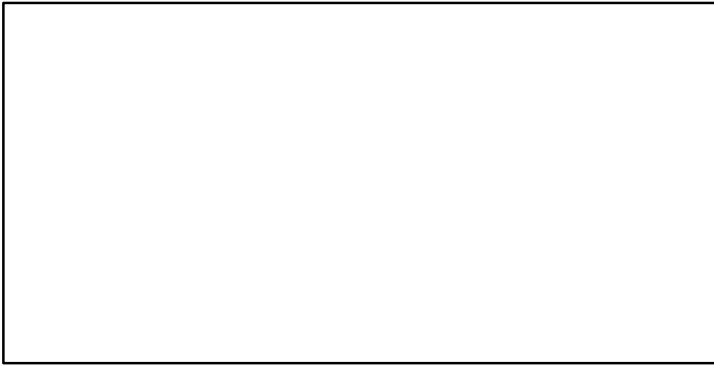
TN \*



F-1/yr (2005–2008–OSIO)



ER\*

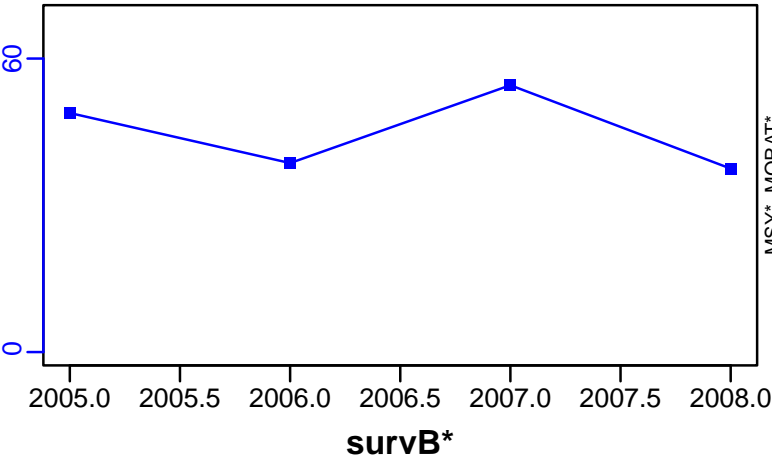


R-E00 (2005–2008–OSIO)



Red mullet Cyprus Island [RMULLMEDGSA25]

TC-MT, TL\*, RecC\* (2005-2008-OSIO)



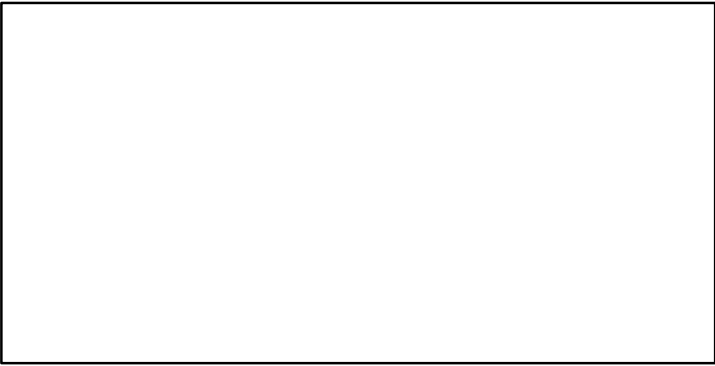
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Red mullet Black Sea [RMULLMEDGSA29]

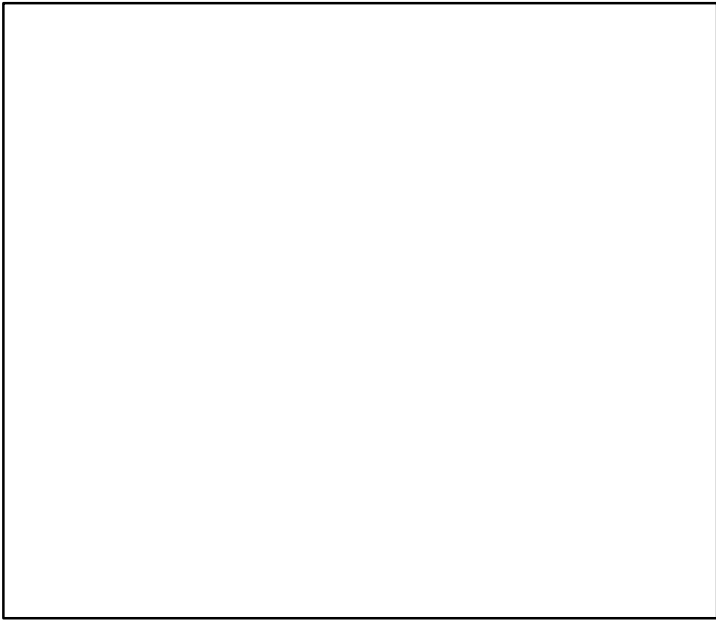
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | SGSABS-RMULLMEDGSA29-1990-2021-HIVELY   |
| <b>Area</b>                 | Black Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Subregional Group on Stock Assessment for the Black Sea                       |
| <b>Asmts in RAM</b>         | 2021, 2014, 2016  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2021      | 0.7   |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2021      | 0.7   |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |               |     |     |
|-------------------|------------------|-----------|---------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value    | Sex | Age |
| <b>TB</b>         | -                | -         | -             | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2021      | 6933          | -   | -   |
| <b>TN</b>         | -                | -         | -             | -   | -   |
| <b>R</b>          | R-E00            | 2021      | 2,822,999,790 | -   | 0   |
| <b>F</b>          | F-1/yr           | 2021      | 0.542         | -   | -   |
| <b>ER</b>         | -                | -         | -             | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 3617          |     |     |
| <b>TL</b>         | TL-MT            | 2021      | 3151          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -             |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2021      | 0.775         |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -             |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -             |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2021      | 0.775         |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -             |     |     |



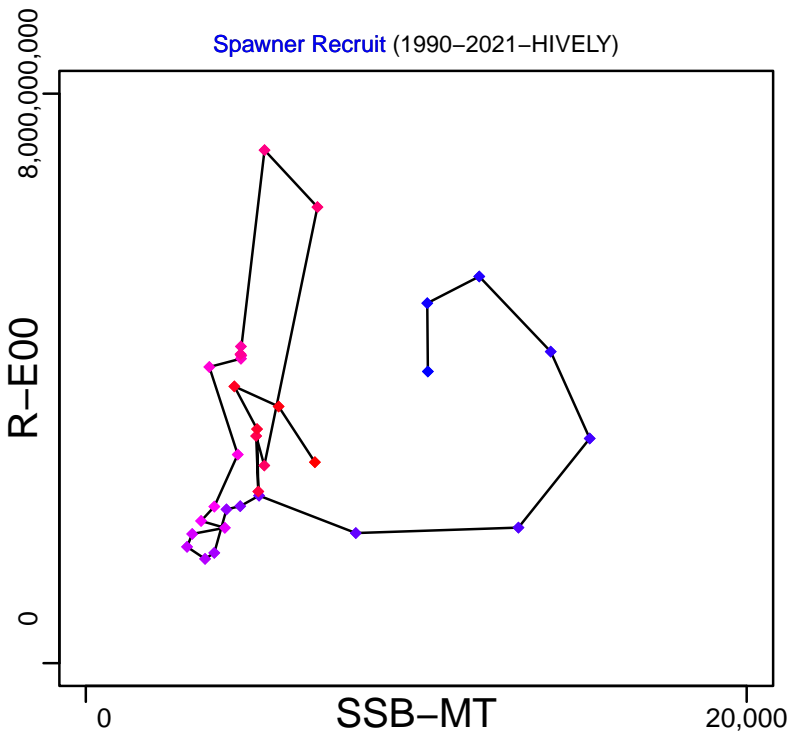
Kobe MSY\*



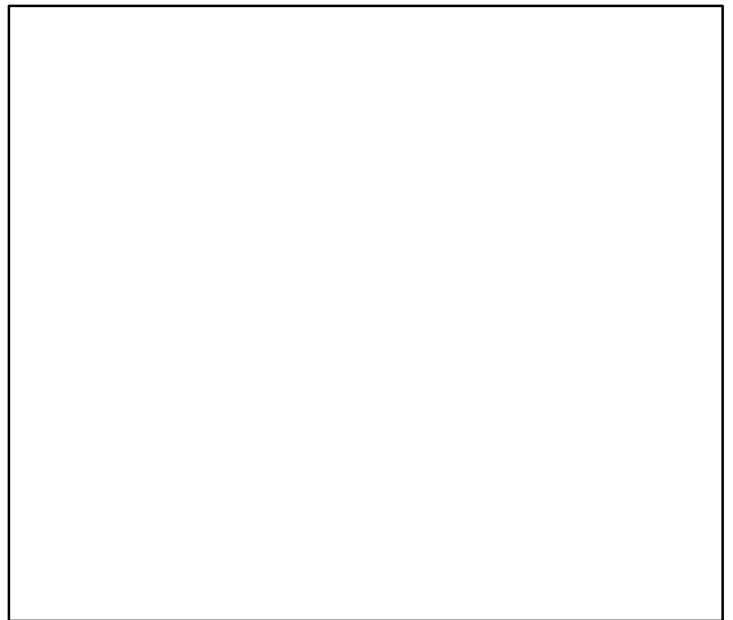
Kobe MGT\*



Spawner Recruit (1990–2021–HIVELY)



Production\*



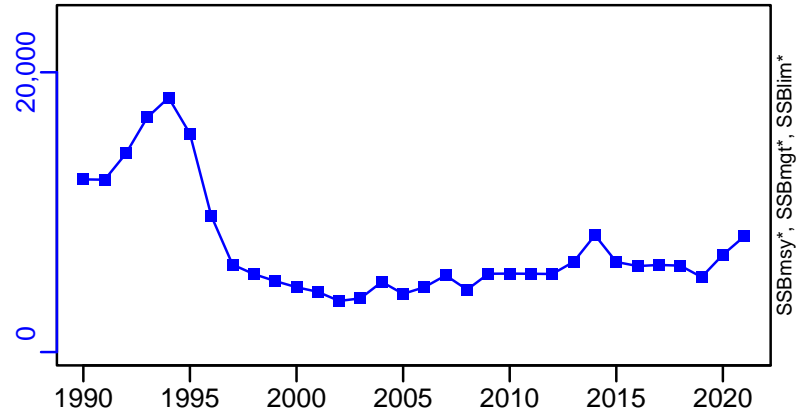
◆ Start Year ◆ End Year \* No Data

# Red mullet Black Sea [RMULLMEDGSA29]

TB\*



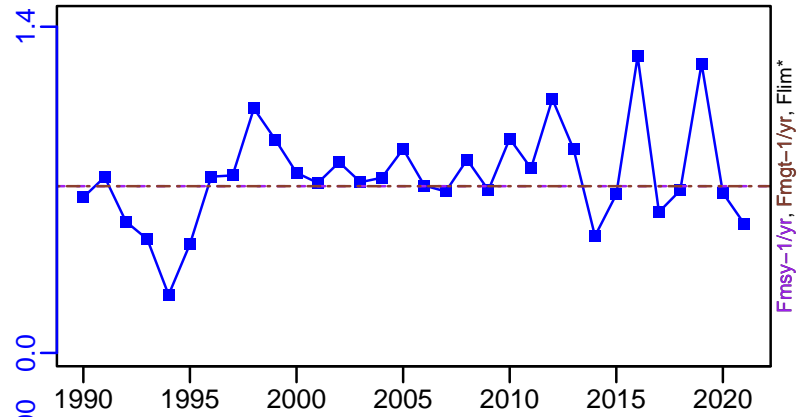
SSB-MT (1990–2021–HIVELY)



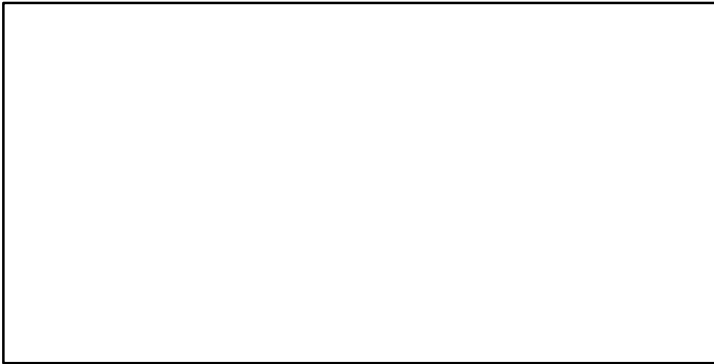
TN \*



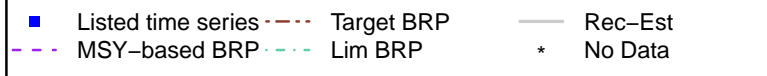
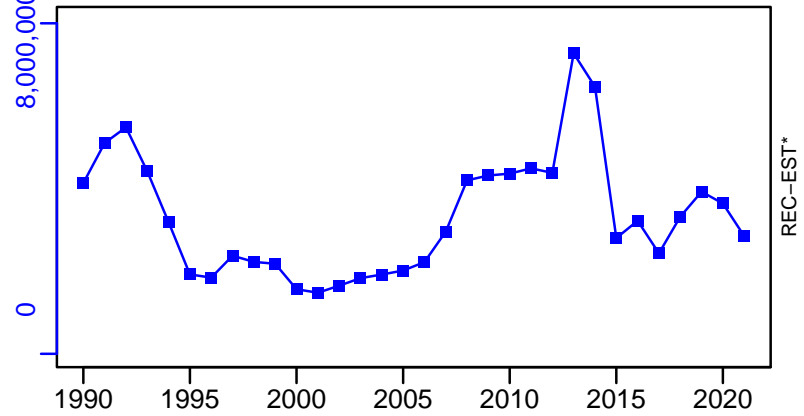
F-1/yr (1990–2021–HIVELY)



ER\*



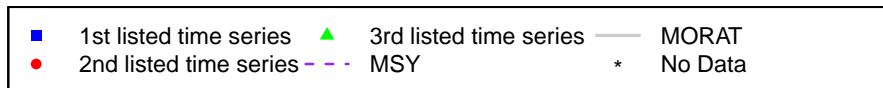
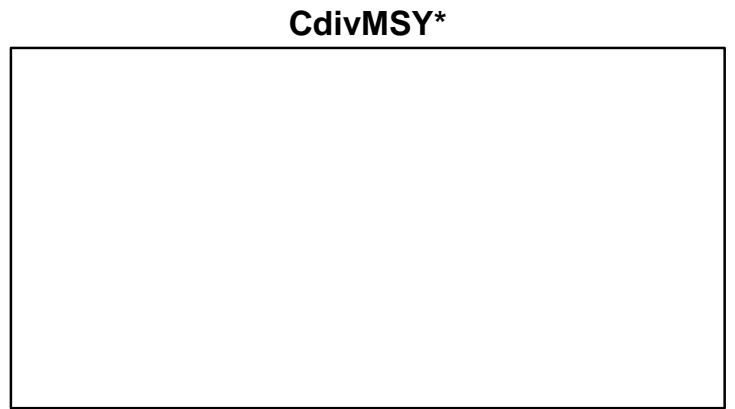
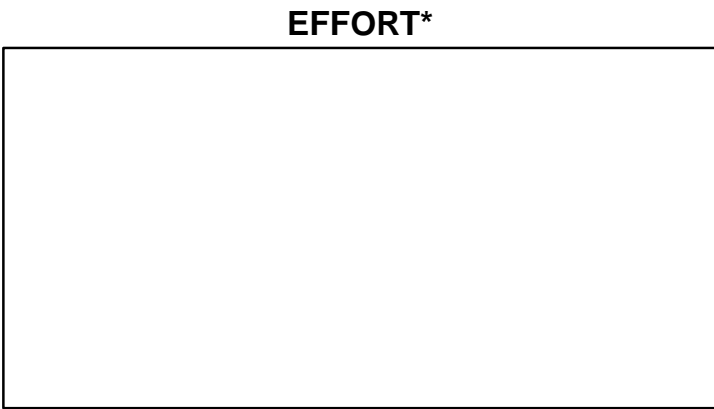
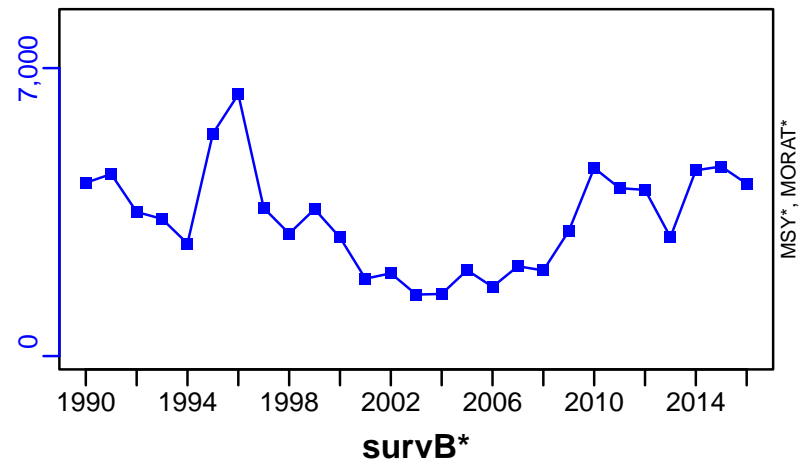
R-E00 (1990–2021–HIVELY)



# Red mullet Black Sea [RMULLMEDGSA29]

TC-MT, TL\*, RecC\* (1990-2016-MEDIMP2021-2)

TAC\*, Cpair\*, Cadv\*



## Red mullet Balearic Island [RMULLMEDGSA5]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA5-2000-2012-OSIO   |
| <b>Area</b>                 | Balearic Island   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2012      | 0.14  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |            |     |     |
|-------------|------------------|-----------|------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value | Sex | Age |
| TB          | -                | -         | -          | -   | -   |
| SSB         | SSB-MT           | 2012      | 29         | -   | 1+  |
| TN          | -                | -         | -          | -   | -   |
| R           | R-E00            | 2012      | 1,050,000  | -   | -   |
| F           | F-1/yr           | 2012      | 1.07       | -   | -   |
| ER          | -                | -         | -          | -   | -   |
| TC          | TC-MT            | 2012      | 16         |     |     |
| TL          | -                | -         | -          |     |     |
| TB/TBmsy    | -                | -         | -          |     |     |
| SSB/SSBmsy  | -                | -         | -          |     |     |
| F/Fmsy      | -                | -         | -          |     |     |
| ER/ERmsy    | -                | -         | -          |     |     |
| TB/TBmgt    | -                | -         | -          |     |     |
| SSB/SSBmgt  | -                | -         | -          |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2012      | 7.643      |     |     |
| ER/ERmgt    | -                | -         | -          |     |     |

Red mullet Balearic Island [RMULLMEDGSA5]

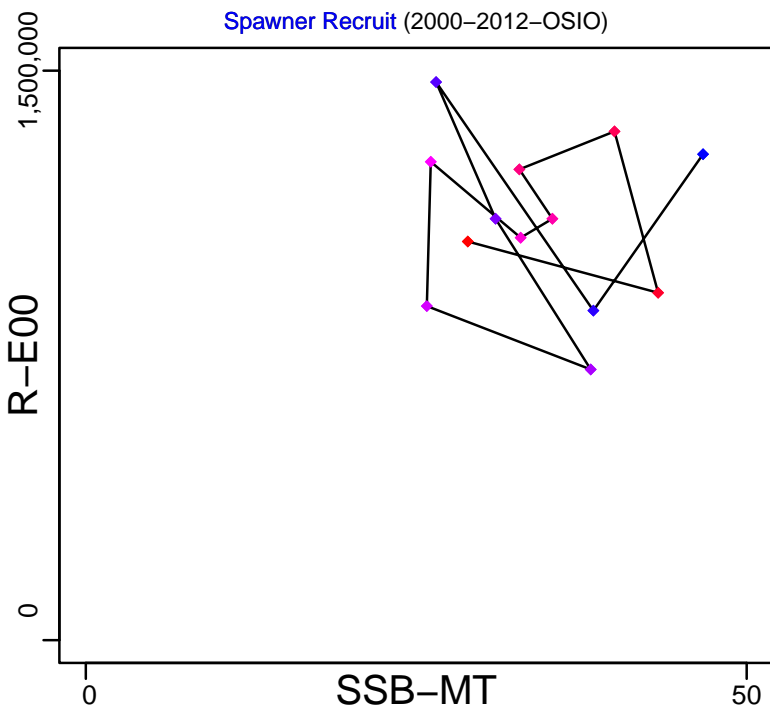
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2000–2012–OSIO)



Production\*



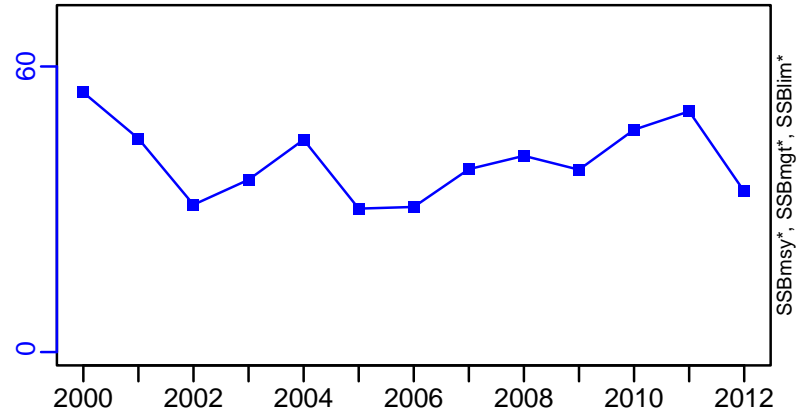
◆ Start Year ◆ End Year \* No Data

# Red mullet Balearic Island [RMULLMEDGSA5]

TB\*



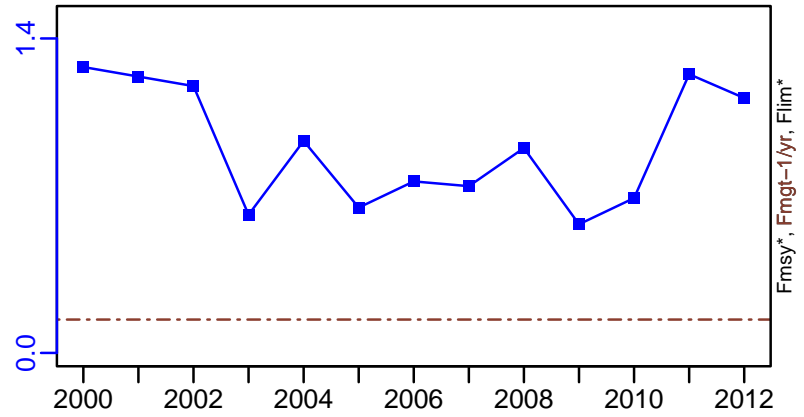
SSB-MT (2000–2012–OSIO)



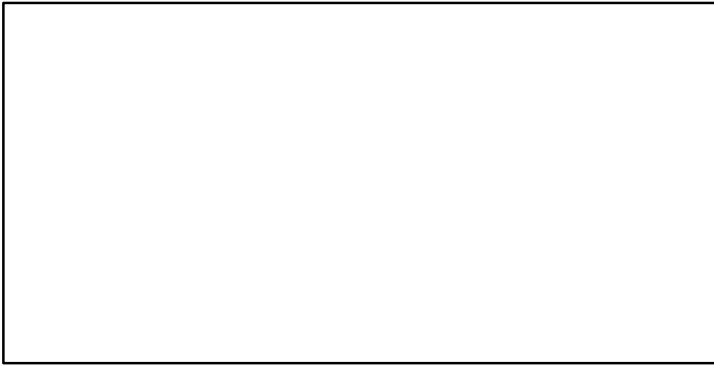
TN \*



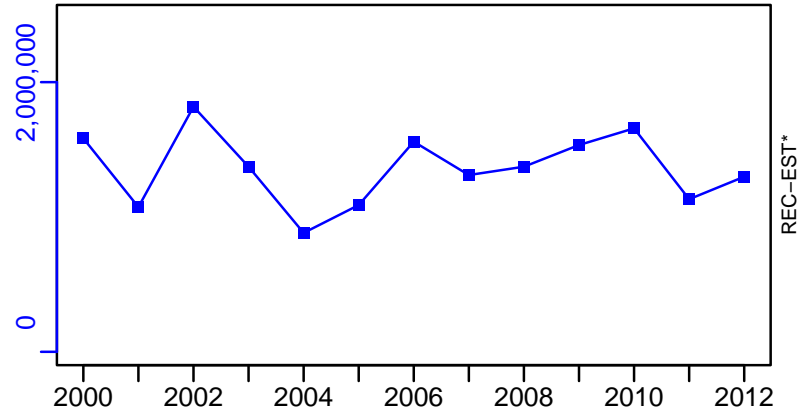
F-1/yr (2000–2012–OSIO)



ER\*



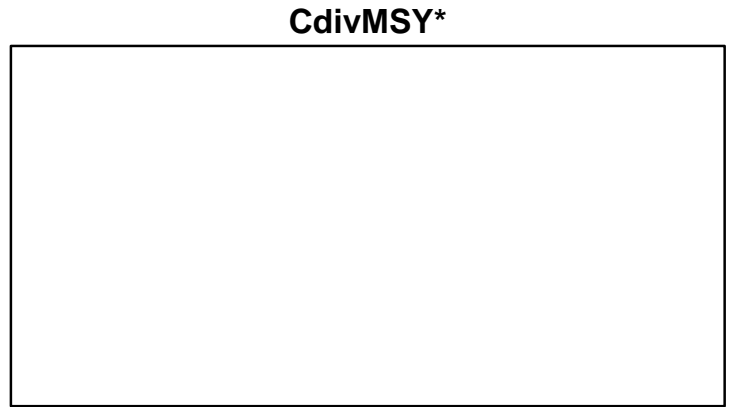
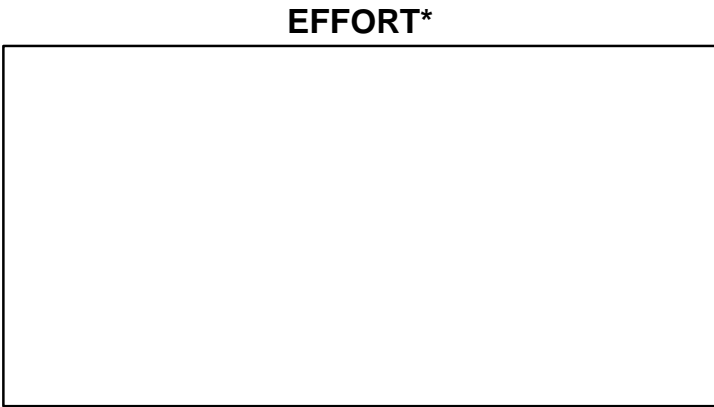
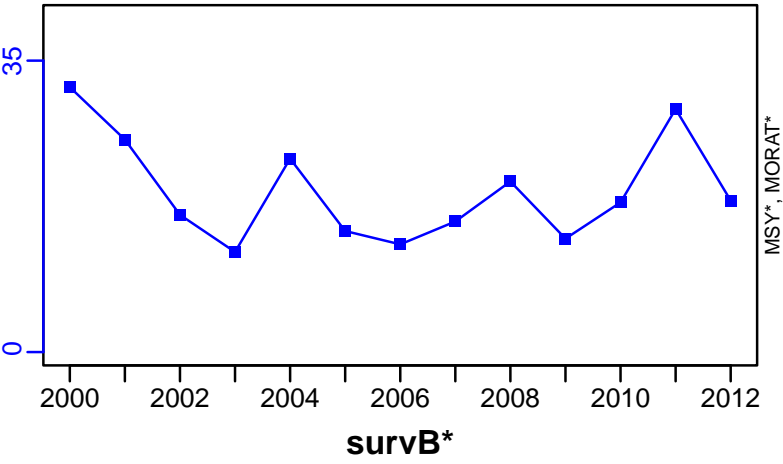
R-E00 (2000–2012–OSIO)



# Red mullet Balearic Island [RMULLMEDGSA5]

TC-MT, TL\*, RecC\* (2000-2012-OSIO)

TAC\*, Cpair\*, Cadv\*



## Red mullet Northern Spain [RMULLMEDGSA6]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | WGSAD-RMULLMEDGSA6-2004-2022-HIVELY   |
| <b>Area</b>                 | Northern Spain  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Demersal Species                         |
| <b>Asmts in RAM</b>         | 2013, 2019, 2021, 2022  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2022      | 0.25  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |        |
|-------------------|------------------|-----------|------------|-----|--------|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age    |
| <b>TB</b>         | TB-MT            | 2022      | 2762       | -   | -      |
| <b>SSB</b>        | SSB-MT           | 2022      | 1015       | -   | -      |
| <b>TN</b>         | -                | -         | -          | -   | -      |
| <b>R</b>          | R-E00            | 2022      | 40,910,000 | -   | 0      |
| <b>F</b>          | F-1/yr           | 2022      | 1.349      | -   | 1 to 3 |
| <b>ER</b>         | ER-calc-ratio    | 2022      | 0.445      | -   | -      |
| <b>TC</b>         | TC-MT            | 2019      | 1546       |     |        |
| <b>TL</b>         | TL-MT            | 2022      | 1228       |     |        |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |        |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |        |
| <b>F/Fmsy</b>     | -                | -         | -          |     |        |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |        |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |        |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |        |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2022      | 5.396      |     |        |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |        |



# Red mullet Northern Spain [RMULLMEDGSA6]

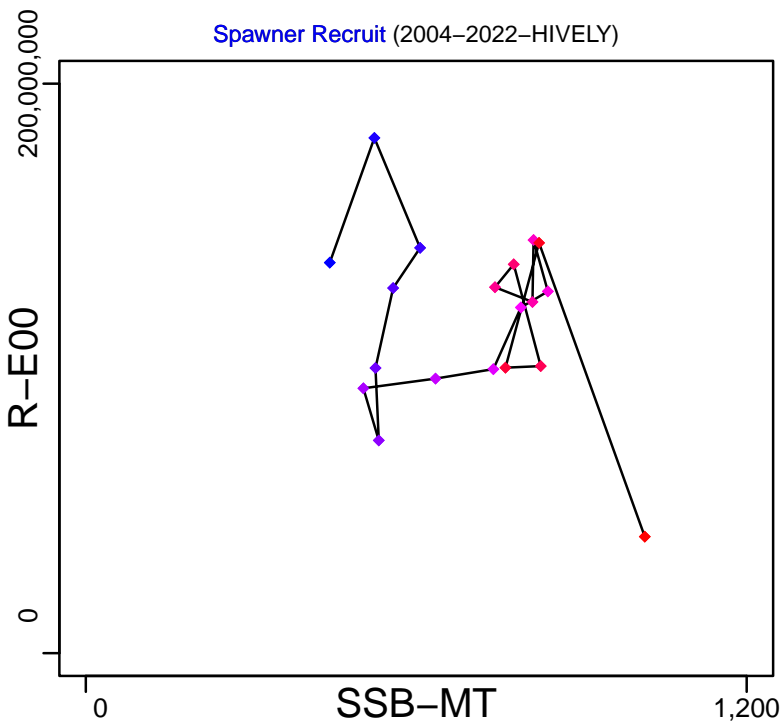
Kobe MSY\*



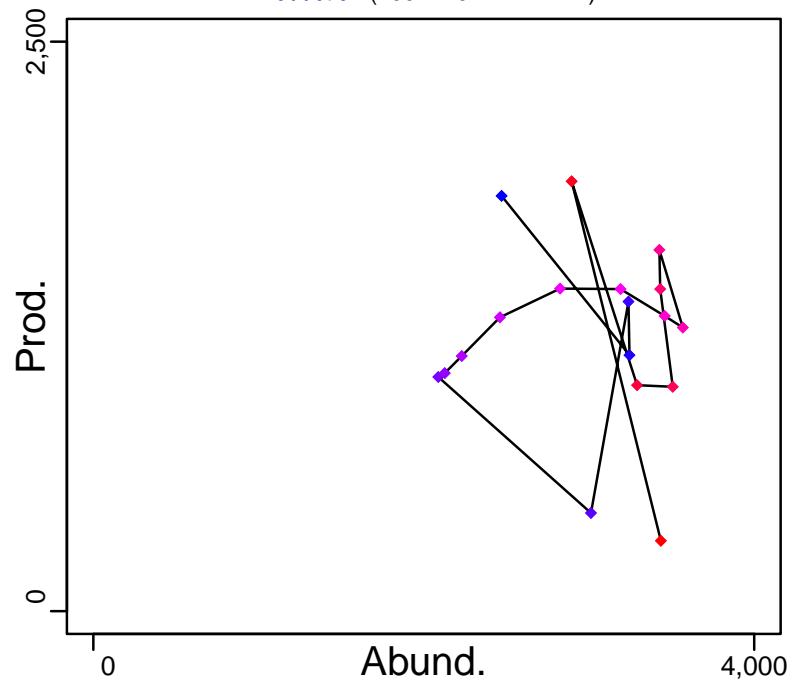
Kobe MGT\*



Spawner Recruit (2004–2022–HIVELY)



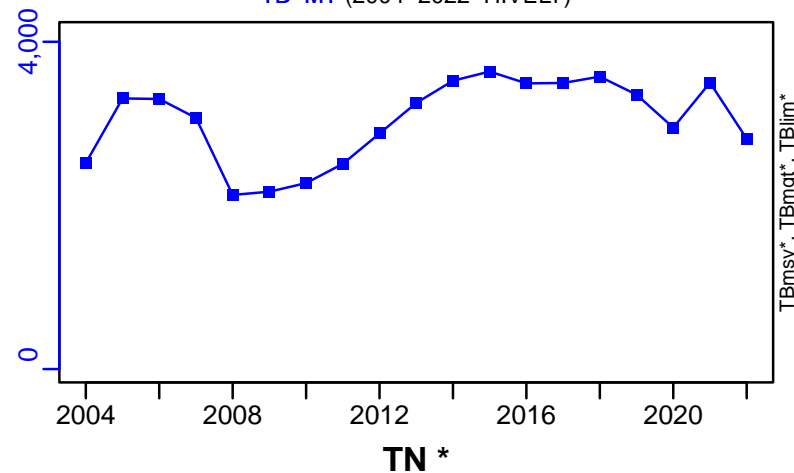
Production (2004–2022–HIVELY)



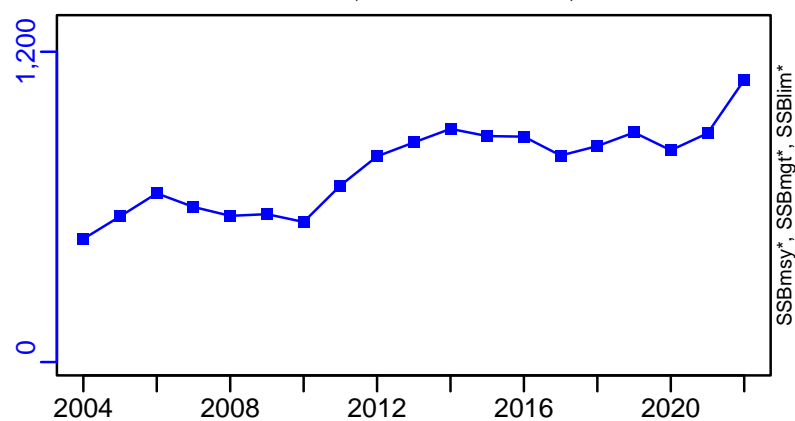
◆ Start Year ◆ End Year \* No Data

# Red mullet Northern Spain [RMULLMEDGSA6]

TB-MT (2004–2022–HIVELY)



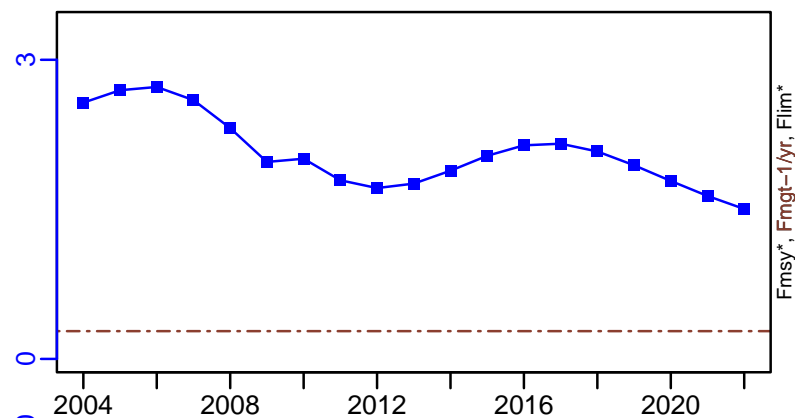
SSB-MT (2004–2022–HIVELY)



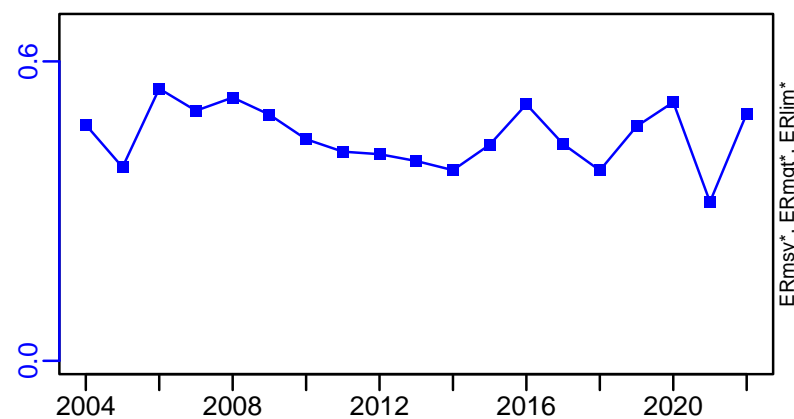
TN \*



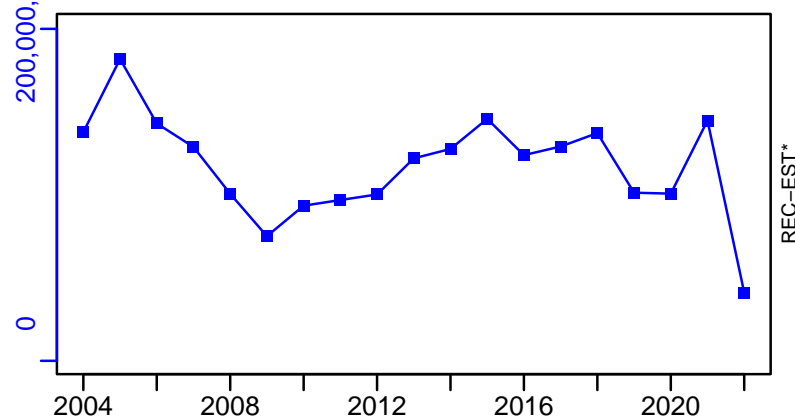
F-1/yr (2004–2022–HIVELY)



ER-calc-ratio (2004–2022–HIVELY)

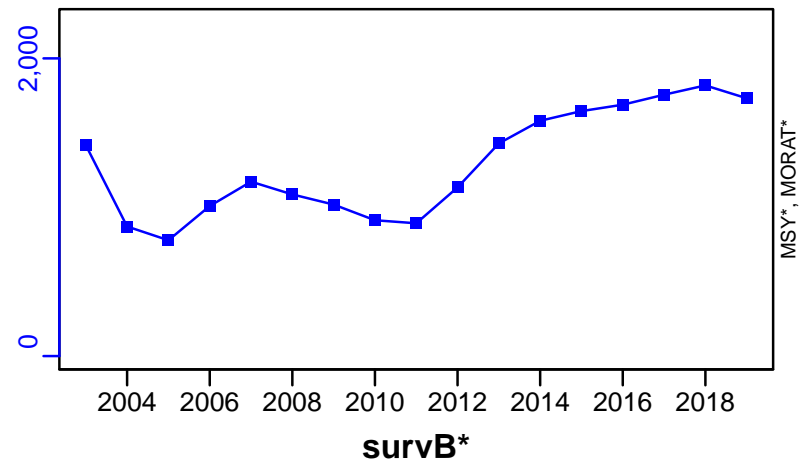


R-E00 (2004–2022–HIVELY)

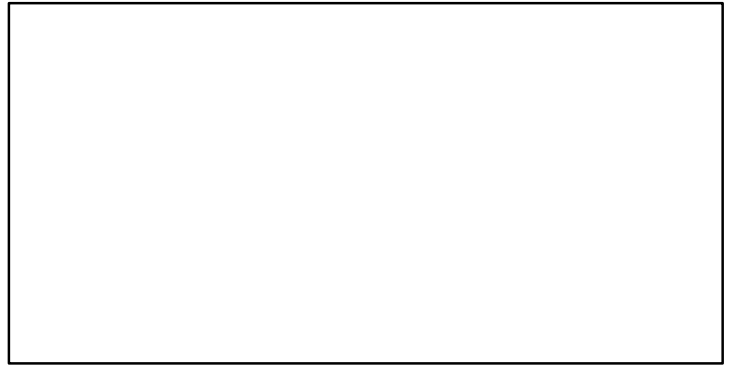


Red mullet Northern Spain [RMULLMEDGSA6]

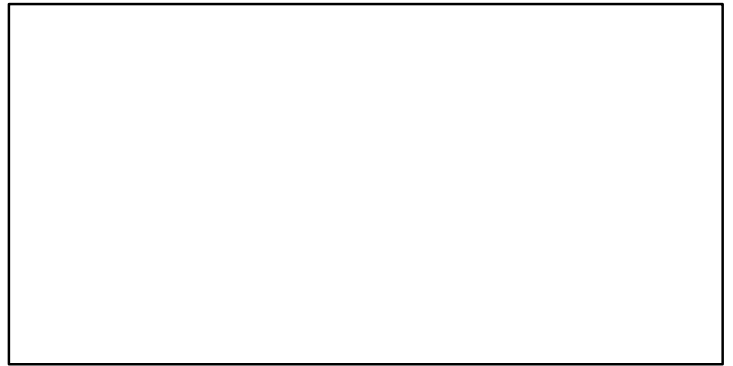
TC-MT, TL\*, RecC\* (2003–2019–MEDIMP2021–2)



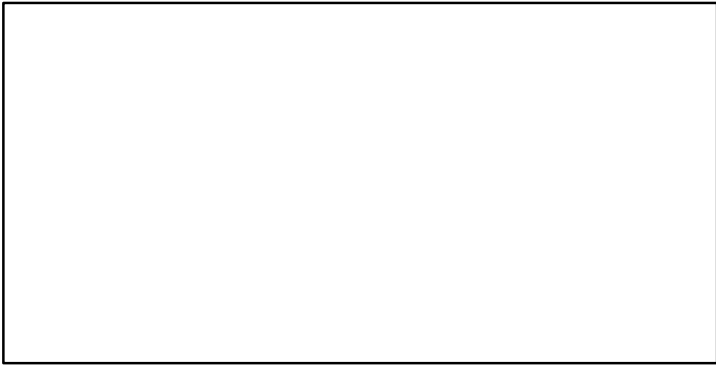
TAC\*, Cpair\*, Cadv\*



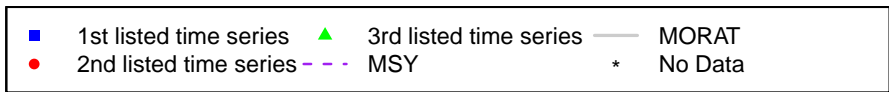
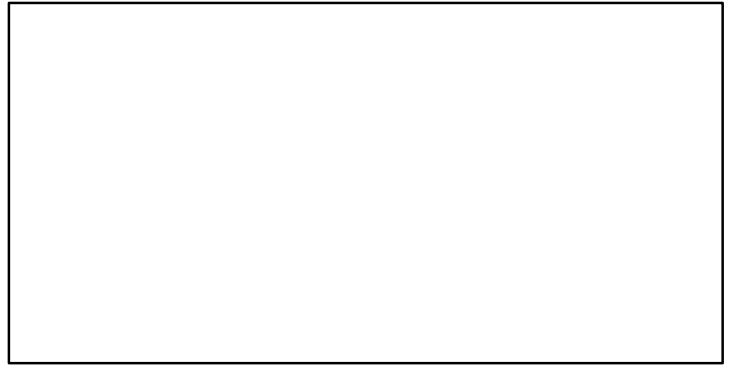
CPUE\*



EFFORT\*



CdivMSY\*



## Red mullet Gulf of Lions [RMULLMEDGSA7]

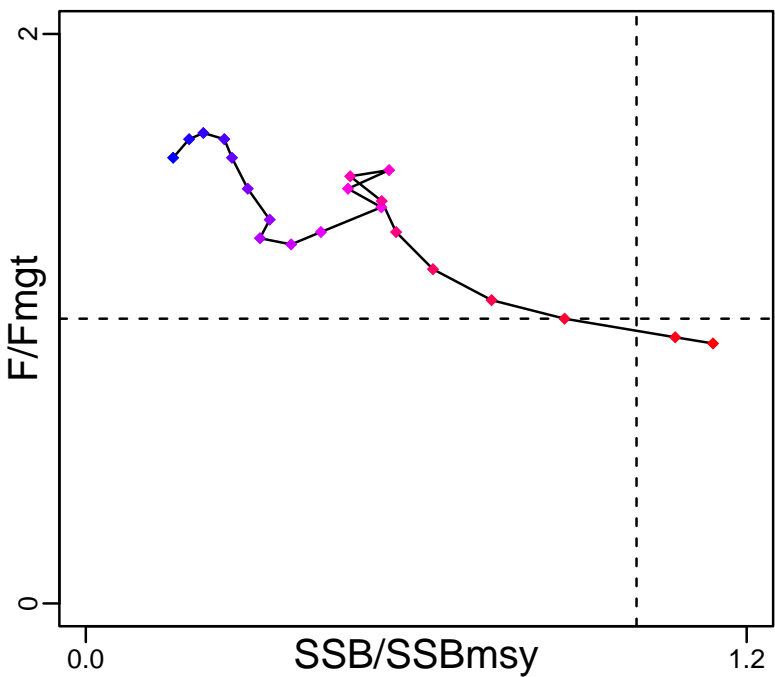
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | WGSAD-RMULLMEDGSA7-2002-2022-HIVELY   |
| <b>Area</b>                 | Gulf of Lions   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Demersal Species                         |
| <b>Asmts in RAM</b>         | 2019, 2013, 2021, 2022  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | SSBmsy-MT | 2022      | 775   |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | SSBmgt-MT | 2022      | 775   |
| <b>Fmgt</b>      | Fmgt-1/yr | 2022      | 0.46  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | SSBlim-MT | 2022      | 134   |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

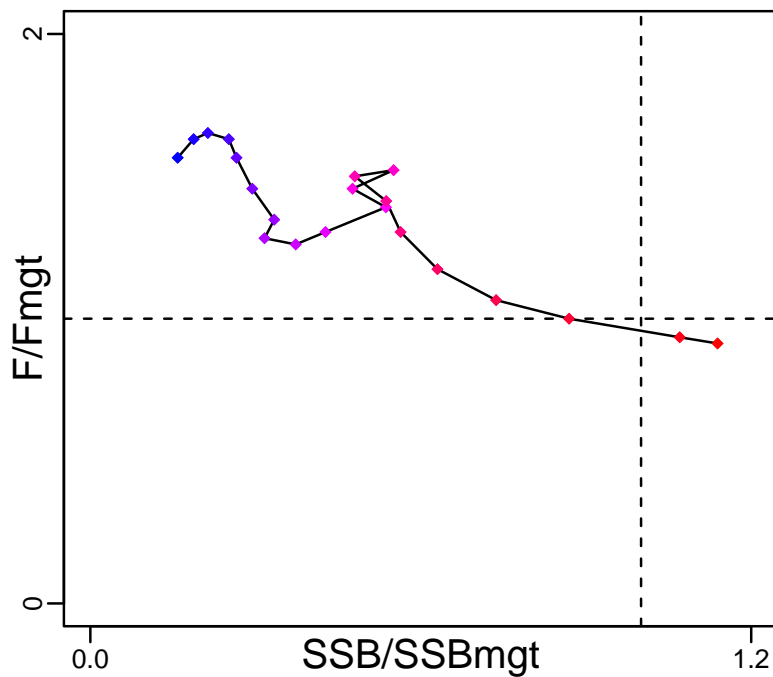
| Time Series       |                  |           |            |     |        |
|-------------------|------------------|-----------|------------|-----|--------|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age    |
| <b>TB</b>         | -                | -         | -          | -   | -      |
| <b>SSB</b>        | SSB-MT           | 2022      | 883        | -   | -      |
| <b>TN</b>         | -                | -         | -          | -   | -      |
| <b>R</b>          | R-E00            | 2022      | 63,903,800 | -   | -      |
| <b>F</b>          | F-1/yr           | 2022      | 0.42       | -   | 1 to 3 |
| <b>ER</b>         | -                | -         | -          | -   | -      |
| <b>TC</b>         | TC-MT            | 2022      | 467        |     |        |
| <b>TL</b>         | TL-MT            | 2021      | 432        |     |        |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |        |
| <b>SSB/SSBmsy</b> | SSB-MT/SSBmsy-MT | 2022      | 1.139      |     |        |
| <b>F/Fmsy</b>     | -                | -         | -          |     |        |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |        |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |        |
| <b>SSB/SSBmgt</b> | SSB-MT/SSBmgt-MT | 2022      | 1.139      |     |        |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2022      | 0.913      |     |        |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |        |

# Red mullet Gulf of Lions [RMULLMEDGSA7]

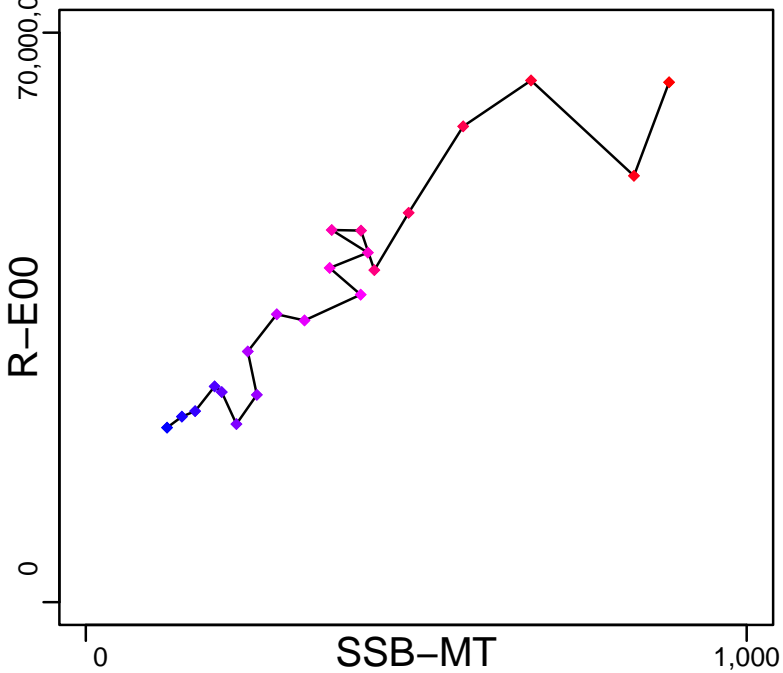
Kobe MSYpref (2002–2022–HIVELY)



Kobe MGTpref (2002–2022–HIVELY)



Spawner Recruit (2002–2022–HIVELY)



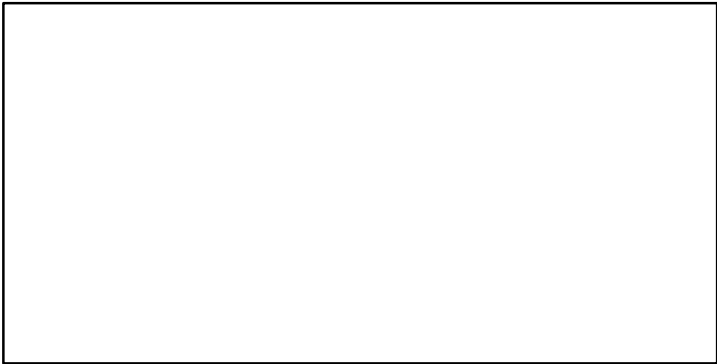
Production\*



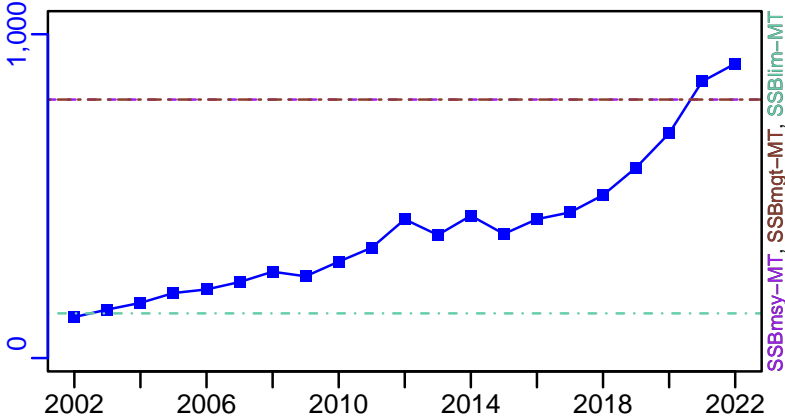
◆ Start Year ◆ End Year \* No Data

Red mullet Gulf of Lions [RMULLMEDGSA7]

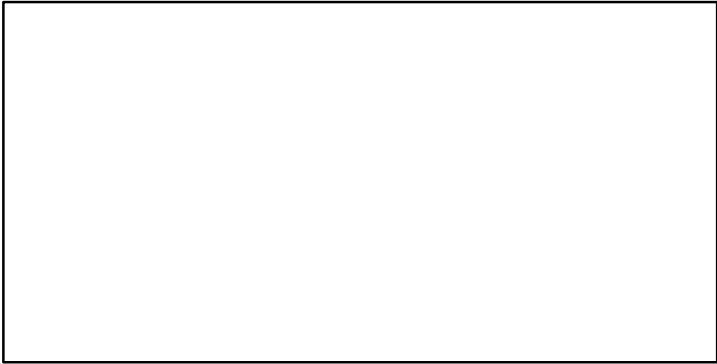
TB\*



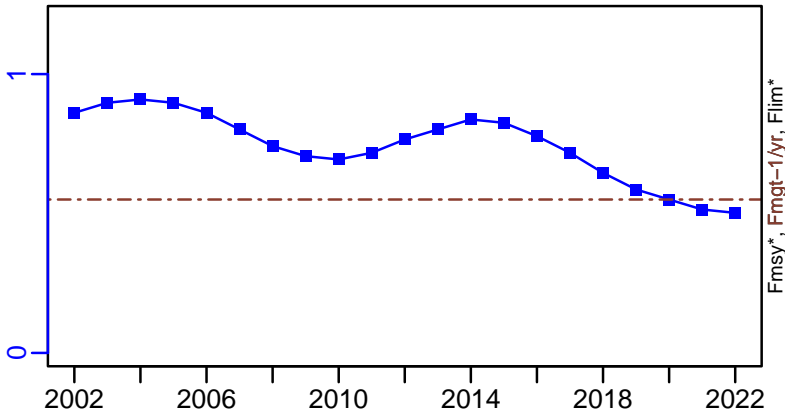
SSB-MT (2002-2022-HIVELY)



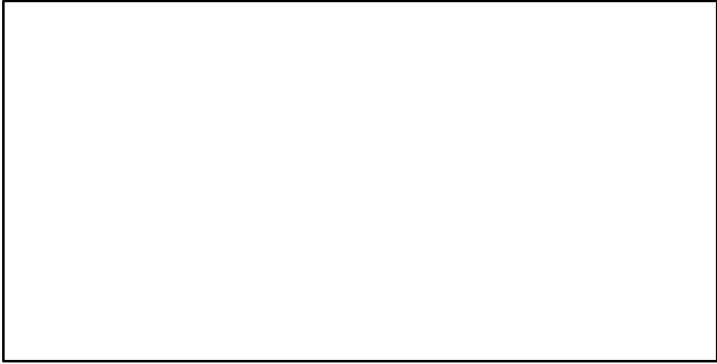
TN \*



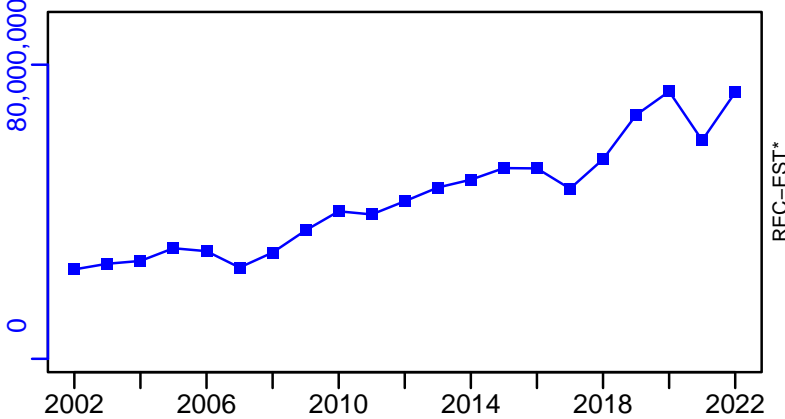
F-1/yr (2002-2022-HIVELY)



ER\*



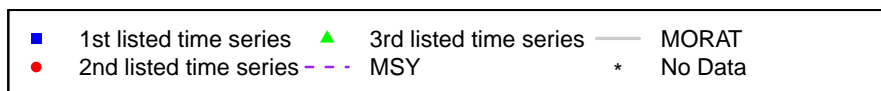
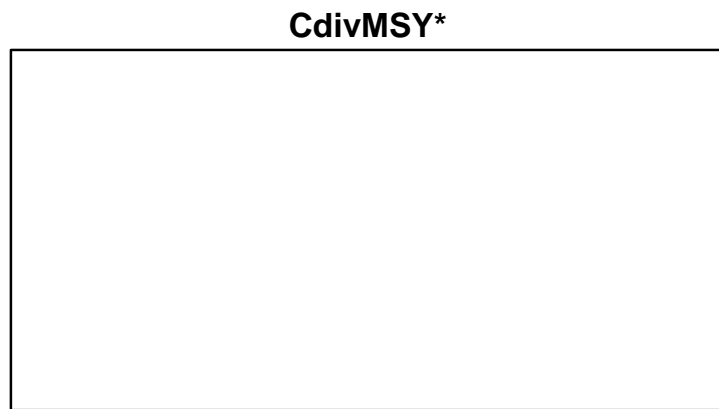
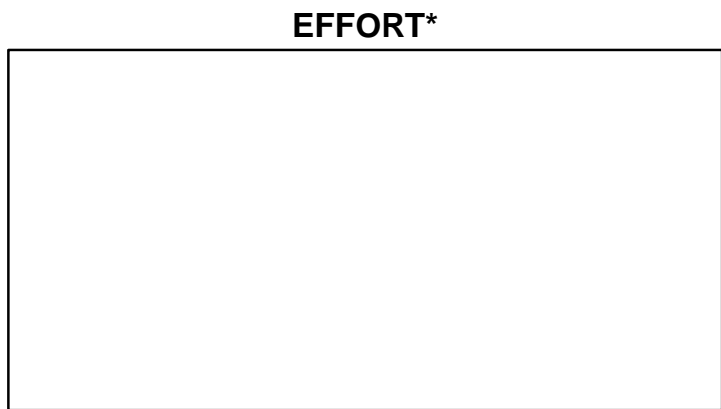
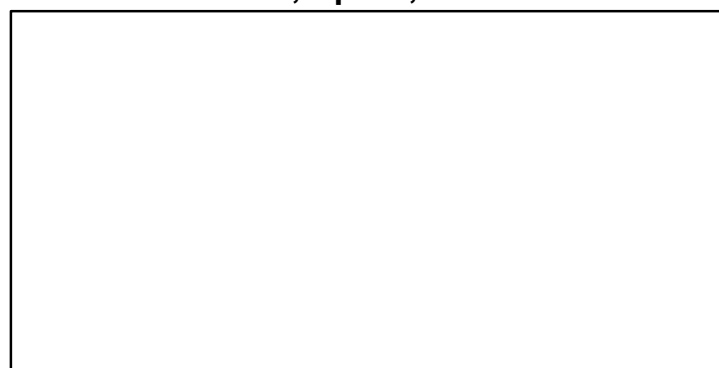
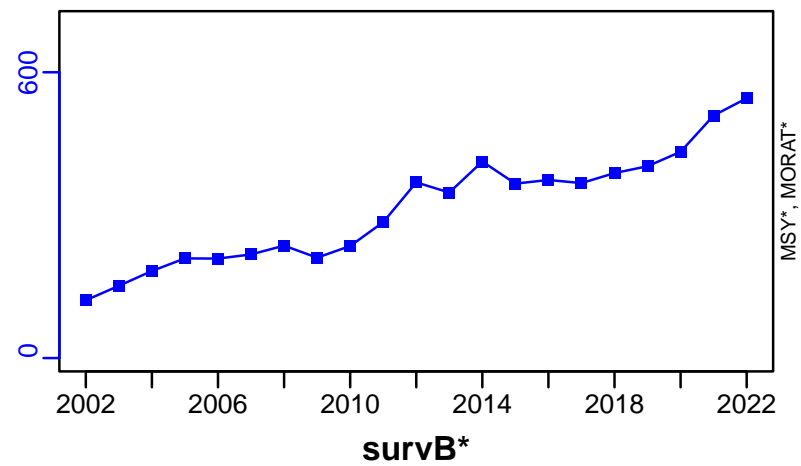
R-E00 (2002-2022-HIVELY)



# Red mullet Gulf of Lions [RMULLMEDGSA7]

TC-MT, TL\*, RecC\* (2002-2022-HIVELY)

TAC\*, Cpair\*, Cadv\*



## Red mullet Ligurian and North Tyrrhenian Sea [RMULLMEDGSA9]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus barbatus   |
| <b>Current Assess ID</b>    | STECF-RMULLMEDGSA9-2004-2019-MEDIMP2021-2                                     |
| <b>Area</b>                 | Ligurian and North Tyrrhenian Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019, 2013  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.506 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |             |     |     |
|-------------------|------------------|-----------|-------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value  | Sex | Age |
| <b>TB</b>         | -                | -         | -           | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 1409        | -   | -   |
| <b>TN</b>         | -                | -         | -           | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 271,663,084 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.846       | -   | -   |
| <b>ER</b>         | -                | -         | -           | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 1011        |     |     |
| <b>TL</b>         | -                | -         | -           |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -           |     |     |
| <b>F/Fmsy</b>     | -                | -         | -           |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -           |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -           |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -           |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 1.67        |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -           |     |     |



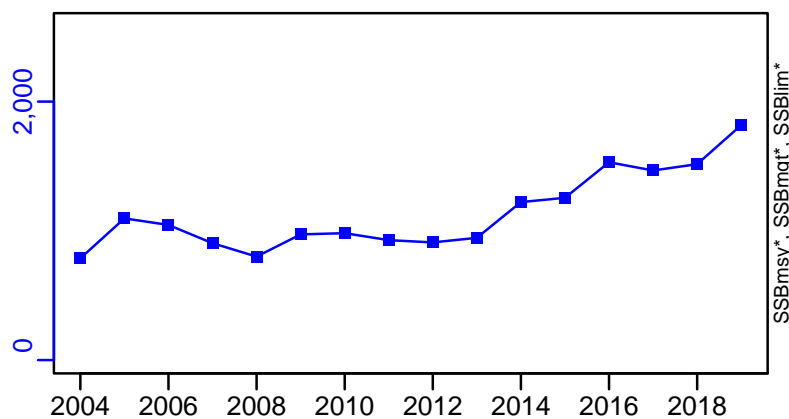


# Red mullet Ligurian and North Tyrrhenian Sea [RMULLMEDGSA9]

TB\*



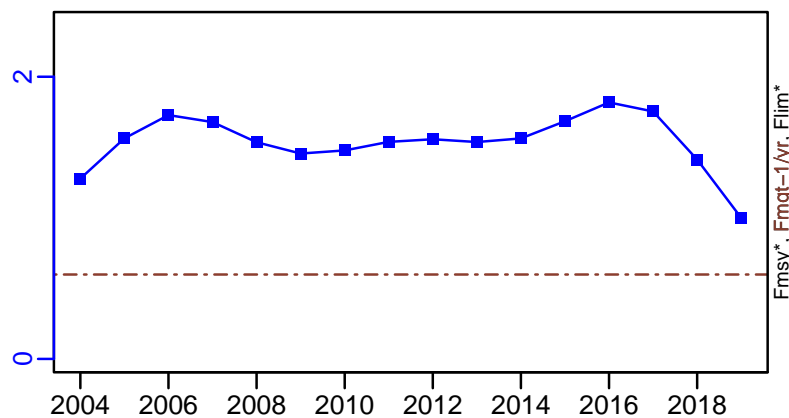
SSB-MT (2004–2019–MEDIMP2021–2)



TN \*



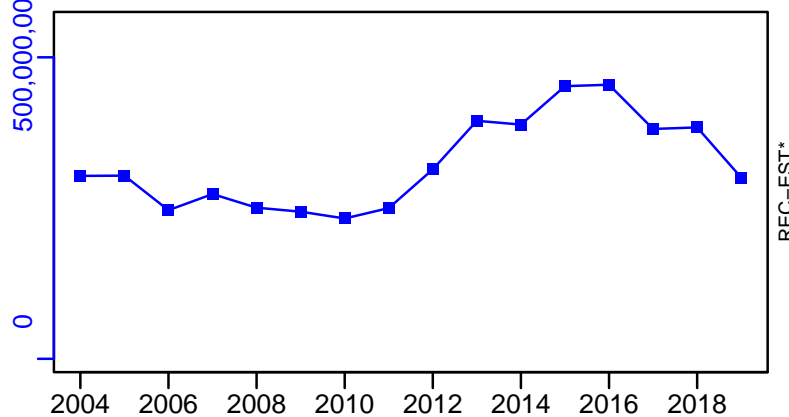
F-1/yr (2004–2019–MEDIMP2021–2)



ER\*

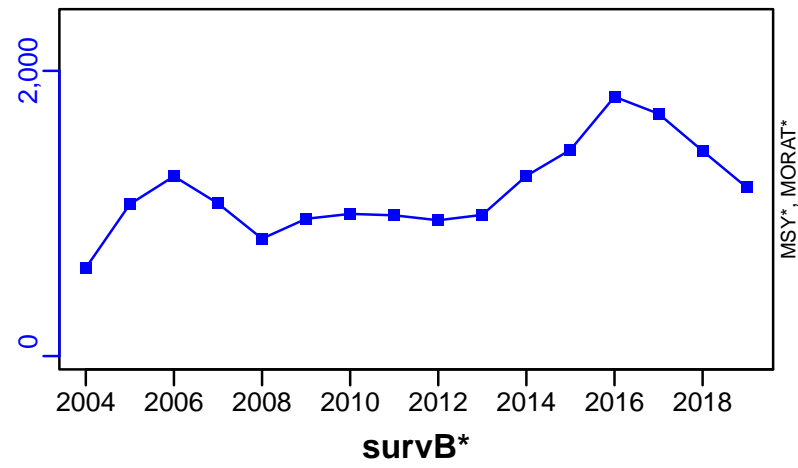


R-E00 (2004–2019–MEDIMP2021–2)



# Red mullet Ligurian and North Tyrrhenian Sea [RMULLMEDGSA9]

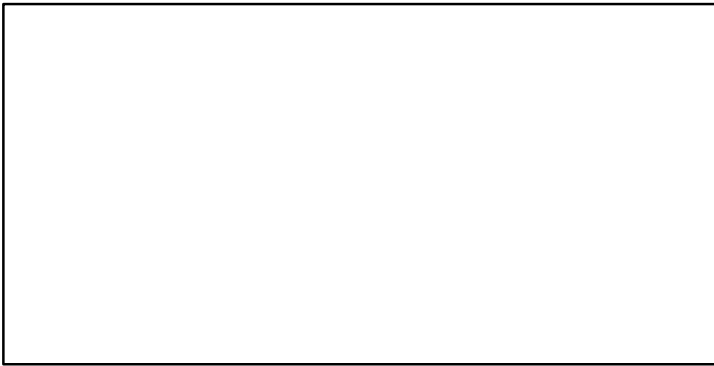
TC-MT, TL\*, RecC\* (2004–2019–MEDIMP2021–2)



TAC\*, Cpair\*, Cadv\*



survB\*



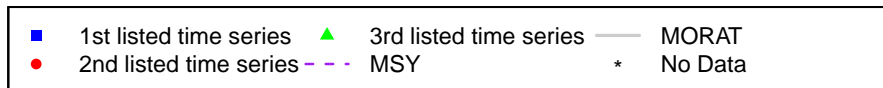
CPUE\*



EFFORT\*



CdivMSY\*



## Deep water rose shrimp Northern Alboran Sea [RSHRMPMEDGSA1]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Parapenaeus longirostris  |
| <b>Current Assess ID</b>    | WGSAD-RSHRMPMEDGSA1-2002-2022-HIVELY  |
| <b>Area</b>                 | Northern Alboran Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Demersal Species                         |
| <b>Asmts in RAM</b>         | 2012, 2015, 2022  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2022      | 0.7   |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |        |
|-------------------|------------------|-----------|------------|-----|--------|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age    |
| <b>TB</b>         | TB-MT            | 2015      | 701        | -   | -      |
| <b>SSB</b>        | SSB-MT           | 2022      | 345        | -   | -      |
| <b>TN</b>         | -                | -         | -          | -   | -      |
| <b>R</b>          | R-E00            | 2022      | 881,104    | -   | -      |
| <b>F</b>          | F-1/yr           | 2022      | 0.869      | -   | 0 to 2 |
| <b>ER</b>         | ER-calc-ratio    | 2015      | 0.163      | -   | -      |
| <b>TC</b>         | TC-MT            | 2022      | 686        |     |        |
| <b>TL</b>         | TL-MT            | 2015      | 114        |     |        |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |        |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |        |
| <b>F/Fmsy</b>     | -                | -         | -          |     |        |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |        |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |        |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |        |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2022      | 1.242      |     |        |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |        |

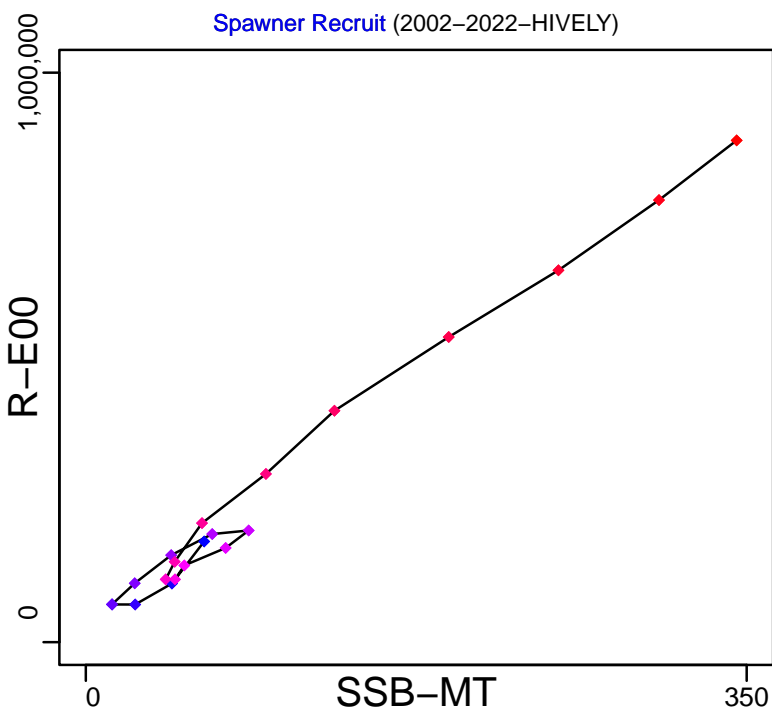
Kobe MSY\*



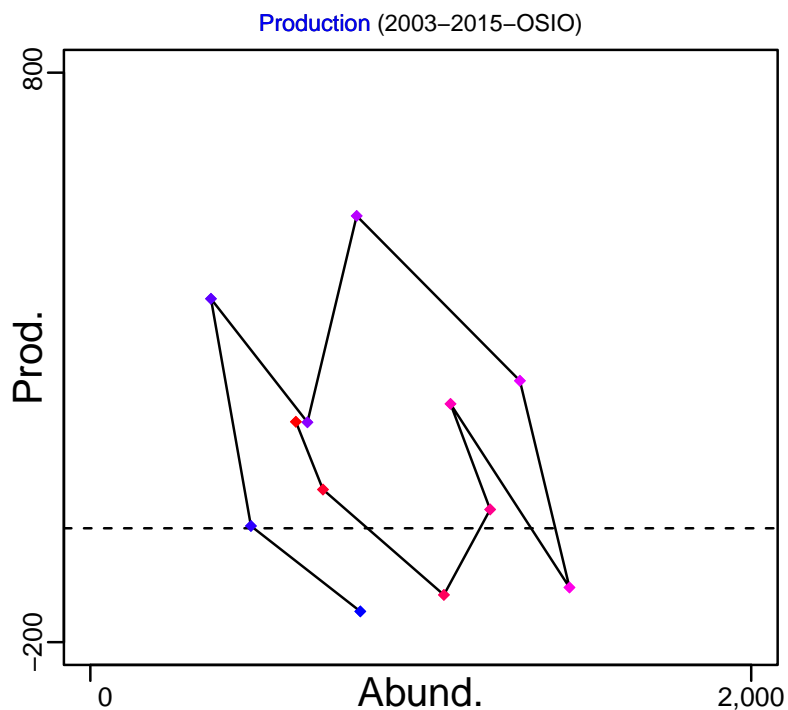
Kobe MGT\*



Spawner Recruit (2002–2022–HIVELY)



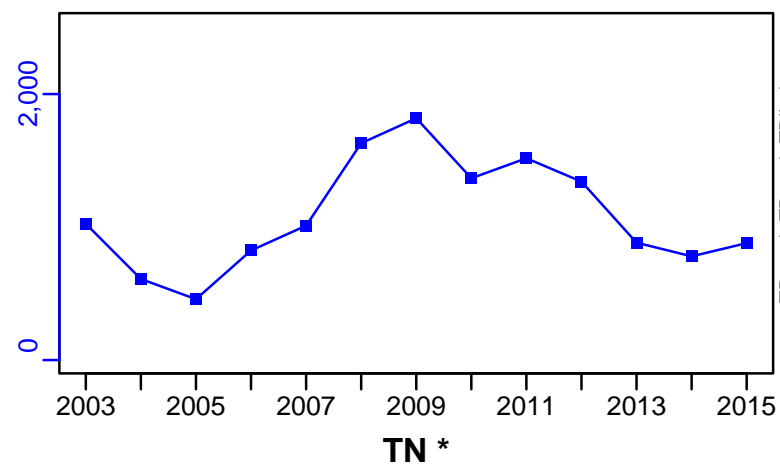
Production (2003–2015–OSIO)



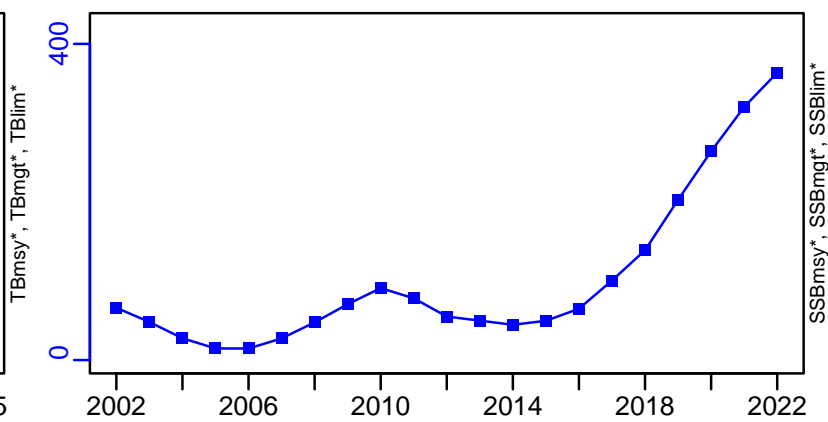
◆ Start Year ◆ End Year \* No Data

# Deep water rose shrimp Northern Alboran Sea [RSHRMPMEDGSA1]

TB-MT (2003–2015–OSIO)



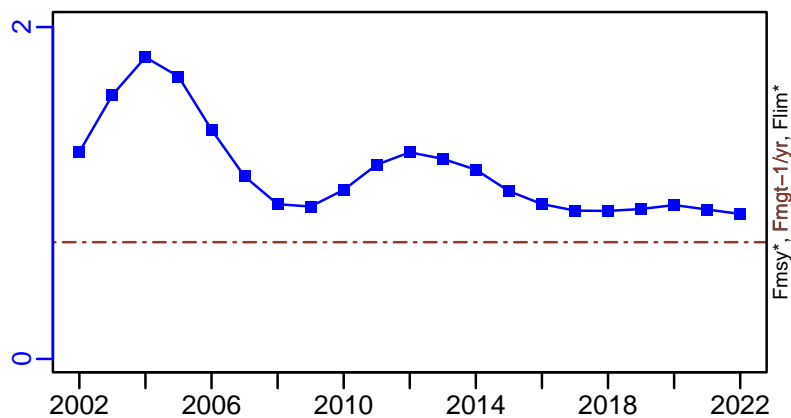
SSB-MT (2002–2022–HIVELY)



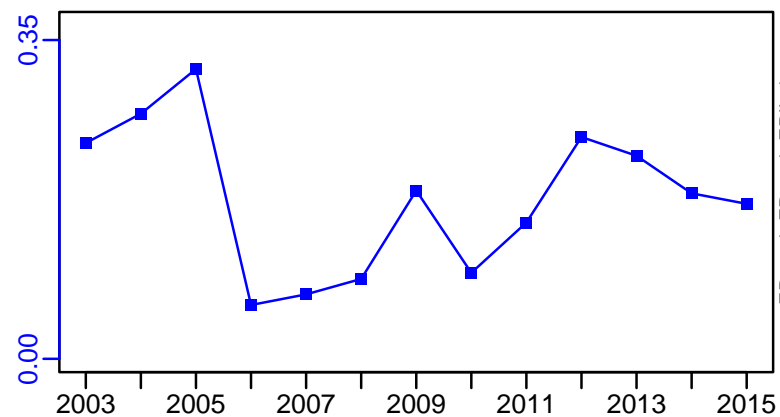
TN \*



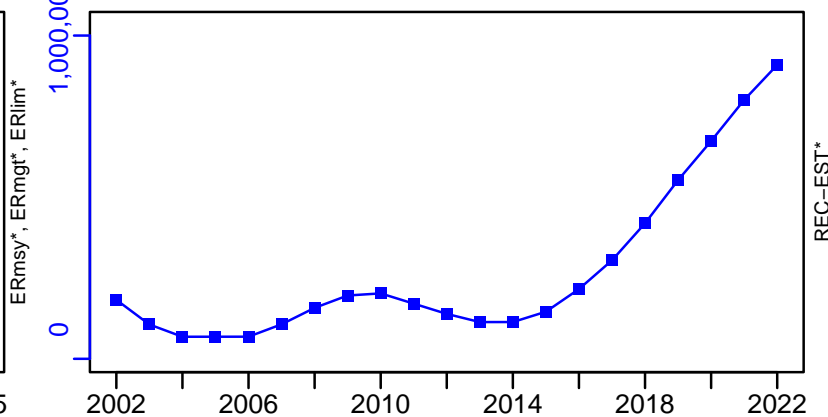
F-1/yr (2002–2022–HIVELY)



ER-calc-ratio (2003–2015–OSIO)

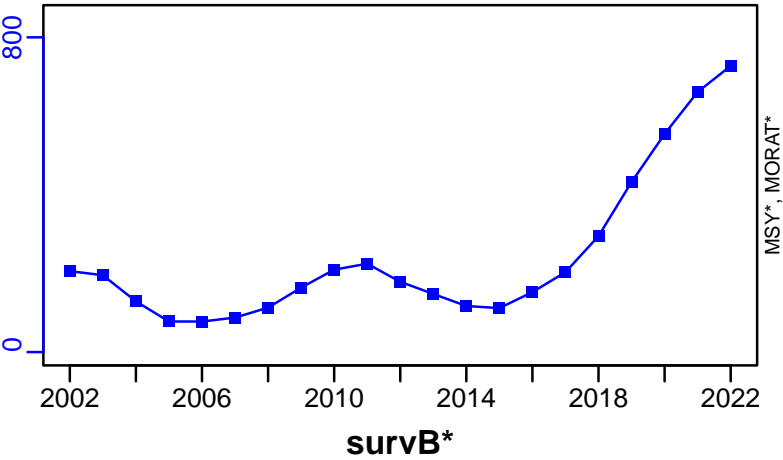


R-E00 (2002–2022–HIVELY)



Deep water rose shrimp Northern Alboran Sea [RSHRMPMEDGSA1]

TC-MT, TL\*, RecC\* (2002-2022-HIVELY)



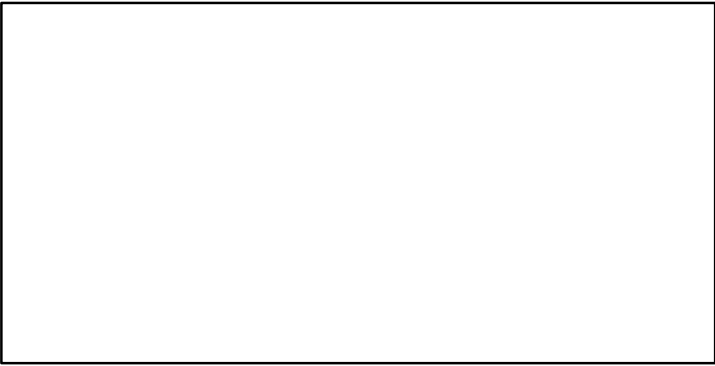
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Deep water rose shrimp Geographical Sub-Areas 12-16 [RSHRMPMEDGSA12-16]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Parapenaeus longirostris  |
| <b>Current Assess ID</b>    | STECF-RSHRMPMEDGSA12-16-2007-2009-OSIO  |
| <b>Area</b>                 | Geographical Sub-Areas 12-16  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011, 2009  |

| Reference Points |                |           |       |
|------------------|----------------|-----------|-------|
| Type             | ID             | Asmt Year | Value |
| <b>TBmsy</b>     | -              | -         | -     |
| <b>SSBmsy</b>    | -              | -         | -     |
| <b>Fmsy</b>      | Fmsy-extr-1/yr | 2011      | 1.21  |
| <b>ERmsy</b>     | -              | -         | -     |
| <b>TBmgt</b>     | -              | -         | -     |
| <b>SSBmgt</b>    | -              | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr      | 2009      | 0.9   |
| <b>ERmgt</b>     | -              | -         | -     |
| <b>TB0</b>       | -              | -         | -     |
| <b>SSB0</b>      | -              | -         | -     |
| <b>MSY</b>       | -              | -         | -     |
| <b>M</b>         | M-1/yr         | 2011      | 1.05  |
| <b>TBlim</b>     | -              | -         | -     |
| <b>SSBlim</b>    | -              | -         | -     |
| <b>Flim</b>      | -              | -         | -     |
| <b>ERlim</b>     | -              | -         | -     |

| Time Series       |                        |           |                    |      |     |
|-------------------|------------------------|-----------|--------------------|------|-----|
| Type              | ID                     | Asmt Year | Curr Value         | Sex  | Age |
| <b>TB</b>         | -                      | -         | -                  | -    | -   |
| <b>SSB</b>        | SSB-MT                 | 2009      | 4630               | Both | -   |
| <b>TN</b>         | -                      | -         | -                  | -    | -   |
| <b>R</b>          | R-E00                  | 2009      | $2.98 \times 10^9$ | -    | -   |
| <b>F</b>          | F-1/yr                 | 2011      | 1.65               | -    | -   |
| <b>ER</b>         | -                      | -         | -                  | -    | -   |
| <b>TC</b>         | TC-MT                  | 2009      | 8810               |      |     |
| <b>TL</b>         | -                      | -         | -                  |      |     |
| <b>TB/TBmsy</b>   | -                      | -         | -                  |      |     |
| <b>SSB/SSBmsy</b> | -                      | -         | -                  |      |     |
| <b>F/Fmsy</b>     | FdivFmsy-dimensionless | 2011      | 1.4                |      |     |
| <b>ER/ERmsy</b>   | -                      | -         | -                  |      |     |
| <b>TB/TBmgt</b>   | -                      | -         | -                  |      |     |
| <b>SSB/SSBmgt</b> | -                      | -         | -                  |      |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr       | 2009      | 1.533              |      |     |
| <b>ER/ERmgt</b>   | -                      | -         | -                  |      |     |



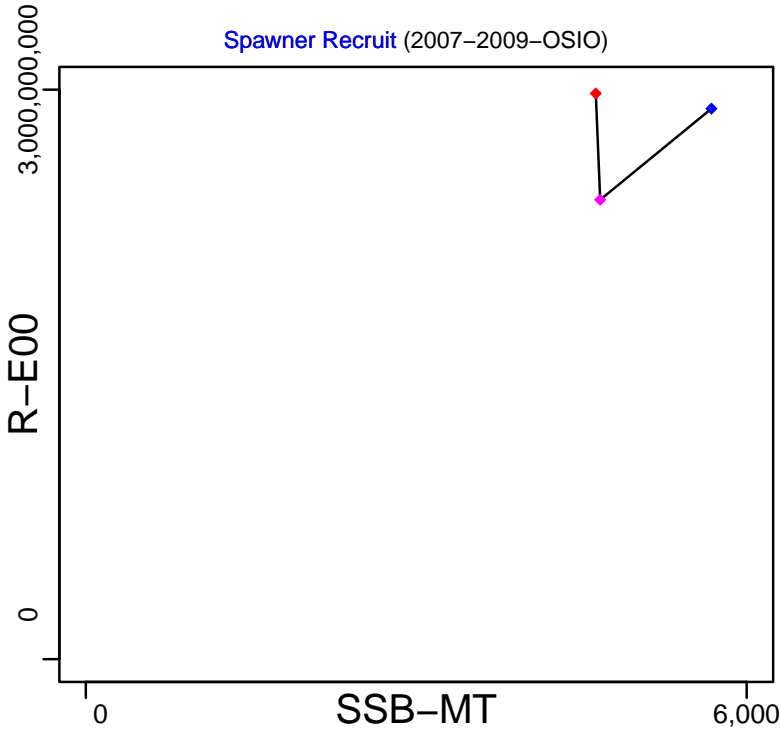
Kobe MSY\*



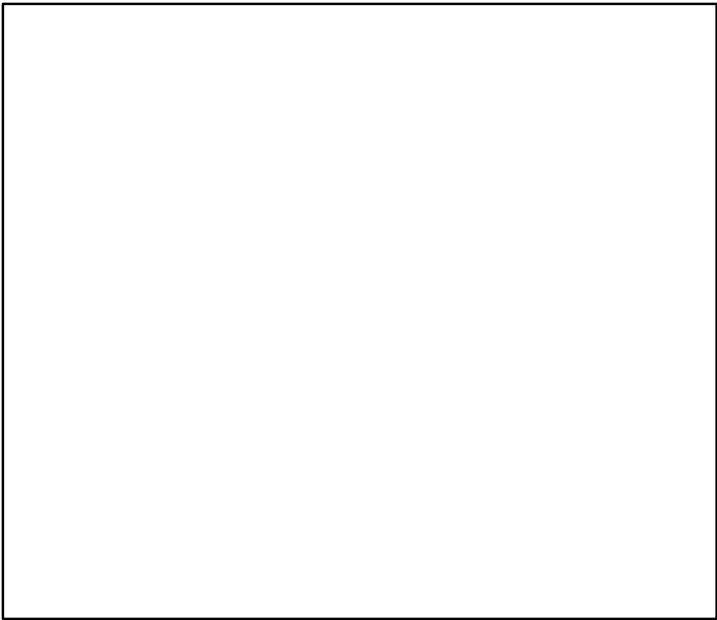
Kobe MGT\*



Spawner Recruit (2007–2009–OSIO)



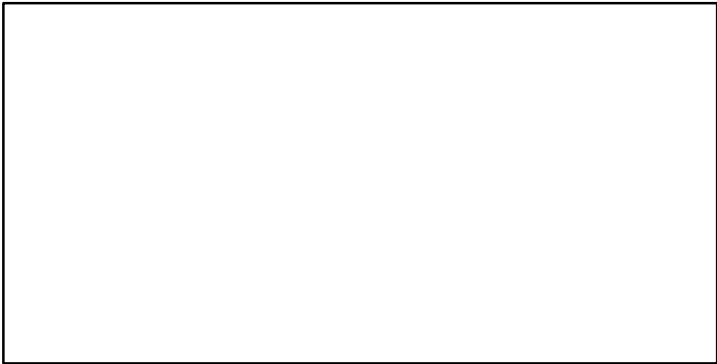
Production\*



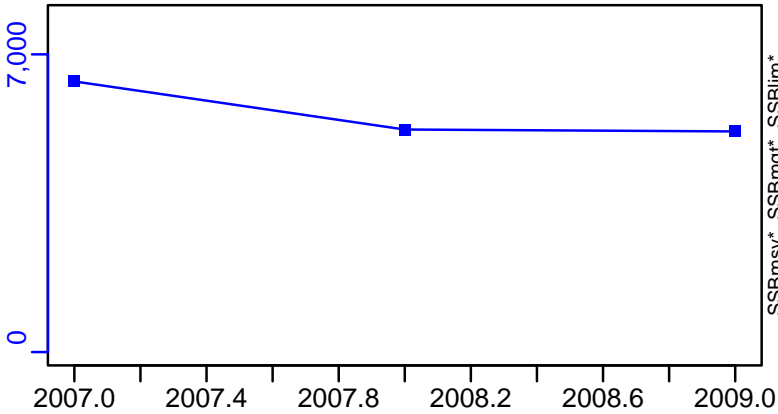
◆ Start Year ◆ End Year \* No Data

Deep water rose shrimp Geographical Sub-Areas 12-16 [RSHRMPMEDGSA12-16]

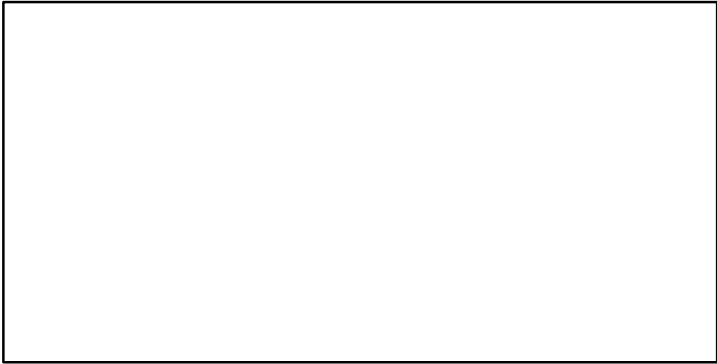
TB\*



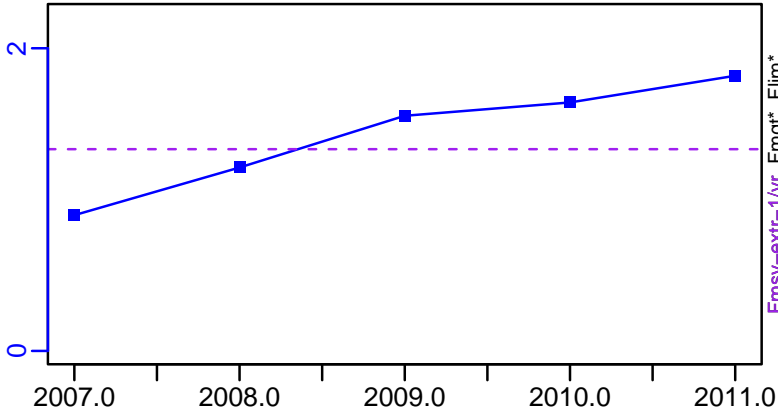
SSB-MT (2007-2009-OSIO)



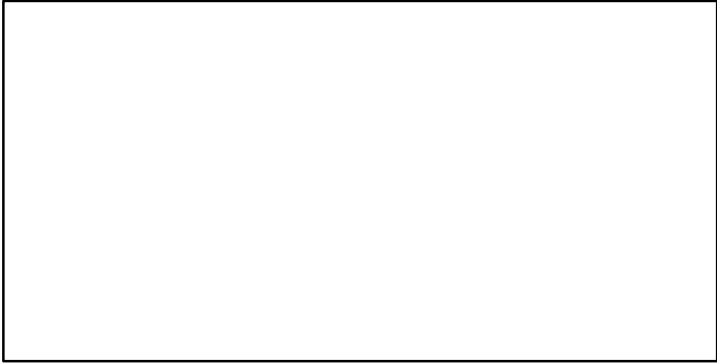
TN \*



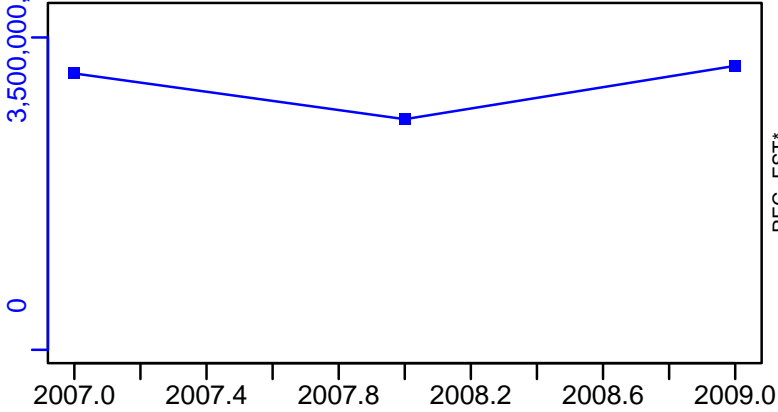
F-1/yr (2007-2011-BANOBI)



ER\*

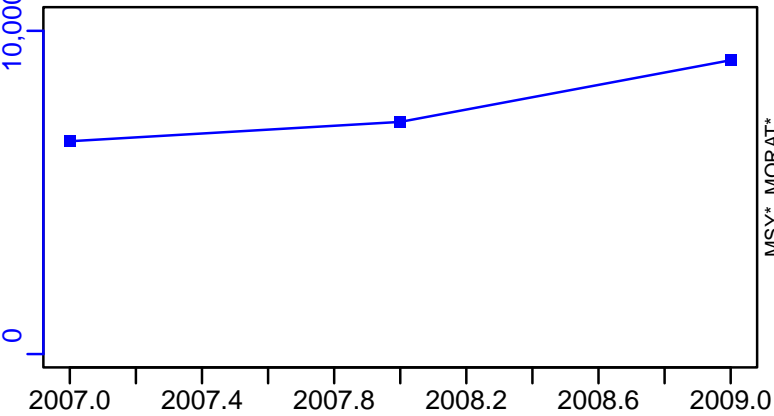


R-E00 (2007-2009-OSIO)

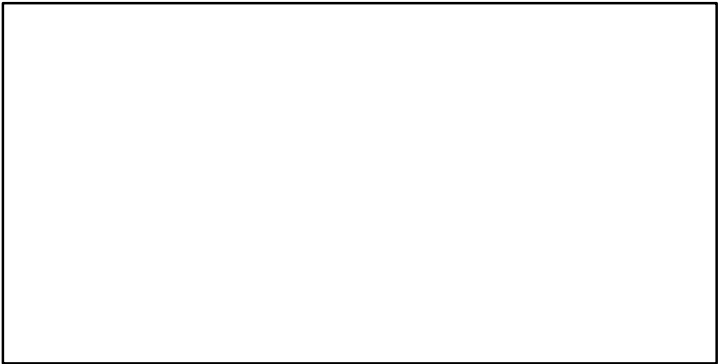


Deep water rose shrimp Geographical Sub-Areas 12–16 [RSHRMPMEDGSA12–16]

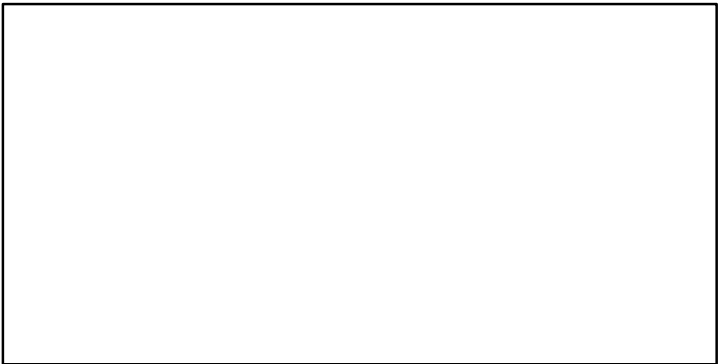
TC–MT, TL\*, RecC\* (2007–2009–OSIO)



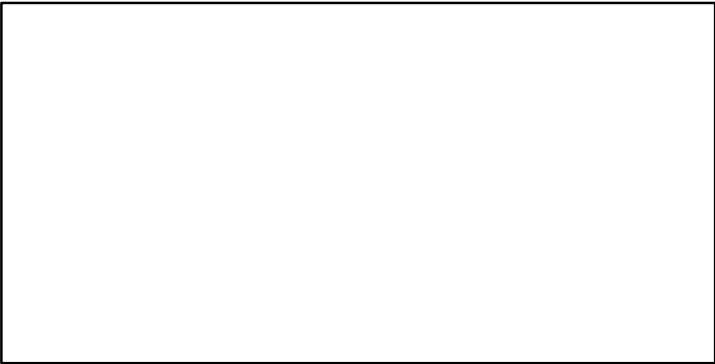
TAC\*, Cpair\*, Cadv\*



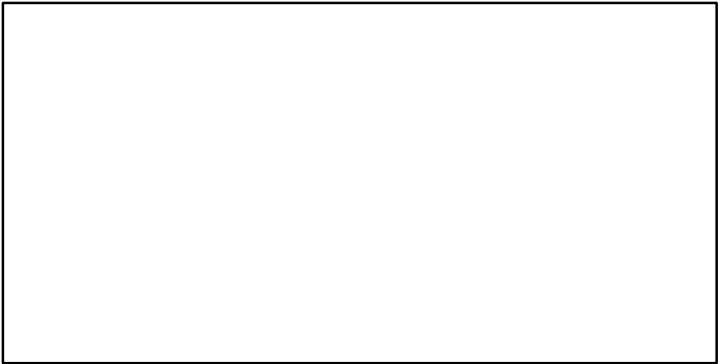
CPUE\*



EFFORT\*



CdivMSY\*



## Deep water rose shrimp Geographical Sub-Areas 17-19 [RSHRMPMEDGSA17-19]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Parapenaeus longirostris  |
| <b>Current Assess ID</b>    | STECF-RSHRMPMEDGSA17-19-2002-2019-MEDIMP2021-2                                |
| <b>Area</b>                 | Geographical Sub-Areas 17-19  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2019, 2014  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2019      | 0.505 |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |               |     |     |
|-------------|------------------|-----------|---------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value    | Sex | Age |
| TB          | -                | -         | -             | -   | -   |
| SSB         | SSB-MT           | 2019      | 3221          | -   | -   |
| TN          | -                | -         | -             | -   | -   |
| R           | R-E00            | 2019      | 7,490,295,088 | -   | -   |
| F           | F-1/yr           | 2019      | 1.488         | -   | -   |
| ER          | -                | -         | -             | -   | -   |
| TC          | TC-MT            | 2019      | 5993          |     |     |
| TL          | -                | -         | -             |     |     |
| TB/TBmsy    | -                | -         | -             |     |     |
| SSB/SSBmsy  | -                | -         | -             |     |     |
| F/Fmsy      | -                | -         | -             |     |     |
| ER/ERmsy    | -                | -         | -             |     |     |
| TB/TBmgt    | -                | -         | -             |     |     |
| SSB/SSBmgt  | -                | -         | -             |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2019      | 2.949         |     |     |
| ER/ERmgt    | -                | -         | -             |     |     |

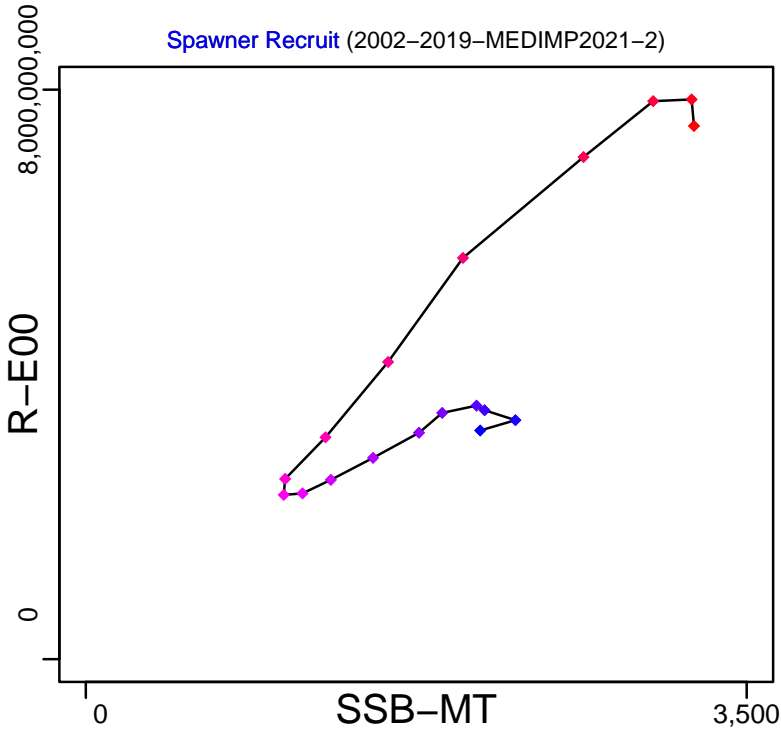
Kobe MSY\*



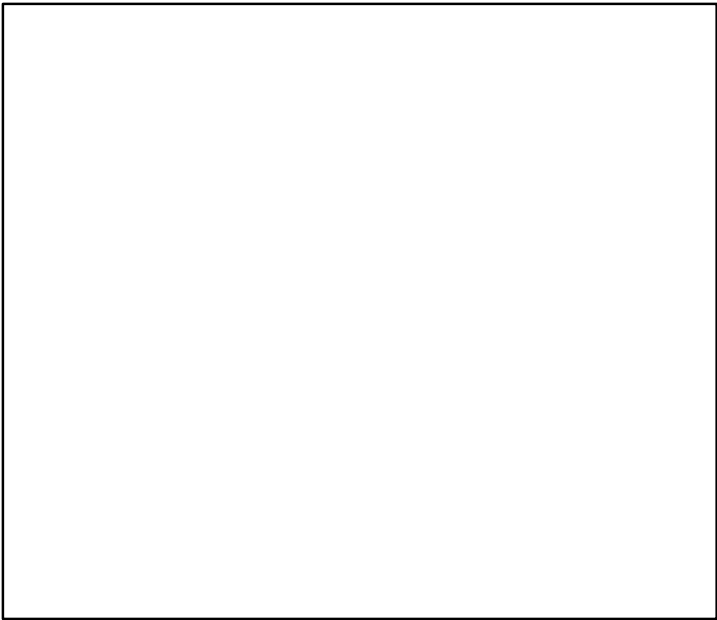
Kobe MGT\*



Spawner Recruit (2002–2019–MEDIMP2021–2)



Production\*



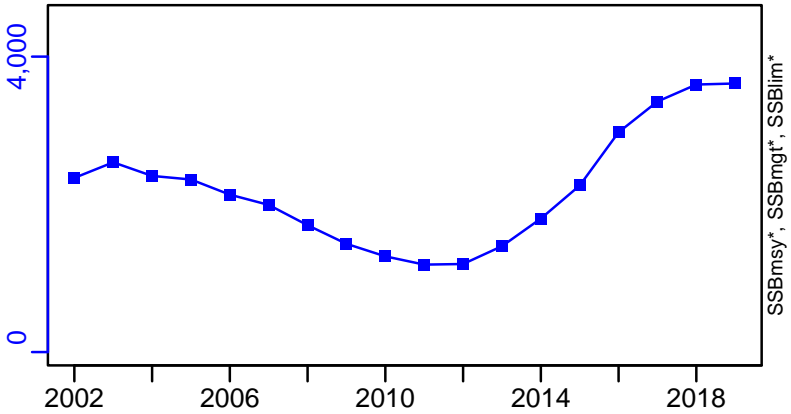
◆ Start Year ◆ End Year \* No Data

Deep water rose shrimp Geographical Sub-Areas 17-19 [RSHRMPMEDGSA17-19]

TB\*



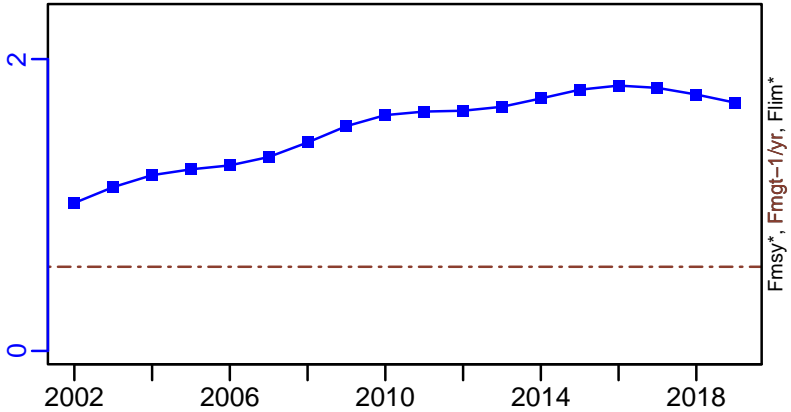
SSB-MT (2002-2019-MEDIMP2021-2)



TN \*



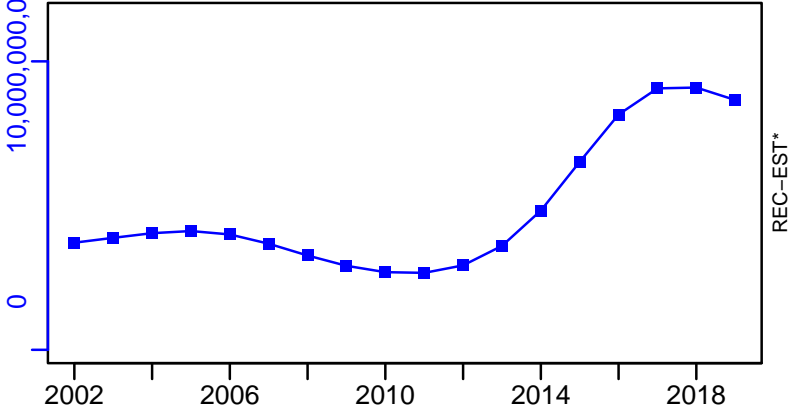
F-1/yr (2002-2019-MEDIMP2021-2)



ER\*

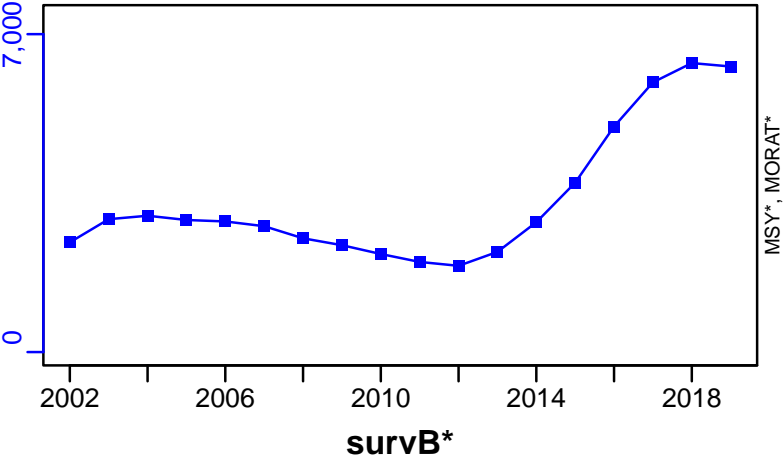


R-E00 (2002-2019-MEDIMP2021-2)



Deep water rose shrimp Geographical Sub-Areas 17–19 [RSHRMPMEDGSA17–19]

TC–MT, TL\*, RecC\* (2002–2019–MEDIMP2021–2)



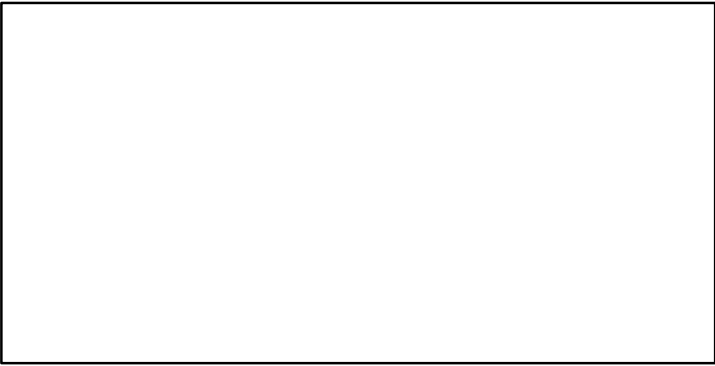
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



**Deep water rose shrimp Aegean Sea and Crete Island (GSA 22,23)**  
**[RSHRMPMEDGSA22-23]**

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Parapenaeus longirostris  |
| <b>Current Assess ID</b>    | STECF-RSHRMPMEDGSA22-23-1990-2006-MEDIMP2021-2                                |
| <b>Area</b>                 | Aegean Sea and Crete Island (GSA 22,23)                                       |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2006  |

| Reference Points |    |           |       |
|------------------|----|-----------|-------|
| Type             | ID | Asmt Year | Value |
| TBmsy            | -  | -         | -     |
| SSBmsy           | -  | -         | -     |
| Fmsy             | -  | -         | -     |
| ERmsy            | -  | -         | -     |
| TBmgt            | -  | -         | -     |
| SSBmgt           | -  | -         | -     |
| Fmgt             | -  | -         | -     |
| ERmgt            | -  | -         | -     |
| TB0              | -  | -         | -     |
| SSB0             | -  | -         | -     |
| MSY              | -  | -         | -     |
| M                | -  | -         | -     |
| TBlim            | -  | -         | -     |
| SSBlim           | -  | -         | -     |
| Flim             | -  | -         | -     |
| ERlim            | -  | -         | -     |

| Time Series |       |           |            |     |     |
|-------------|-------|-----------|------------|-----|-----|
| Type        | ID    | Asmt Year | Curr Value | Sex | Age |
| TB          | -     | -         | -          | -   | -   |
| SSB         | -     | -         | -          | -   | -   |
| TN          | -     | -         | -          | -   | -   |
| R           | -     | -         | -          | -   | -   |
| F           | -     | -         | -          | -   | -   |
| ER          | -     | -         | -          | -   | -   |
| TC          | TC-MT | 2006      | 2363       |     |     |
| TL          | -     | -         | -          |     |     |
| TB/TBmsy    | -     | -         | -          |     |     |
| SSB/SSBmsy  | -     | -         | -          |     |     |
| F/Fmsy      | -     | -         | -          |     |     |
| ER/ERmsy    | -     | -         | -          |     |     |
| TB/TBmgt    | -     | -         | -          |     |     |
| SSB/SSBmgt  | -     | -         | -          |     |     |
| F/Fmgt      | -     | -         | -          |     |     |
| ER/ERmgt    | -     | -         | -          |     |     |



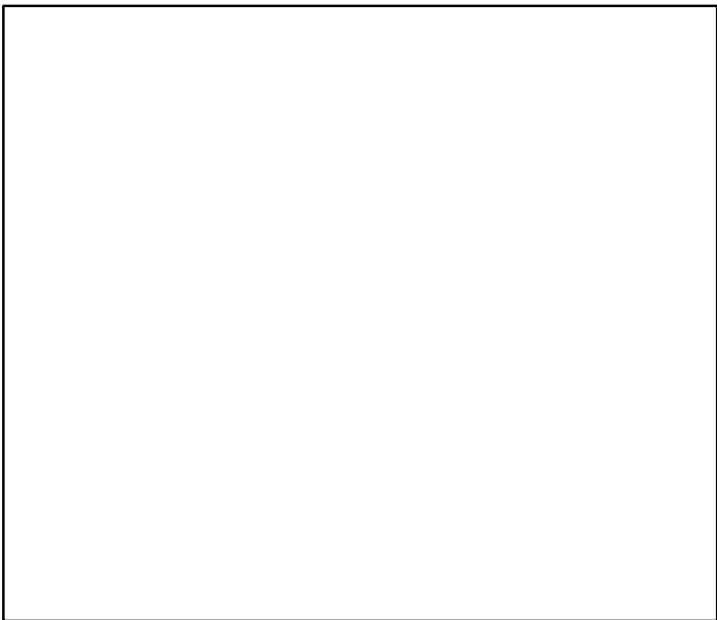
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

**TB\***



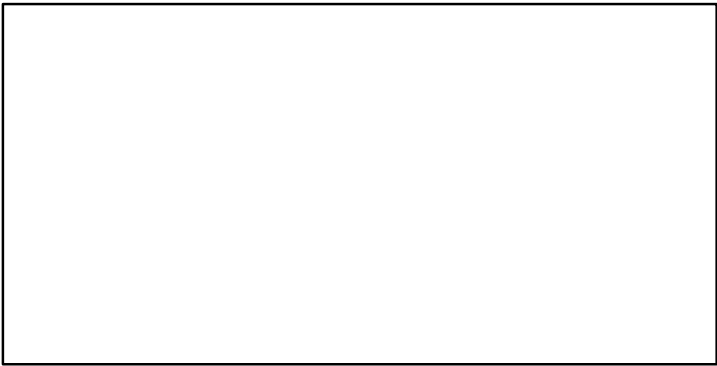
**SSB\***



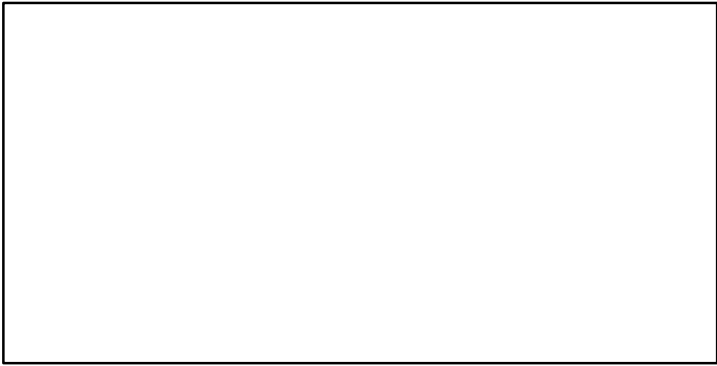
**TN \***



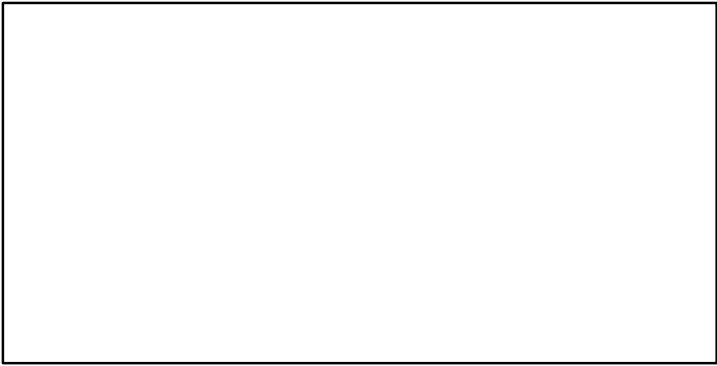
**F\***



**ER\***

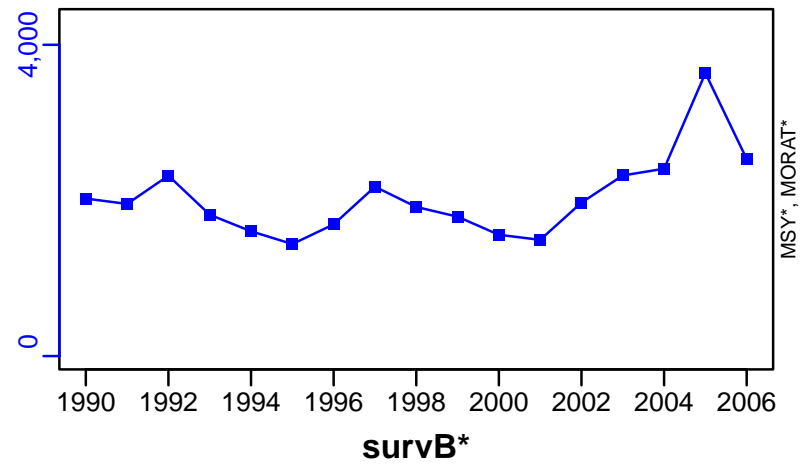


**Recruits\***



Deep water rose shrimp Aegean Sea and Crete Island (GSA 22,23) [RSHRMPMEDGSA22-23]

TC-MT, TL\*, RecC\* (1990-2006-MEDIMP2021-2)



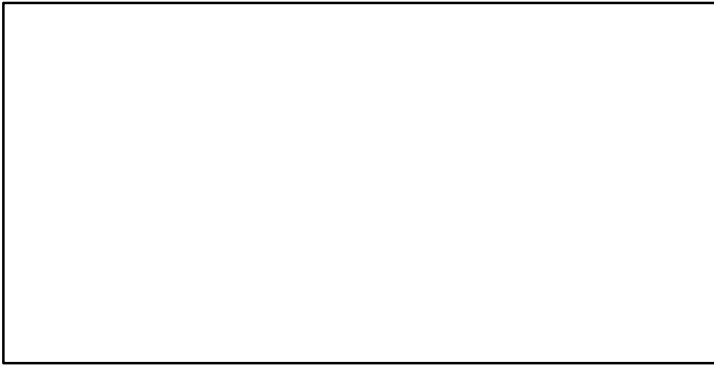
TAC\*, Cpair\*, Cadv\*



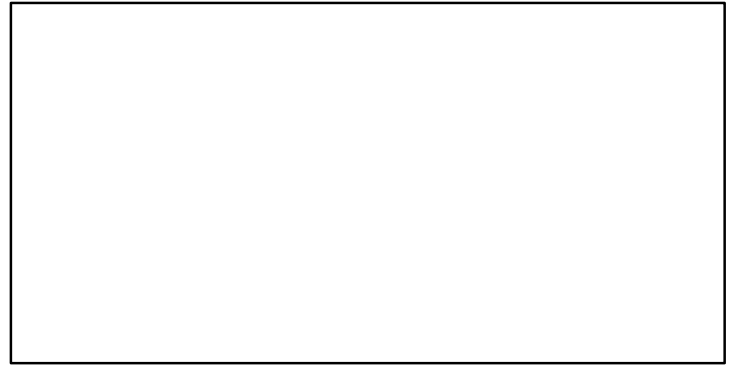
CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

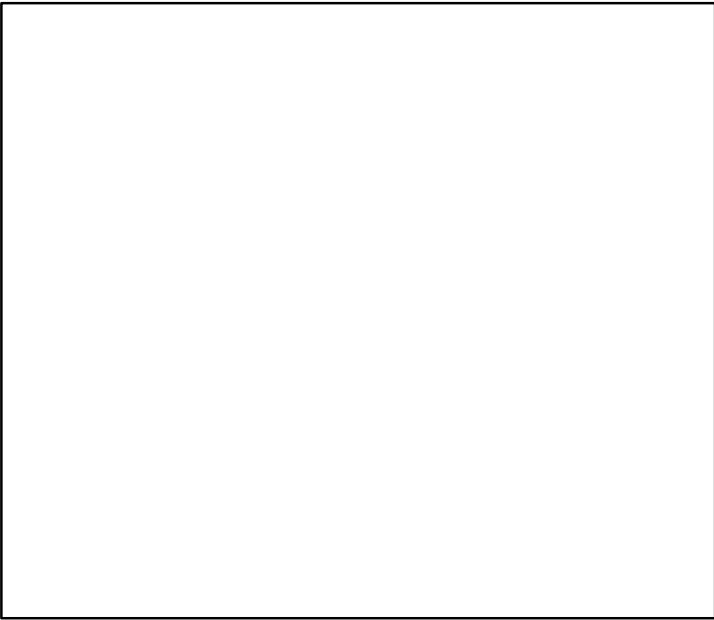
## Deep water rose shrimp Balearic Island [RSHRMPMEDGSA5]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Parapenaeus longirostris  |
| <b>Current Assess ID</b>    | STECF-RSHRMPMEDGSA5-2002-2012-OSIO  |
| <b>Area</b>                 | Balearic Island   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2012      | 0.62  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2012      | 7          | -   | 1+  |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2012      | 3,490,000  | -   | -   |
| <b>F</b>          | F-1/yr           | 2012      | 0.68       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2012      | 4.17       |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2012      | 1.097      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

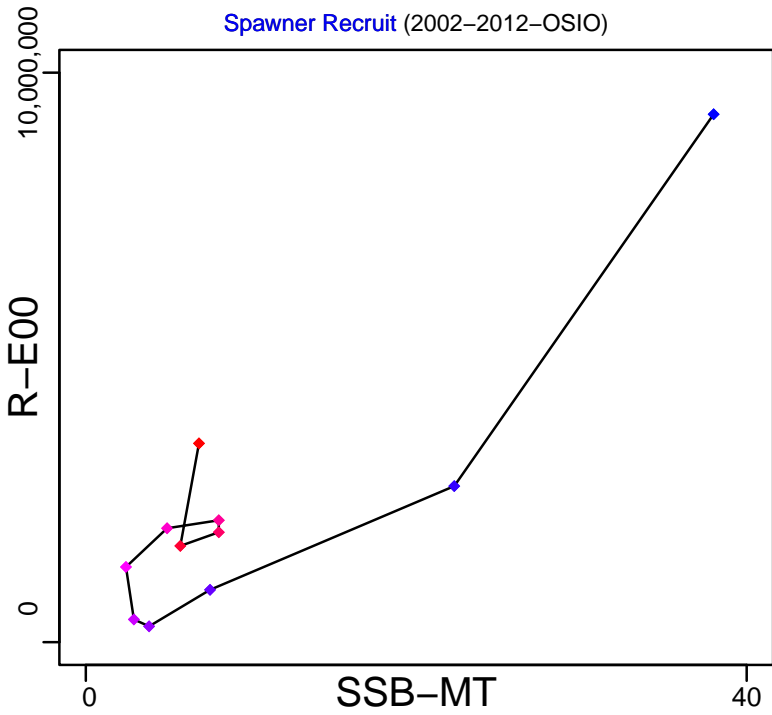
Kobe MSY\*



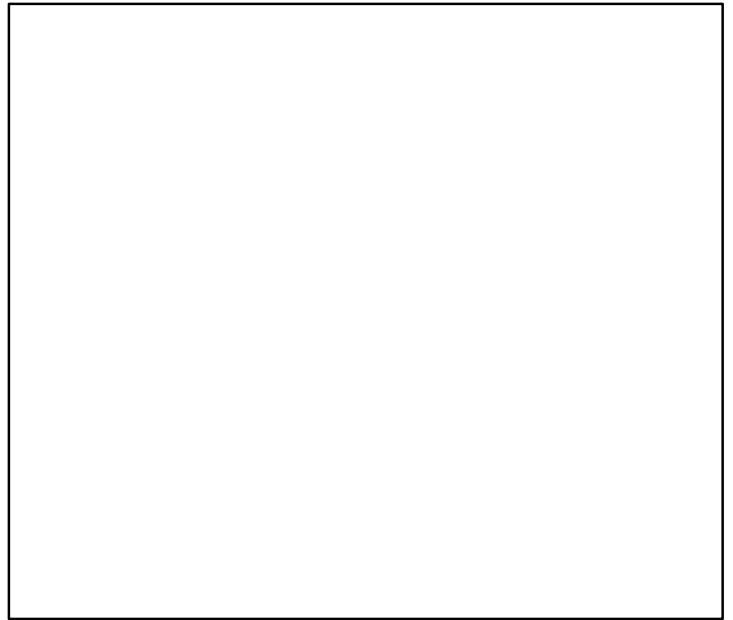
Kobe MGT\*



Spawner Recruit (2002–2012–OSIO)



Production\*



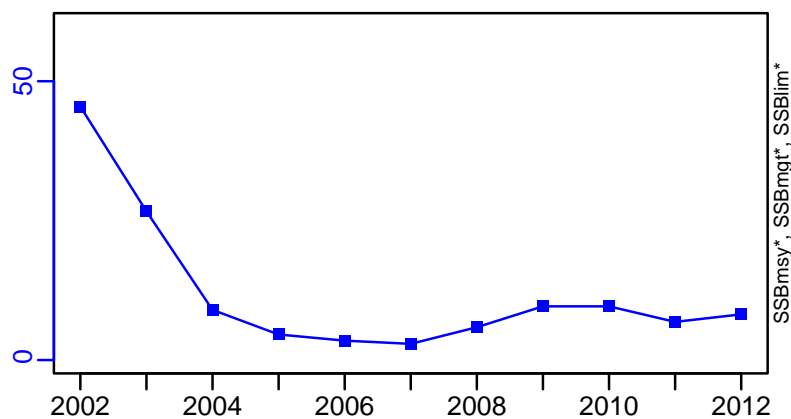
◆ Start Year ◆ End Year \* No Data

# Deep water rose shrimp Balearic Island [RSHRMPMEDGSA5]

TB\*



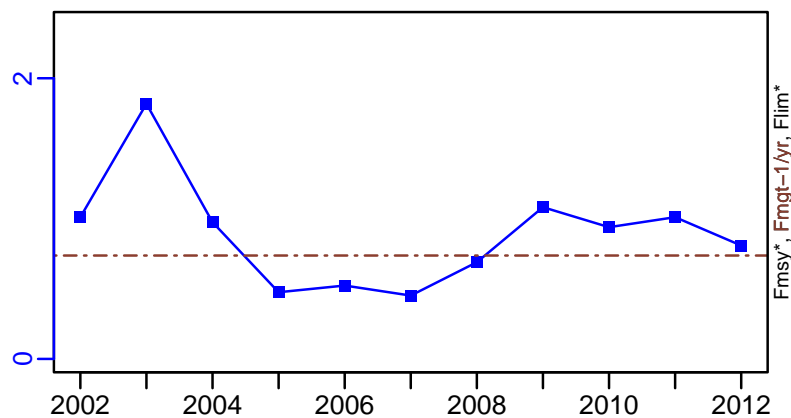
SSB-MT (2002-2012-OSIO)



TN \*



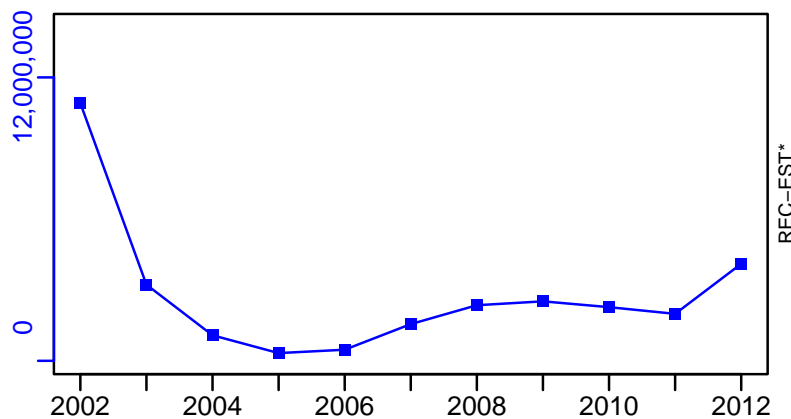
F-1/yr (2002-2012-OSIO)



ER\*

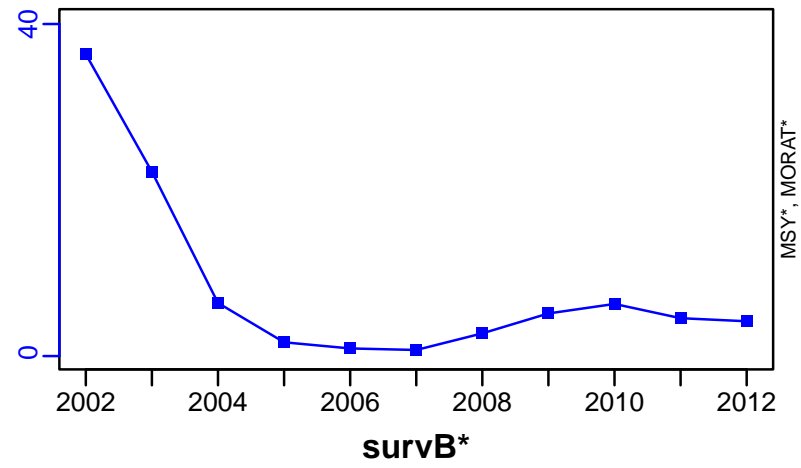


R-E00 (2002-2012-OSIO)

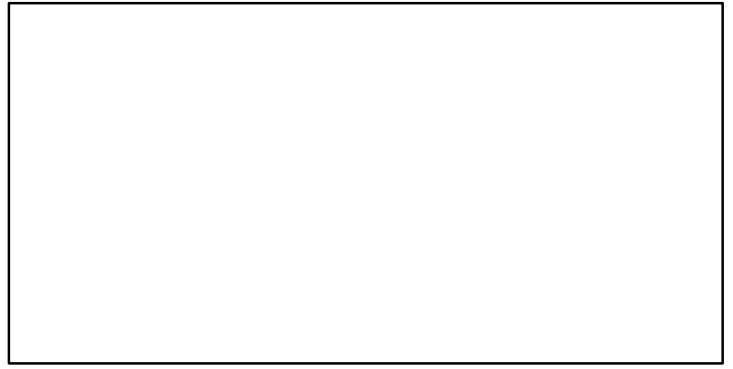


Deep water rose shrimp Balearic Island [RSHRMPMEDGSA5]

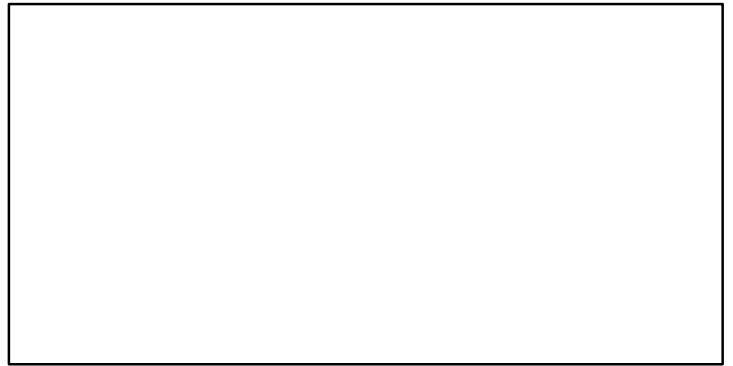
TC-MT, TL\*, RecC\* (2002-2012-OSIO)



TAC\*, Cpair\*, Cadv\*



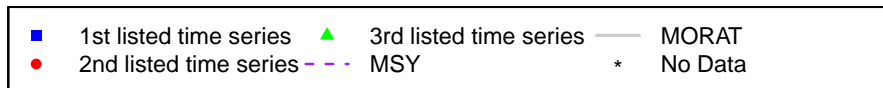
CPUE\*



EFFORT\*



CdivMSY\*



## Deep water rose shrimp Geographical Sub-Areas 9-11 [RSHRMPMEDGSA9-11]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Parapenaeus longirostris  |
| <b>Current Assess ID</b>    | STECF-RSHRMPMEDGSA9-11-2009-2019-MEDIMP2021-2                                 |
| <b>Area</b>                 | Geographical Sub-Areas 9-11   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2015, 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 1.09  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |               |     |     |
|-------------------|------------------|-----------|---------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value    | Sex | Age |
| <b>TB</b>         | TB-MT            | 2015      | 5390          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 2575          | -   | -   |
| <b>TN</b>         | -                | -         | -             | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 4,302,305,361 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 1.025         | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2015      | 0.286         | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 1606          |     |     |
| <b>TL</b>         | TL-MT            | 2015      | 1540          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -             |     |     |
| <b>F/Fmsy</b>     | -                | -         | -             |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -             |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -             |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 0.941         |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -             |     |     |



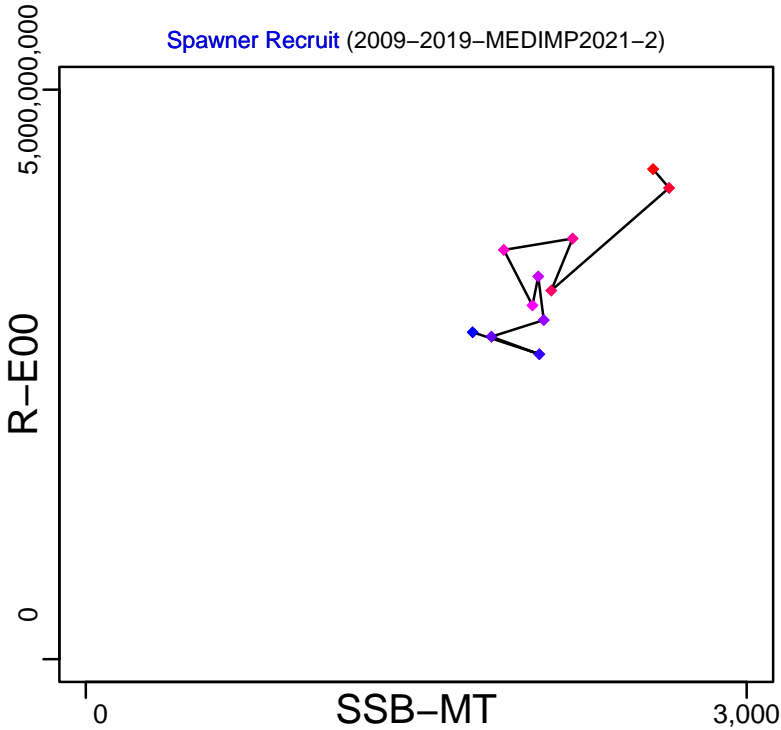
Kobe MSY\*



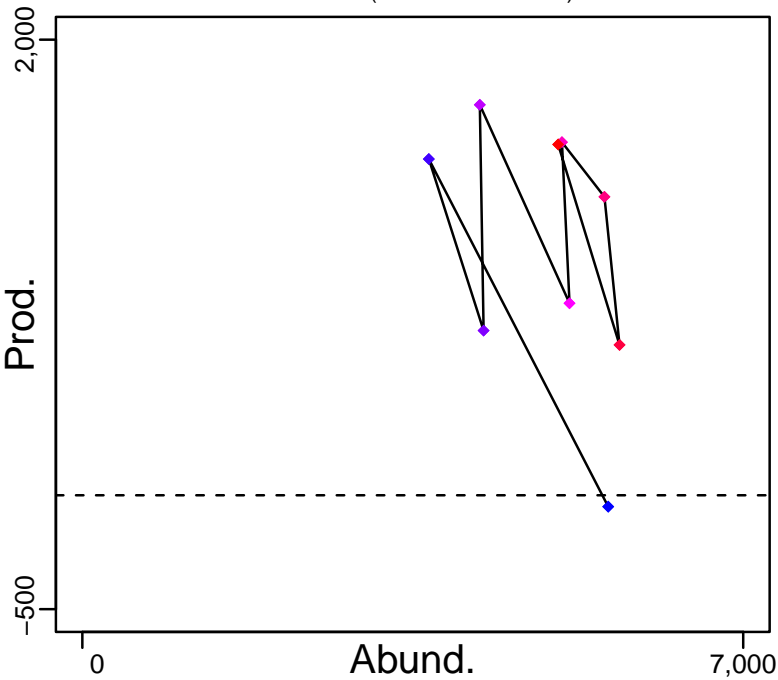
Kobe MGT\*



Spawner Recruit (2009–2019–MEDIMP2021–2)



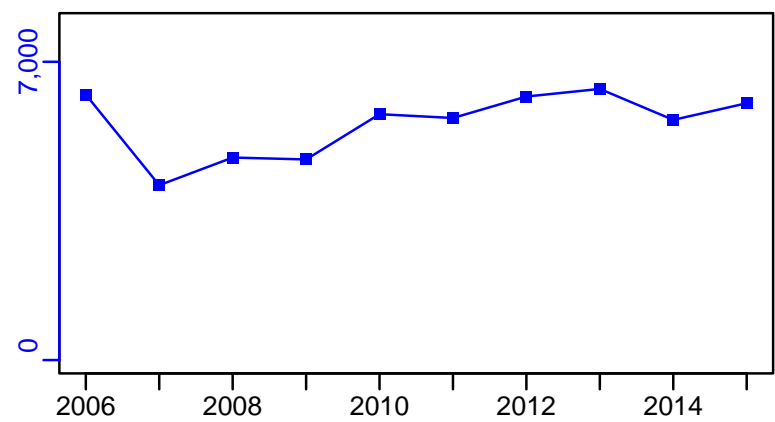
Production (2006–2015–OSIO)



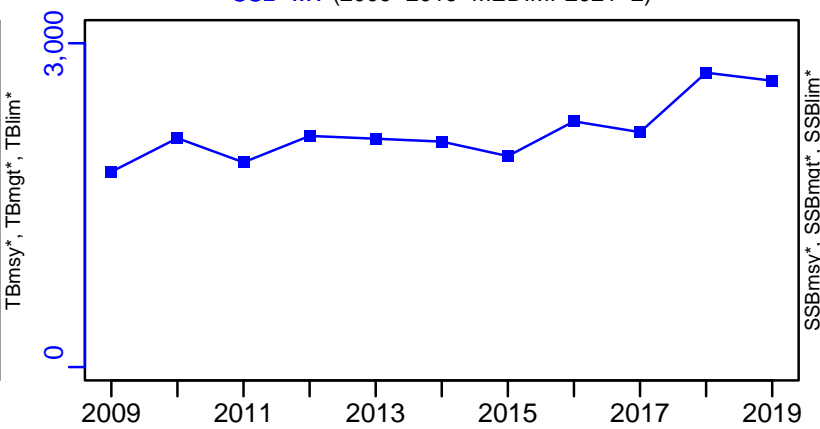
◆ Start Year ◆ End Year \* No Data

# Deep water rose shrimp Geographical Sub-Areas 9-11 [RSHRMPMEDGSA9-11]

TB-MT (2006-2015-OSIO)



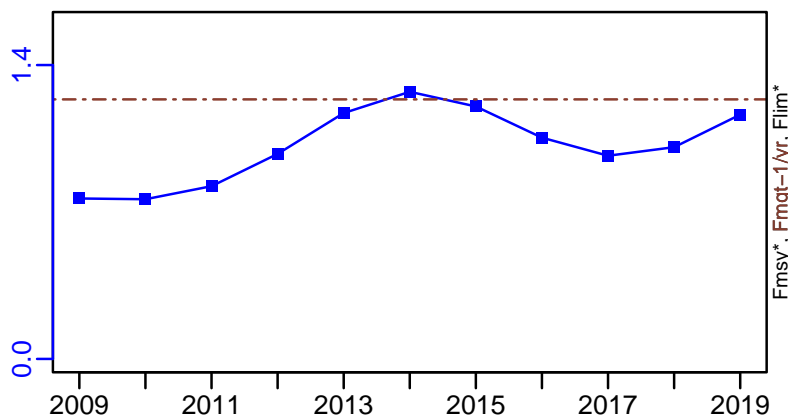
SSB-MT (2009-2019-MEDIMP2021-2)



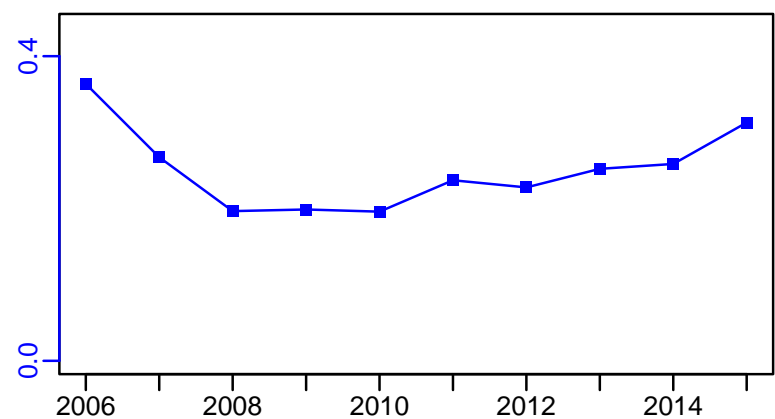
TN \*



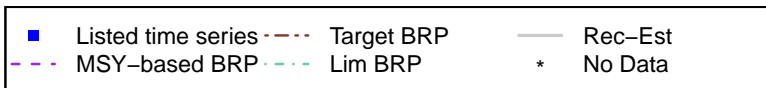
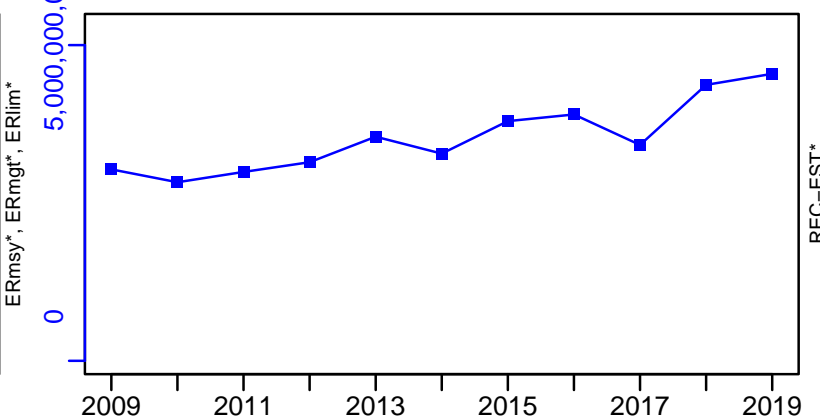
F-1/yr (2009-2019-MEDIMP2021-2)



ER-calc-ratio (2006-2015-OSIO)

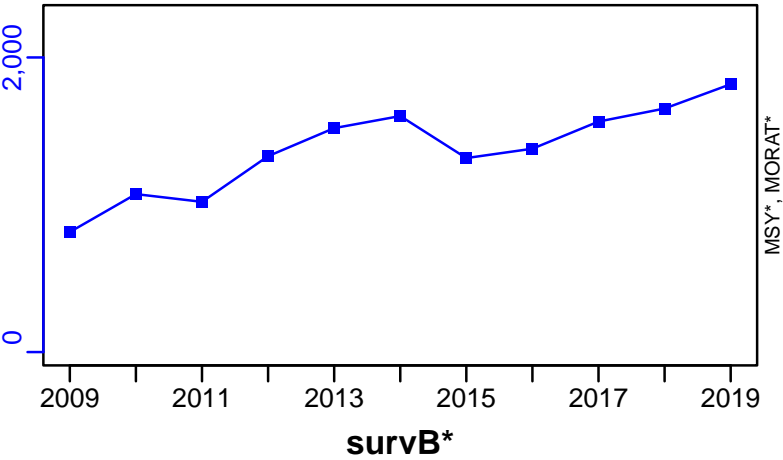


R-E00 (2009-2019-MEDIMP2021-2)



Deep water rose shrimp Geographical Sub-Areas 9–11 [RSHRMPMEDGSA9–11]

TC–MT, TL\*, RecC\* (2009–2019–MEDIMP2021–2)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*

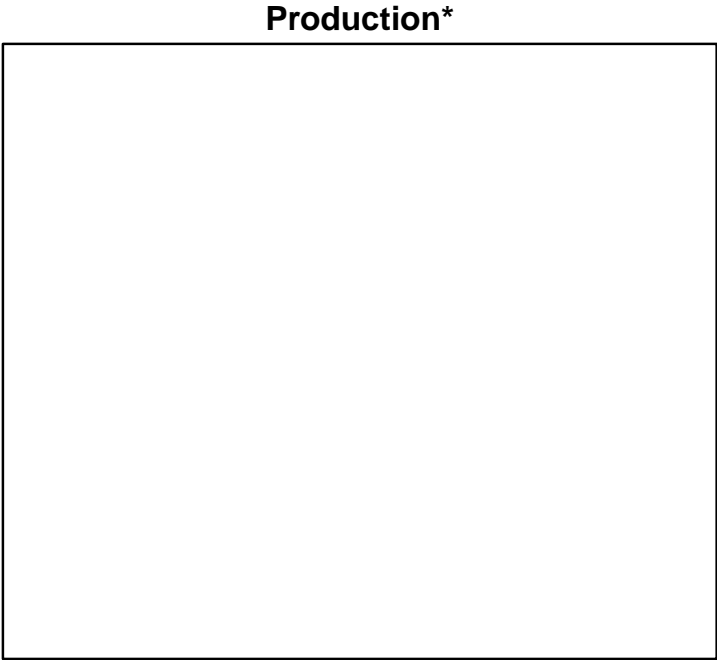
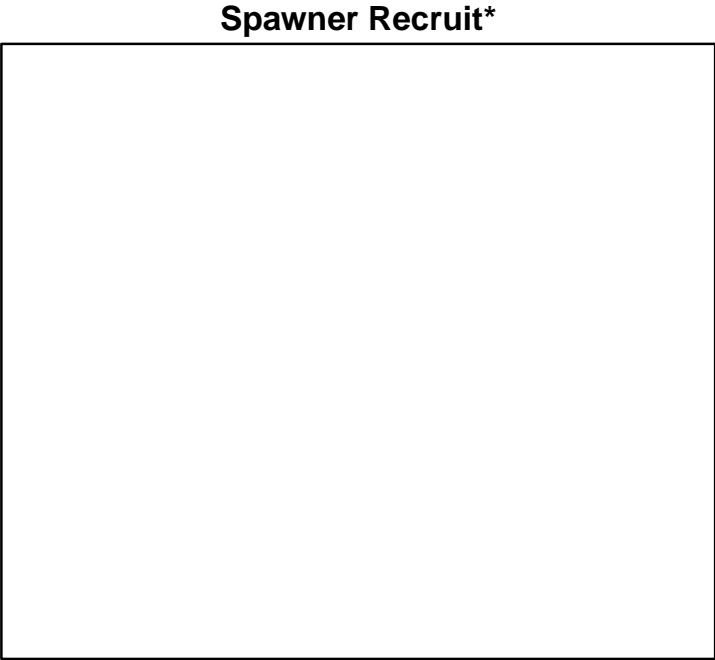
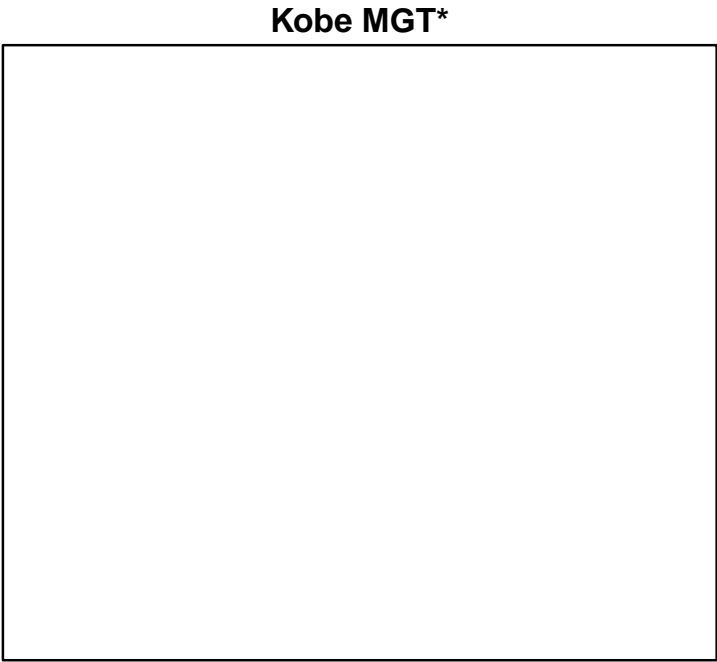
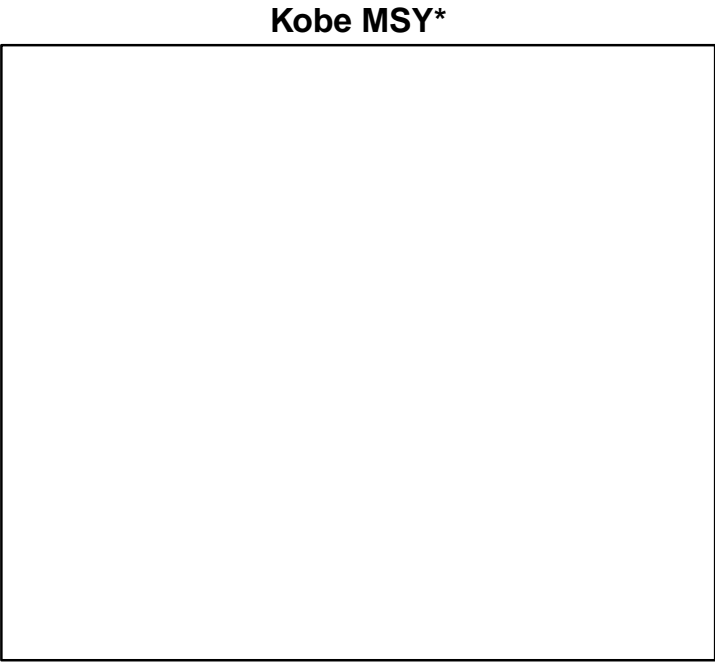


## European pilchard Northern Alboran Sea [SARDMEDGSA1]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sardina pilchardus  |
| <b>Current Assess ID</b>    | STECF-SARDMEDGSA1-2002-2012-OSIO  |
| <b>Area</b>                 | Northern Alboran Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012  |

| Reference Points |    |           |       |
|------------------|----|-----------|-------|
| Type             | ID | Asmt Year | Value |
| TBmsy            | -  | -         | -     |
| SSBmsy           | -  | -         | -     |
| Fmsy             | -  | -         | -     |
| ERmsy            | -  | -         | -     |
| TBmgt            | -  | -         | -     |
| SSBmgt           | -  | -         | -     |
| Fmgt             | -  | -         | -     |
| ERmgt            | -  | -         | -     |
| TB0              | -  | -         | -     |
| SSB0             | -  | -         | -     |
| MSY              | -  | -         | -     |
| M                | -  | -         | -     |
| TBlim            | -  | -         | -     |
| SSBlim           | -  | -         | -     |
| Flim             | -  | -         | -     |
| ERlim            | -  | -         | -     |

| Time Series |       |           |            |     |     |
|-------------|-------|-----------|------------|-----|-----|
| Type        | ID    | Asmt Year | Curr Value | Sex | Age |
| TB          | -     | -         | -          | -   | -   |
| SSB         | -     | -         | -          | -   | -   |
| TN          | -     | -         | -          | -   | -   |
| R           | -     | -         | -          | -   | -   |
| F           | -     | -         | -          | -   | -   |
| ER          | -     | -         | -          | -   | -   |
| TC          | TC-MT | 2012      | 6220       |     |     |
| TL          | -     | -         | -          |     |     |
| TB/TBmsy    | -     | -         | -          |     |     |
| SSB/SSBmsy  | -     | -         | -          |     |     |
| F/Fmsy      | -     | -         | -          |     |     |
| ER/ERmsy    | -     | -         | -          |     |     |
| TB/TBmgt    | -     | -         | -          |     |     |
| SSB/SSBmgt  | -     | -         | -          |     |     |
| F/Fmgt      | -     | -         | -          |     |     |
| ER/ERmgt    | -     | -         | -          |     |     |



◆ Start Year   ◆ End Year   \* No Data

TB\*



SSB\*



TN \*



F\*



ER\*

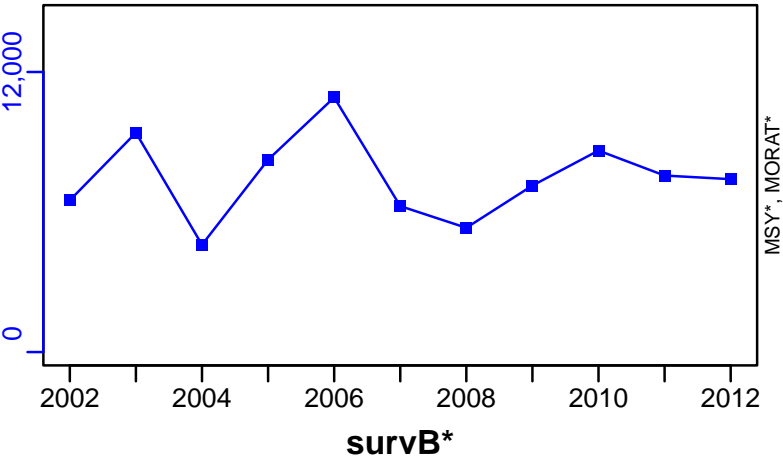


Recruits\*



European pilchard Northern Alboran Sea [SARDMEDGSA1]

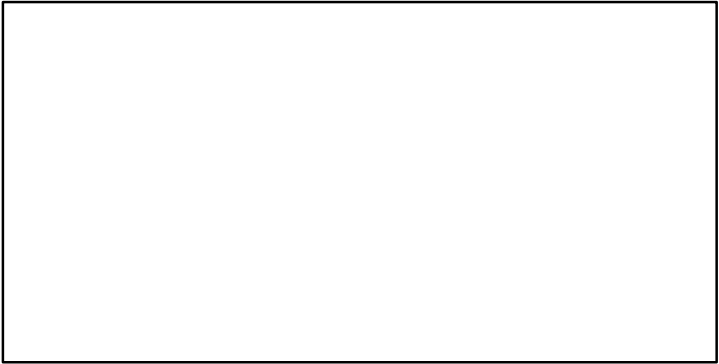
TC-MT, TL\*, RecC\* (2002-2012-OSIO)



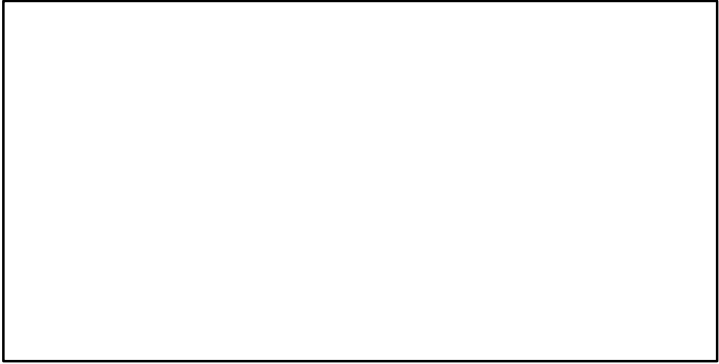
TAC\*, Cpair\*, Cadv\*



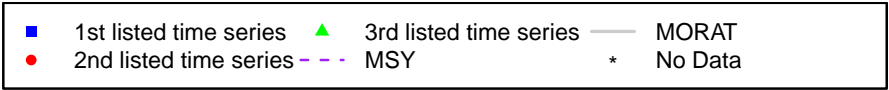
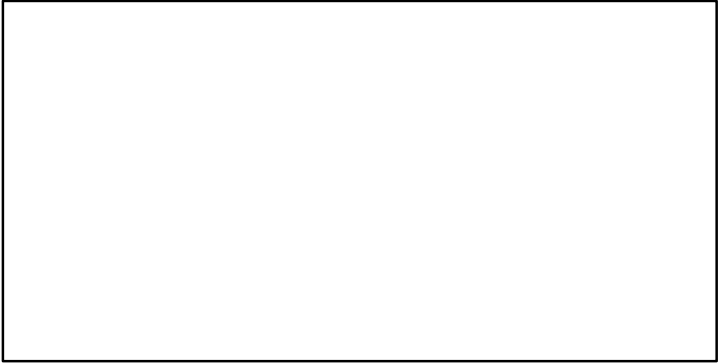
CPUE\*



EFFORT\*



CdivMSY\*



## Sardine South of Sicily [SARDMEDGSA16]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sardina pilchardus  |
| <b>Current Assess ID</b>    | WGSASP-SARDMEDGSA16-2003-2021-HIVELY  |
| <b>Area</b>                 | South of Sicily   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Small Pelagic species                    |
| <b>Asmts in RAM</b>         | 2011, 2021  |

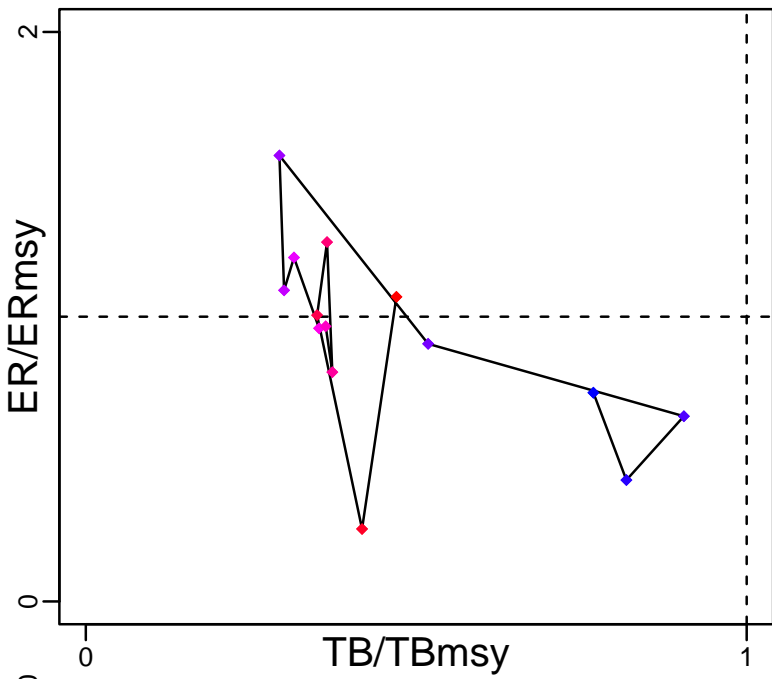
| Reference Points |                  |           |        |
|------------------|------------------|-----------|--------|
| Type             | ID               | Asmt Year | Value  |
| <b>TBmsy</b>     | TBmsy-MT         | 2011      | 32,527 |
| <b>SSBmsy</b>    | -                | -         | -      |
| <b>Fmsy</b>      | Fmsy-1/yr        | 2011      | 0.16   |
| <b>ERmsy</b>     | ERmsy-calc-ratio | 2011      | 0.163  |
| <b>TBmgt</b>     | -                | -         | -      |
| <b>SSBmgt</b>    | -                | -         | -      |
| <b>Fmgt</b>      | Fmgt-1/yr        | 2021      | 0.476  |
| <b>ERmgt</b>     | -                | -         | -      |
| <b>TB0</b>       | -                | -         | -      |
| <b>SSB0</b>      | -                | -         | -      |
| <b>MSY</b>       | MSY-MT           | 2011      | 5307   |
| <b>M</b>         | -                | -         | -      |
| <b>TBlim</b>     | -                | -         | -      |
| <b>SSBlim</b>    | -                | -         | -      |
| <b>Flim</b>      | -                | -         | -      |
| <b>ERlim</b>     | -                | -         | -      |

| Time Series       |                                |           |            |     |     |
|-------------------|--------------------------------|-----------|------------|-----|-----|
| Type              | ID                             | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | TB-MT                          | 2021      | 1103       | -   | -   |
| <b>SSB</b>        | SSB-MT                         | 2021      | 643        | -   | -   |
| <b>TN</b>         | -                              | -         | -          | -   | -   |
| <b>R</b>          | R-E00                          | 2021      | 29,746,000 | -   | -   |
| <b>F</b>          | F-1/yr                         | 2021      | 1.666      | -   | -   |
| <b>ER</b>         | ER-calc-ratio                  | 2021      | 0.777      | -   | -   |
| <b>TC</b>         | TC-MT                          | 2011      | 2670       |     |     |
| <b>TL</b>         | TL-MT                          | 2021      | 858        |     |     |
| <b>TB/TBmsy</b>   | TBdivTBmsy-dimensionless       | 2011      | 0.47       |     |     |
| <b>SSB/SSBmsy</b> | -                              | -         | -          |     |     |
| <b>F/Fmsy</b>     | FdivFmsy-dimensionless         | 2011      | 1.07       |     |     |
| <b>ER/ERmsy</b>   | ER-calc-ratio/ERmsy-calc-ratio | 2011      | 1.07       |     |     |
| <b>TB/TBmgt</b>   | -                              | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                              | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr               | 2021      | 3.502      |     |     |
| <b>ER/ERmgt</b>   | -                              | -         | -          |     |     |

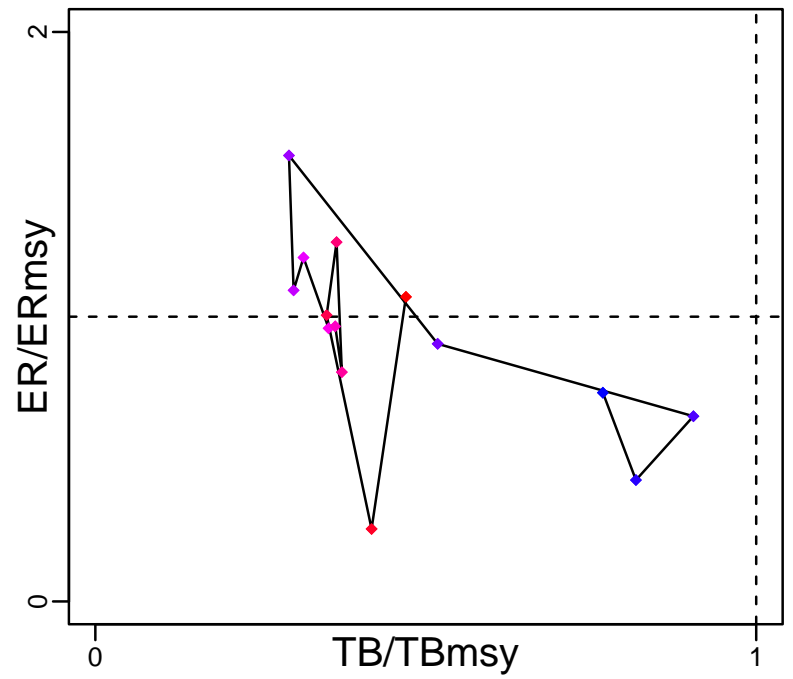


# Sardine South of Sicily [SARDMEDGSA16]

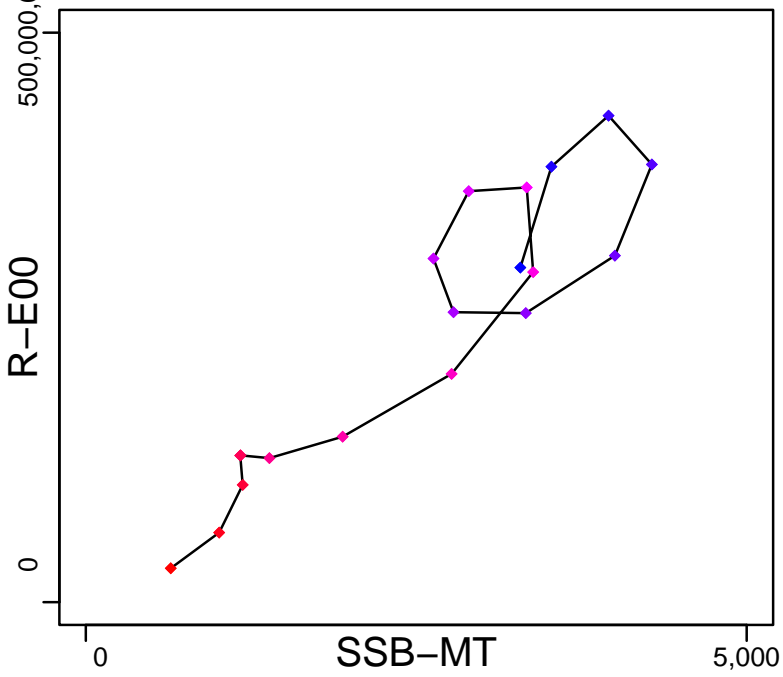
Kobe MSYpref (1998–2011–BANOB1)



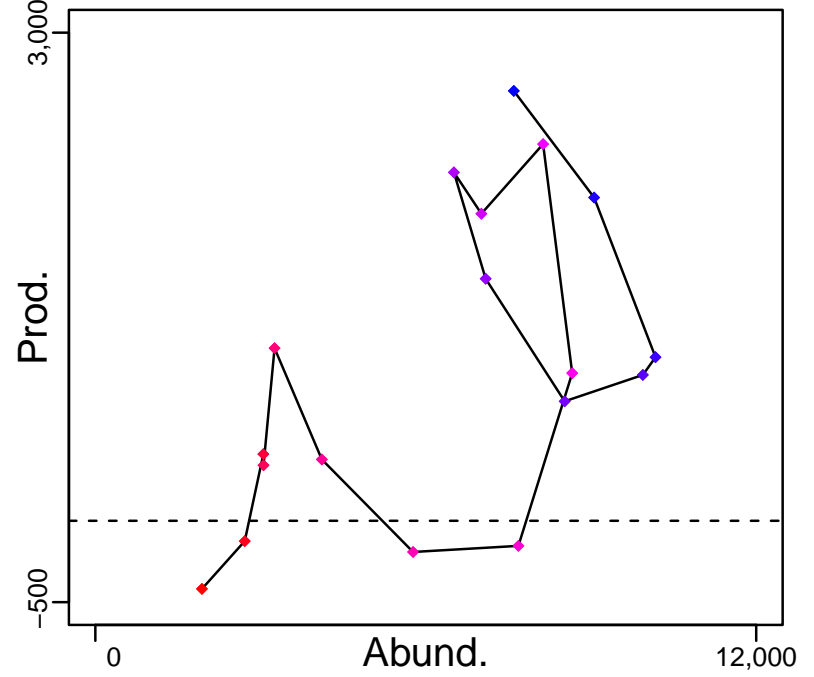
Kobe MGTpref (1998–2011–BANOB1)



Spawner Recruit (2003–2021–HIVELY)



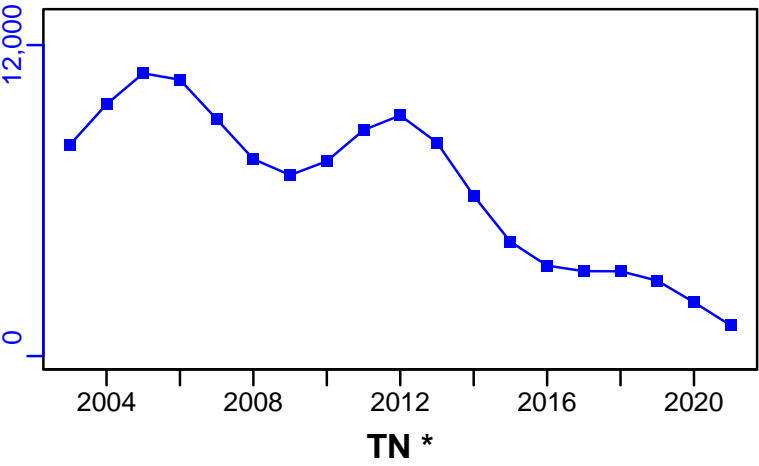
Production (2003–2021–HIVELY)



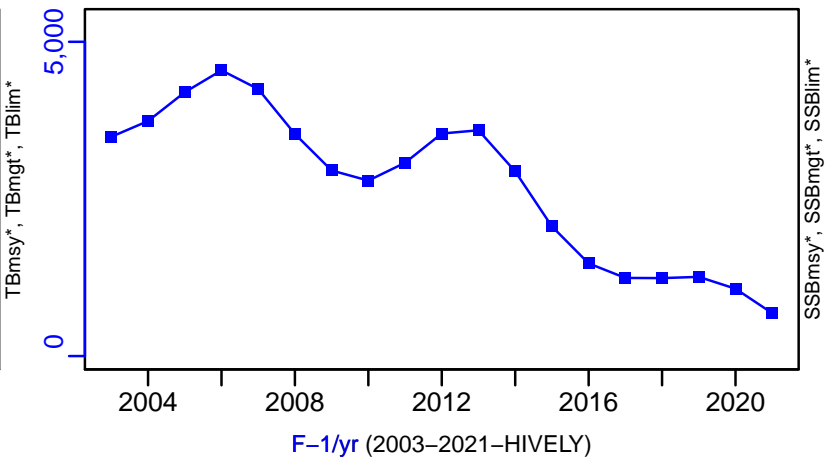
◆ Start Year ◆ End Year \* No Data

# Sardine South of Sicily [SARDMEDGSA16]

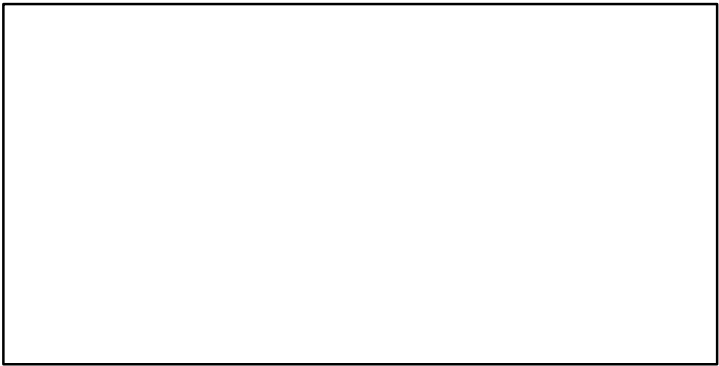
TB-MT (2003–2021–HIVELY)



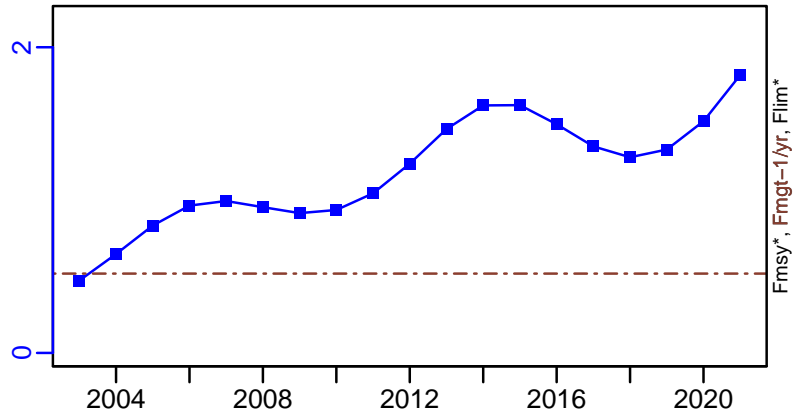
SSB-MT (2003–2021–HIVELY)



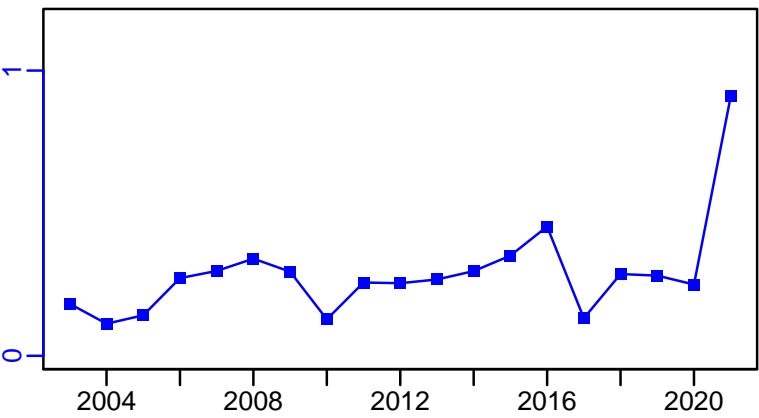
TN \*



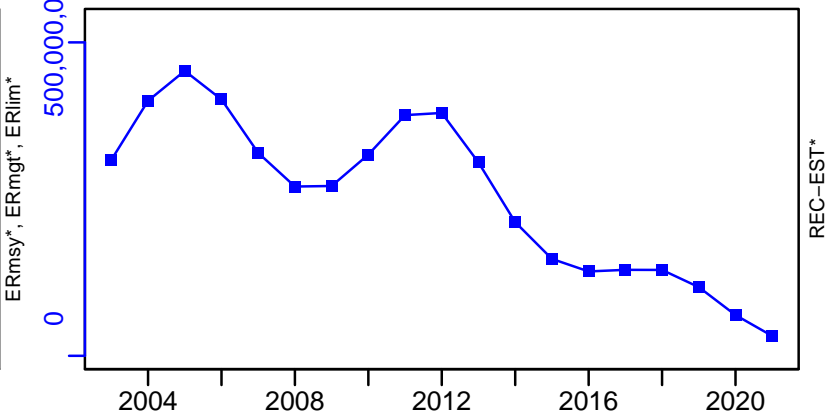
F-1/yr (2003–2021–HIVELY)



ER-calc-ratio (2003–2021–HIVELY)

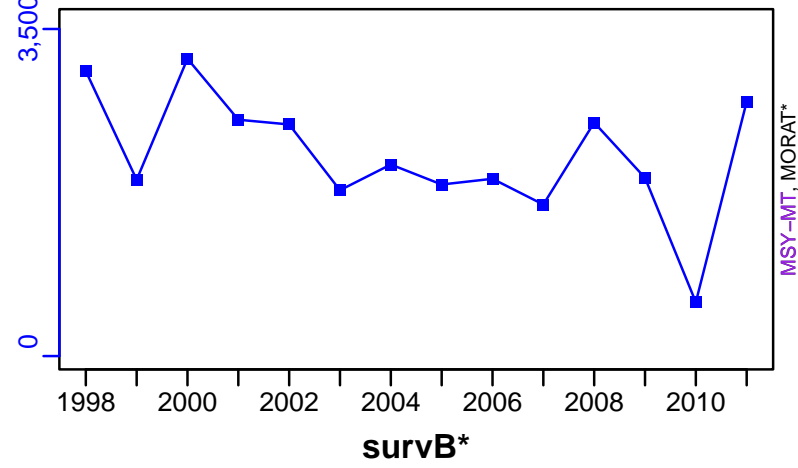


R-E00 (2003–2021–HIVELY)



# Sardine South of Sicily [SARDMEDGSA16]

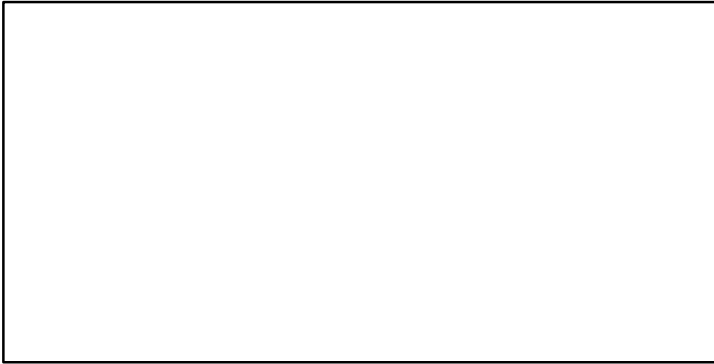
TC-MT, TL\*, RecC\* (1998–2011–BANOB)



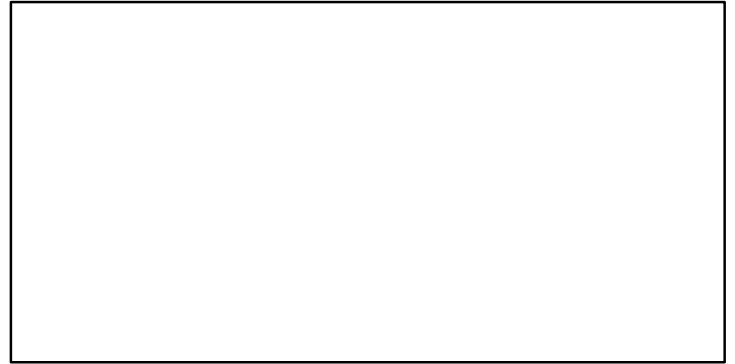
TAC\*, Cpair\*, Cadv\*



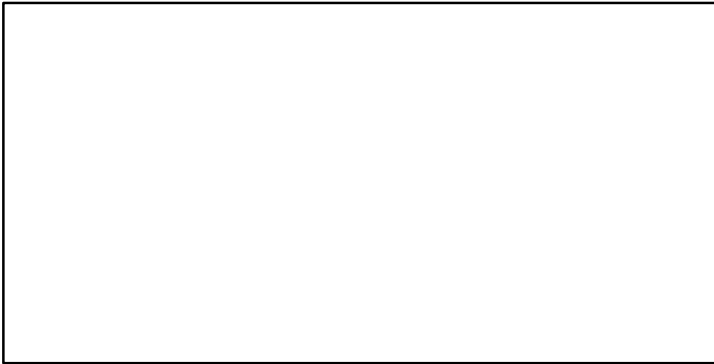
survB\*



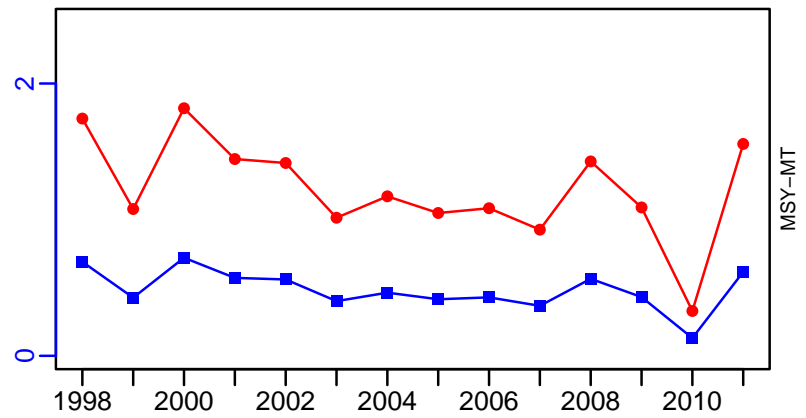
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1998–2011–BANOB)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
 ● 2nd listed time series    - - - MSY    \* No Data

## Sardine Adriatic Sea (GSA 17,18) [SARDMEDGSA17-18]

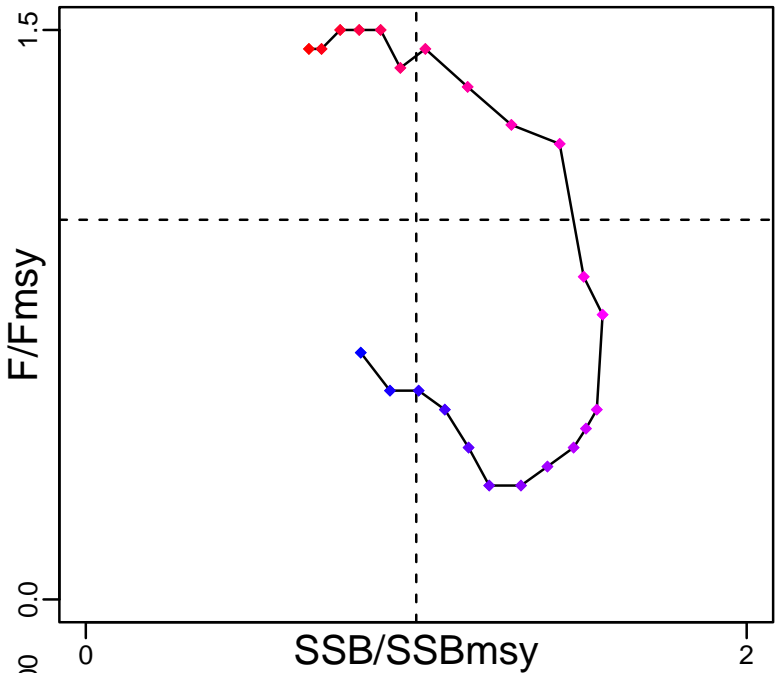
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sardina pilchardus  |
| <b>Current Assess ID</b>    | WGSASP-SARDMEDGSA17-18-2000-2022-HIVELY                                       |
| <b>Area</b>                 | Adriatic Sea (GSA 17,18)  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Small Pelagic species                    |
| <b>Asmts in RAM</b>         | 2013, 2015, 2016, 2022  |

| Reference Points |           |           |         |
|------------------|-----------|-----------|---------|
| Type             | ID        | Asmt Year | Value   |
| <b>TBmsy</b>     | -         | -         | -       |
| <b>SSBmsy</b>    | SSBmsy-MT | 2022      | 254,971 |
| <b>Fmsy</b>      | Fmsy-1/yr | 2022      | 0.2     |
| <b>ERmsy</b>     | -         | -         | -       |
| <b>TBmgt</b>     | -         | -         | -       |
| <b>SSBmgt</b>    | SSBmgt-MT | 2022      | 254,971 |
| <b>Fmgt</b>      | Fmgt-1/yr | 2022      | 0.2     |
| <b>ERmgt</b>     | -         | -         | -       |
| <b>TB0</b>       | -         | -         | -       |
| <b>SSB0</b>      | -         | -         | -       |
| <b>MSY</b>       | -         | -         | -       |
| <b>M</b>         | -         | -         | -       |
| <b>TBlim</b>     | -         | -         | -       |
| <b>SSBlim</b>    | SSBlim-MT | 2022      | 76,491  |
| <b>Flim</b>      | -         | -         | -       |
| <b>ERlim</b>     | -         | -         | -       |

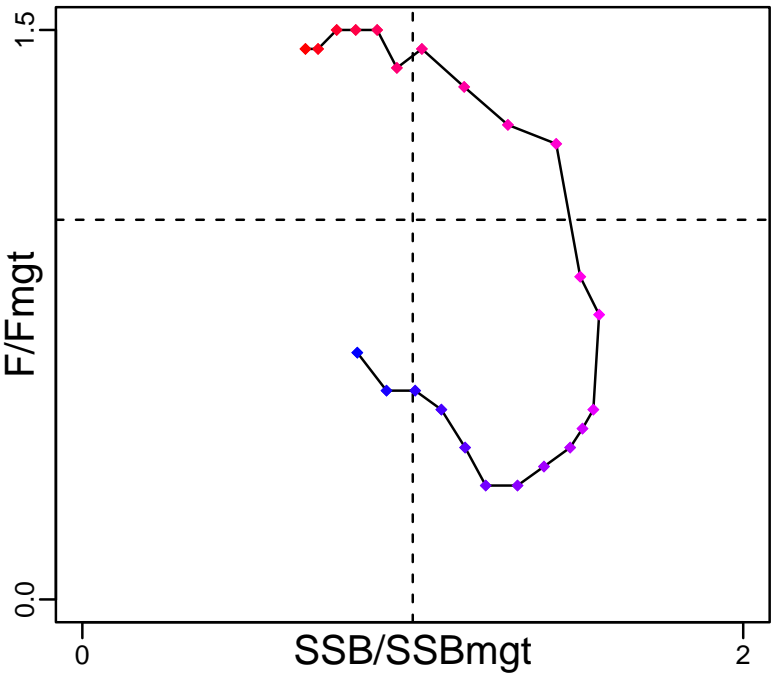
| Time Series       |                  |           |                |     |     |
|-------------------|------------------|-----------|----------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value     | Sex | Age |
| <b>TB</b>         | TB-MT            | 2015      | 573,000        | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2022      | 172,167        | -   | -   |
| <b>TN</b>         | -                | -         | -              | -   | -   |
| <b>R</b>          | R-E00            | 2016      | 24,791,217,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2022      | 0.29           | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2015      | 0.135          | -   | -   |
| <b>TC</b>         | TC-MT            | 2022      | 50,537         |     |     |
| <b>TL</b>         | TL-MT            | 2022      | 50,537         |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -              |     |     |
| <b>SSB/SSBmsy</b> | SSB-MT/SSBmsy-MT | 2022      | 0.675          |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2022      | 1.45           |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -              |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -              |     |     |
| <b>SSB/SSBmgt</b> | SSB-MT/SSBmgt-MT | 2022      | 0.675          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2022      | 1.45           |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -              |     |     |

Sardine Adriatic Sea (GSA 17,18) [SARDMEDGSA17-18]

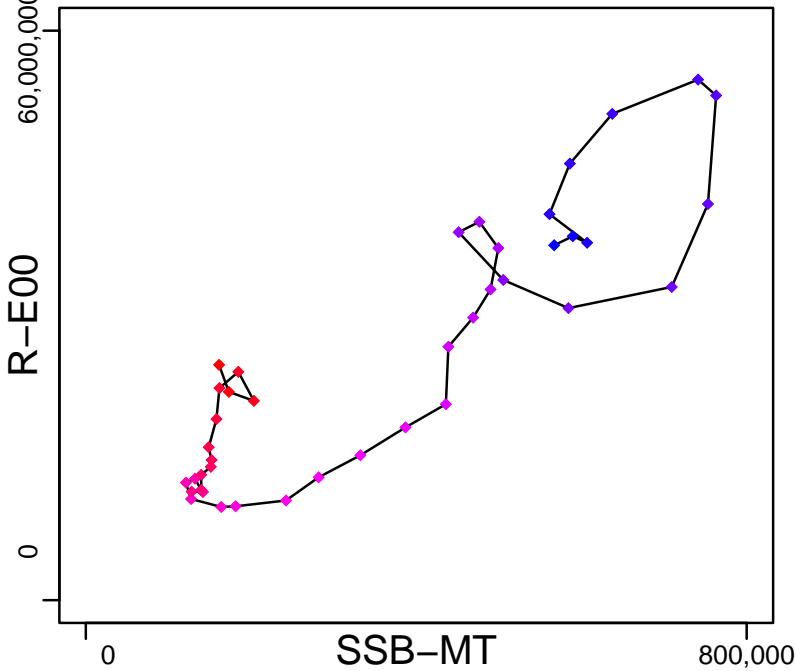
Kobe MSYpref (2000–2022–HIVELY)



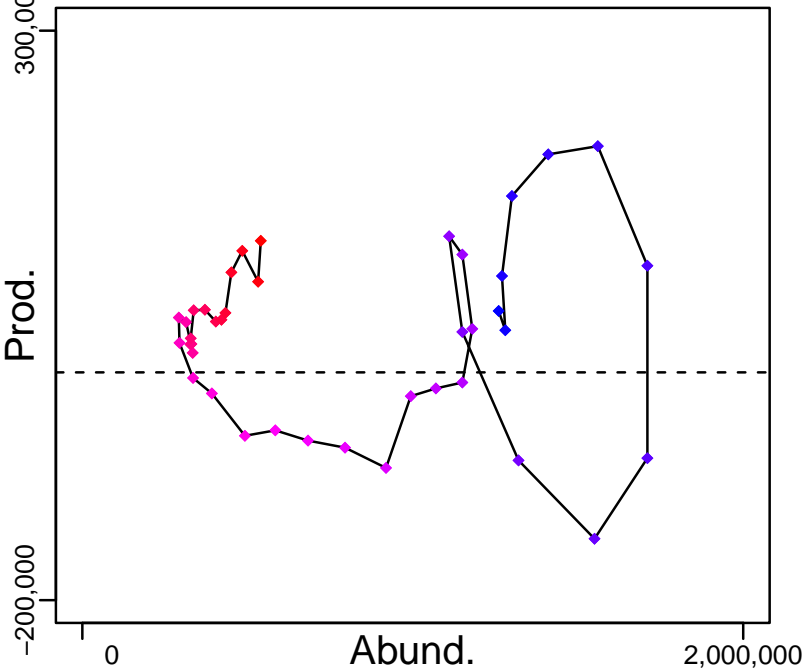
Kobe MGTpref (2000–2022–HIVELY)



Spawner Recruit (1975–2016–MEDIMP2021–2)

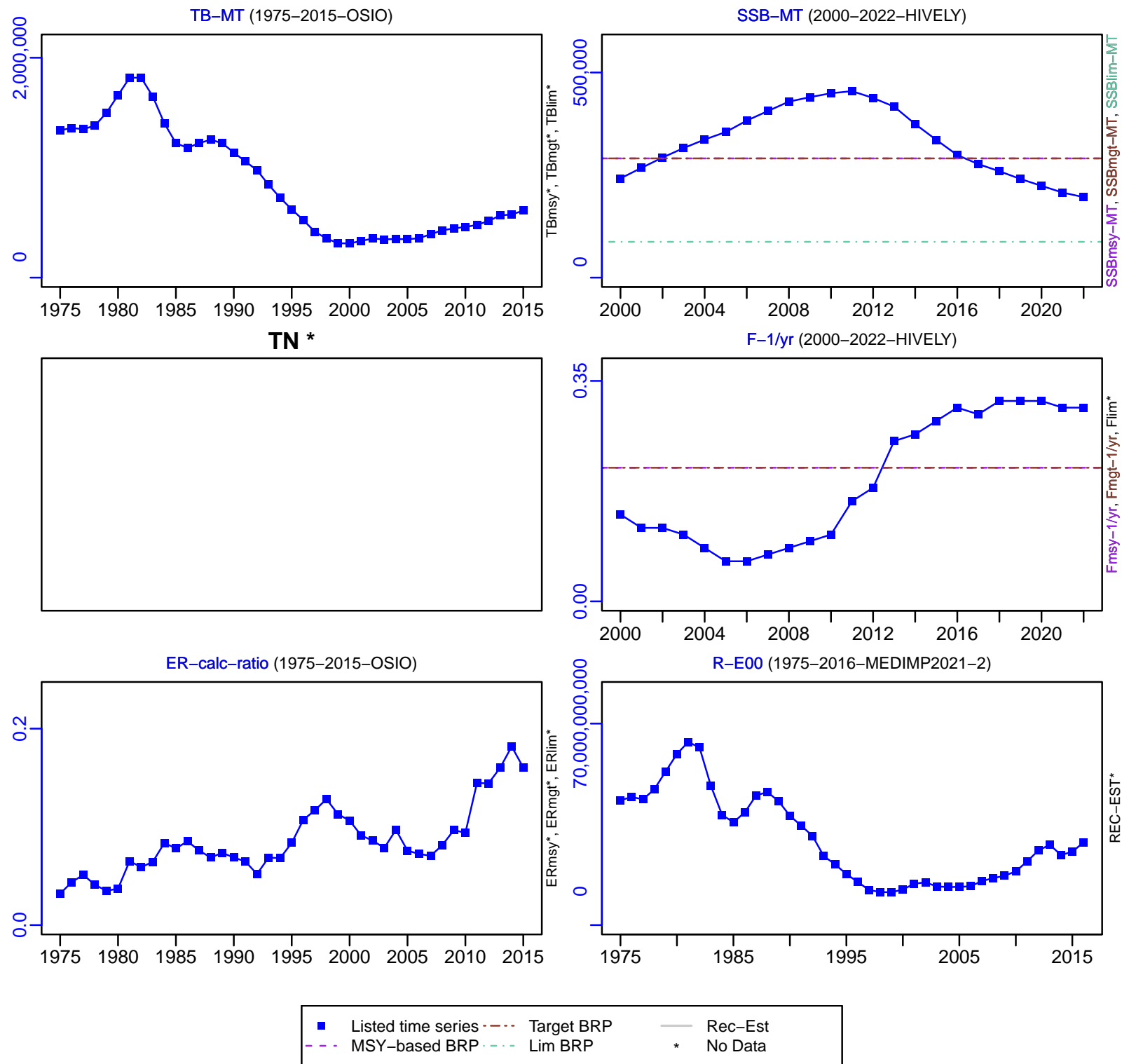


Production (1975–2015–OSIO)



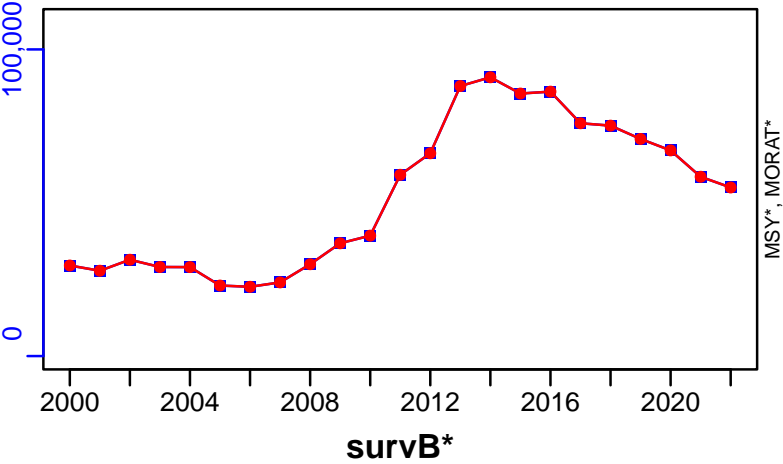
◆ Start Year ◆ End Year \* No Data

# Sardine Adriatic Sea (GSA 17,18) [SARDMEDGSA17-18]



Sardine Adriatic Sea (GSA 17,18) [SARDMEDGSA17-18]

TC-MT, TL-MT, RecC\* (2000-2022-HIVELY)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## European pilchard Eastern Ionian Sea [SARDMEDGSA20]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sardina pilchardus  |
| <b>Current Assess ID</b>    | STECF-SARDMEDGSA20-2000-2008-OSIO   |
| <b>Area</b>                 | Eastern Ionian Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2008  |

| Reference Points |    |           |       |
|------------------|----|-----------|-------|
| Type             | ID | Asmt Year | Value |
| TBmsy            | -  | -         | -     |
| SSBmsy           | -  | -         | -     |
| Fmsy             | -  | -         | -     |
| ERmsy            | -  | -         | -     |
| TBmgt            | -  | -         | -     |
| SSBmgt           | -  | -         | -     |
| Fmgt             | -  | -         | -     |
| ERmgt            | -  | -         | -     |
| TB0              | -  | -         | -     |
| SSB0             | -  | -         | -     |
| MSY              | -  | -         | -     |
| M                | -  | -         | -     |
| TBlim            | -  | -         | -     |
| SSBlim           | -  | -         | -     |
| Flim             | -  | -         | -     |
| ERlim            | -  | -         | -     |

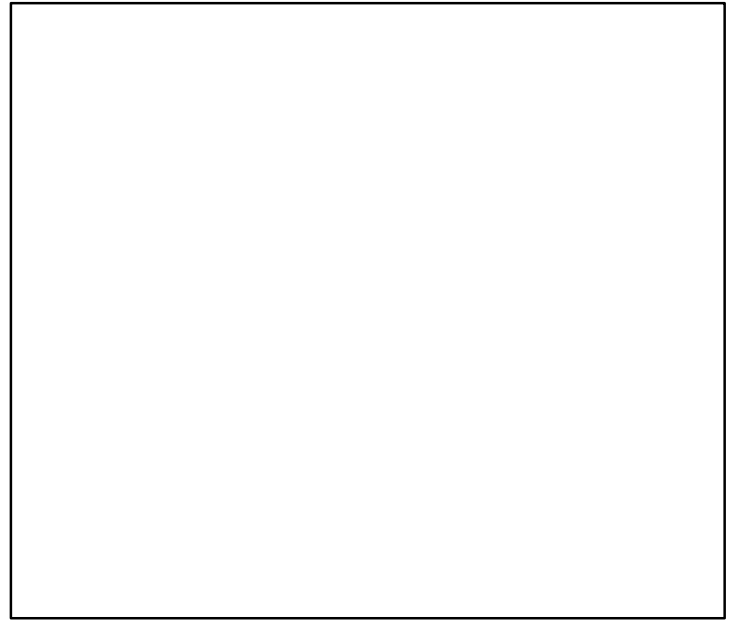
| Time Series |        |           |                    |     |        |
|-------------|--------|-----------|--------------------|-----|--------|
| Type        | ID     | Asmt Year | Curr Value         | Sex | Age    |
| TB          | -      | -         | -                  | -   | -      |
| SSB         | SSB-MT | 2008      | 5650               | -   | 1 to 3 |
| TN          | -      | -         | -                  | -   | -      |
| R           | R-E00  | 2008      | $1.02 \times 10^9$ | -   | -      |
| F           | F-1/yr | 2008      | 0.68               | -   | -      |
| ER          | -      | -         | -                  | -   | -      |
| TC          | TC-MT  | 2008      | 2940               |     |        |
| TL          | -      | -         | -                  |     |        |
| TB/TBmsy    | -      | -         | -                  |     |        |
| SSB/SSBmsy  | -      | -         | -                  |     |        |
| F/Fmsy      | -      | -         | -                  |     |        |
| ER/ERmsy    | -      | -         | -                  |     |        |
| TB/TBmgt    | -      | -         | -                  |     |        |
| SSB/SSBmgt  | -      | -         | -                  |     |        |
| F/Fmgt      | -      | -         | -                  |     |        |
| ER/ERmgt    | -      | -         | -                  |     |        |



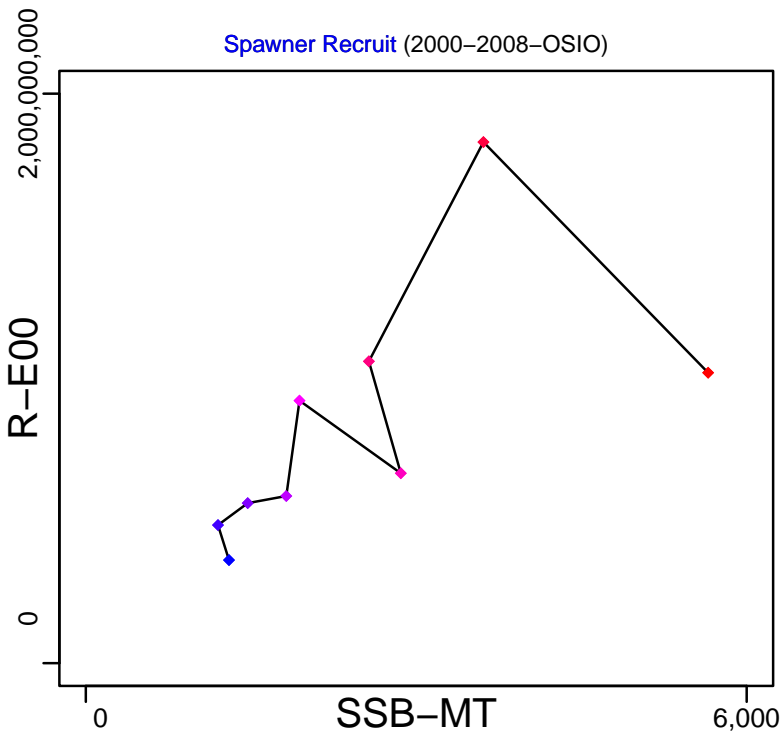
**Kobe MSY\***



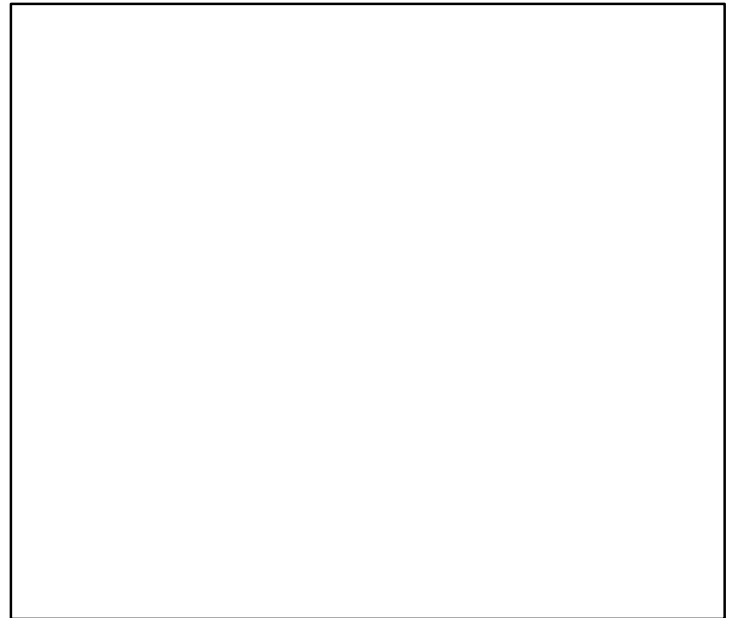
**Kobe MGT\***



**Spawner Recruit (2000–2008–OSIO)**



**Production\***



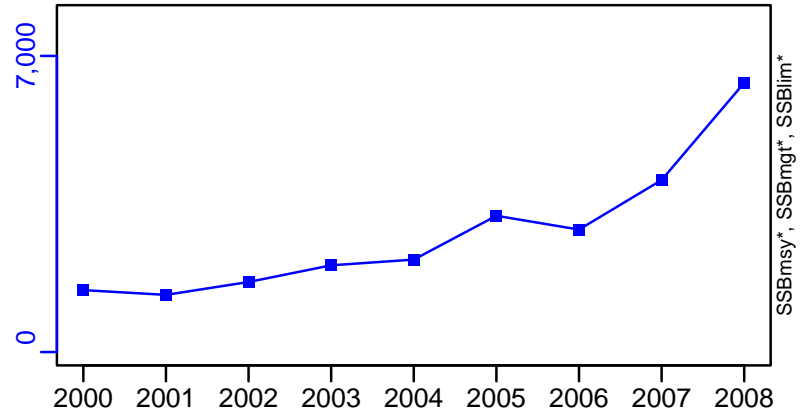
◆ Start Year ◆ End Year \* No Data

# European pilchard Eastern Ionian Sea [SARDMEDGSA20]

TB\*



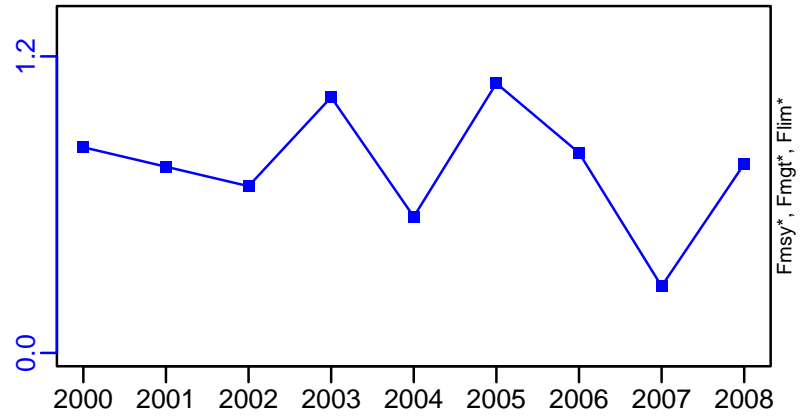
SSB-MT (2000–2008–OSIO)



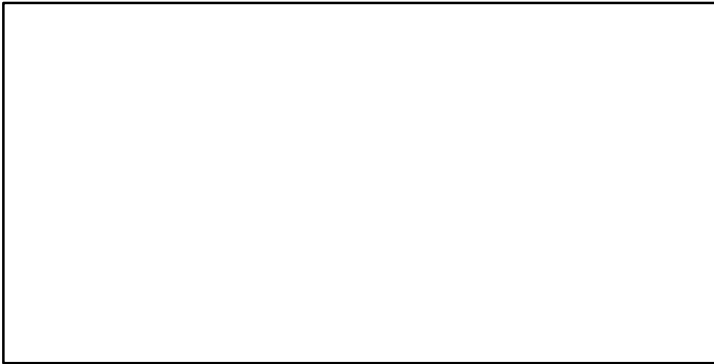
TN \*



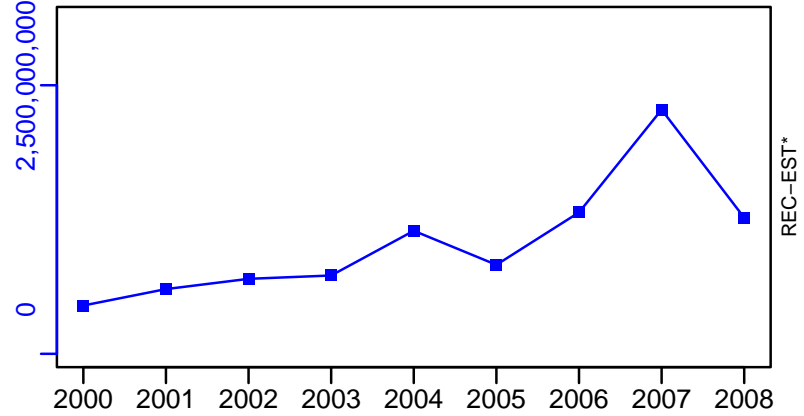
F-1/yr (2000–2008–OSIO)



ER\*

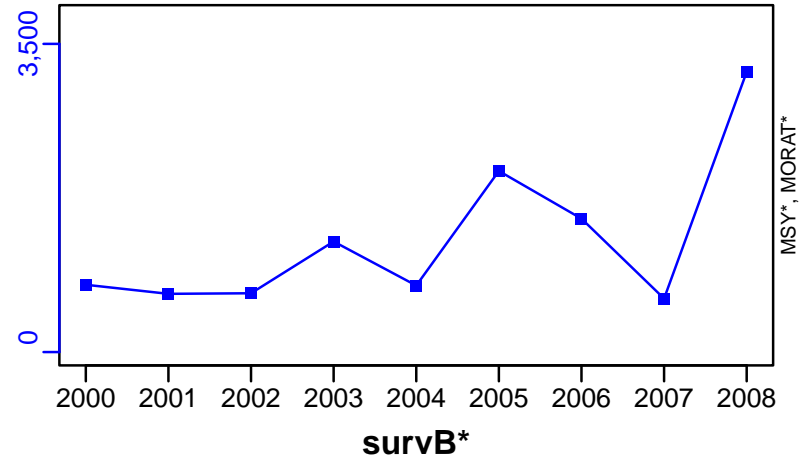


R-E00 (2000–2008–OSIO)



# European pilchard Eastern Ionian Sea [SARDMEDGSA20]

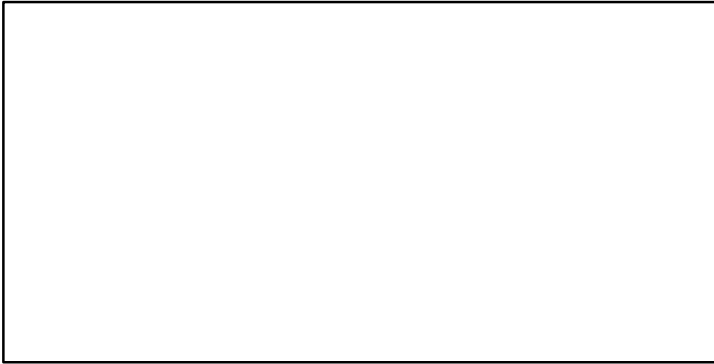
TC-MT, TL\*, RecC\* (2000–2008–OSIO)



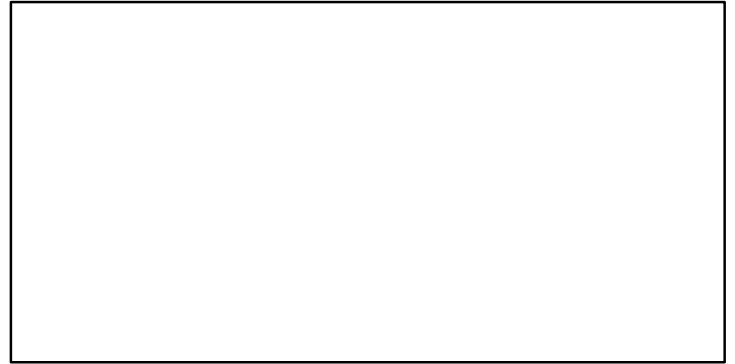
TAC\*, Cpair\*, Cadv\*



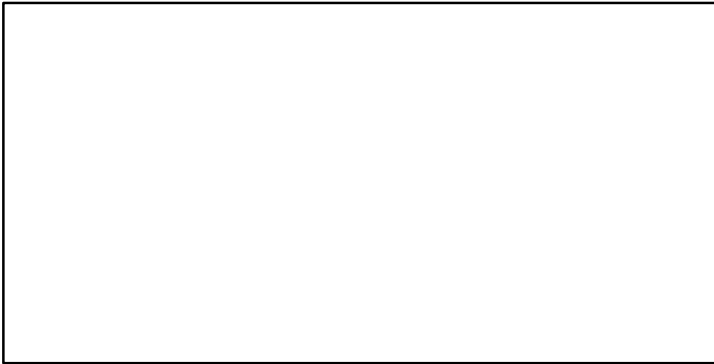
survB\*



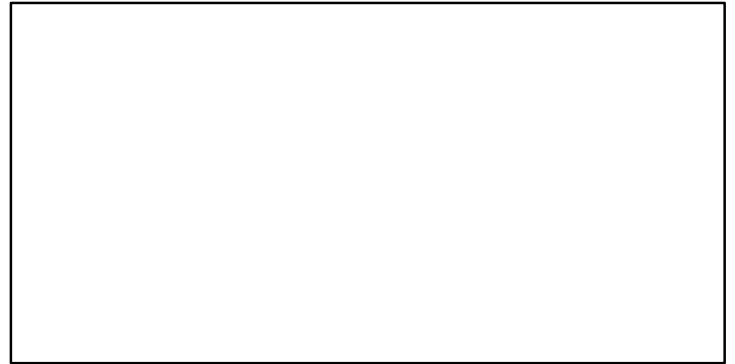
CPUE\*



EFFORT\*



CdivMSY\*



**European pilchard Aegean Sea and Crete Island (GSA 22,23)**  
**[SARDMEDGSA22-23]**

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sardina pilchardus  |
| <b>Current Assess ID</b>    | STECF-SARDMEDGSA22-23-2000-2016-MEDIMP2021-2                                  |
| <b>Area</b>                 | Aegean Sea and Crete Island (GSA 22,23)                                       |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2016  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2016      | 0.503 |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2016      | 0.503 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |               |     |     |
|-------------------|------------------|-----------|---------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value    | Sex | Age |
| <b>TB</b>         | -                | -         | -             | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2016      | 33,851        | -   | -   |
| <b>TN</b>         | -                | -         | -             | -   | -   |
| <b>R</b>          | R-E00            | 2016      | 6,176,295,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2016      | 0.534         | -   | -   |
| <b>ER</b>         | -                | -         | -             | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 9655          |     |     |
| <b>TL</b>         | -                | -         | -             |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -             |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2016      | 1.062         |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -             |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -             |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2016      | 1.062         |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -             |     |     |

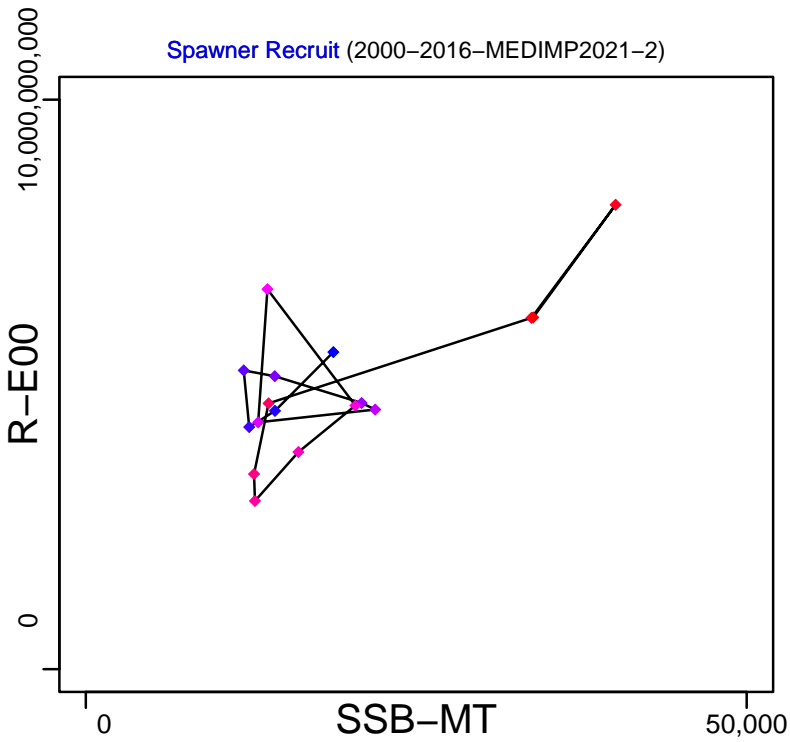
**Kobe MSY\***



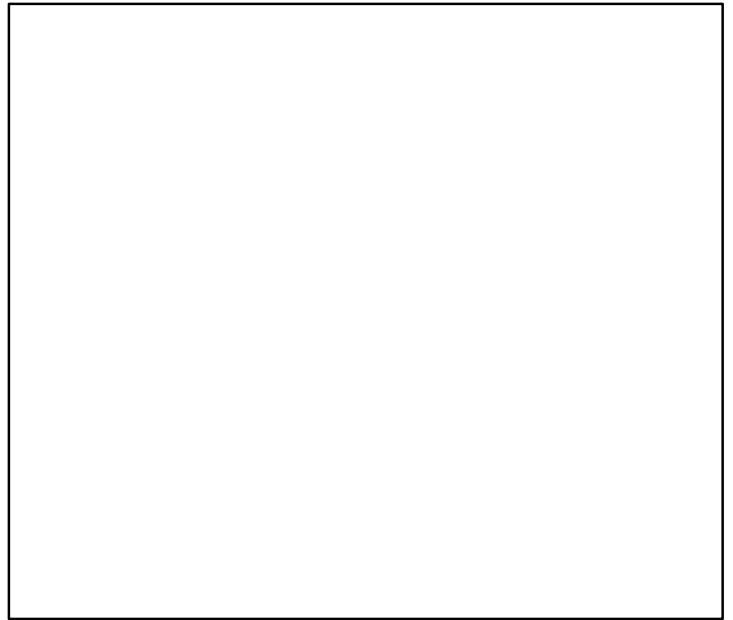
**Kobe MGT\***



**Spawner Recruit** (2000-2016-MEDIMP2021-2)



**Production\***



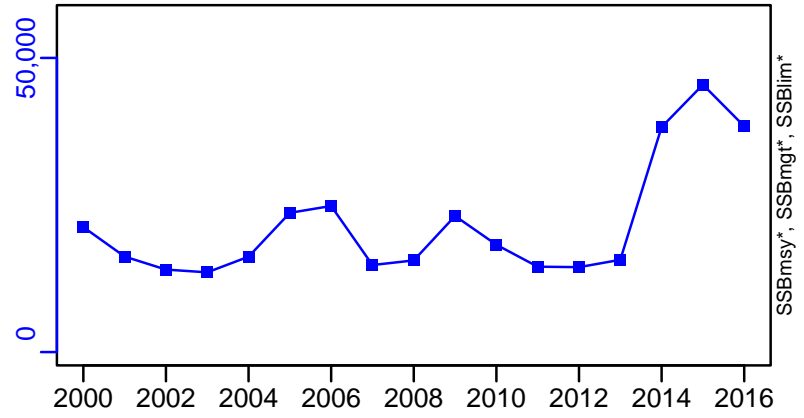
◆ Start Year ◆ End Year \* No Data

European pilchard Aegean Sea and Crete Island (GSA 22,23) [SARDMEDGSA22-23]

TB\*



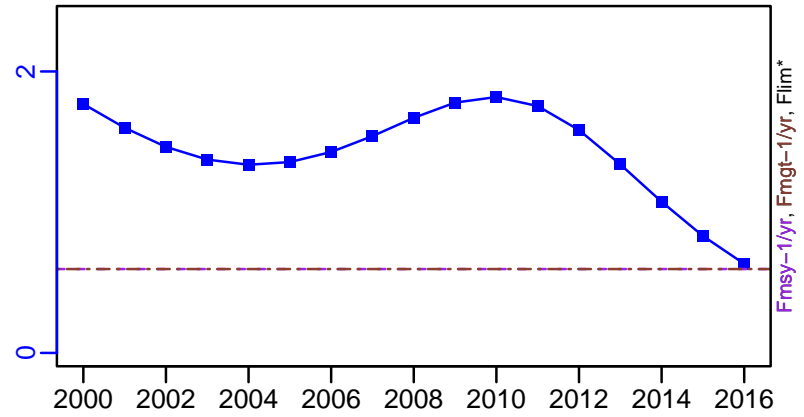
SSB-MT (2000-2016-MEDIMP2021-2)



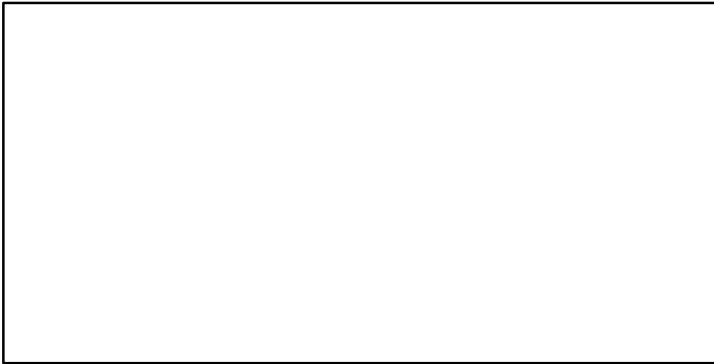
TN \*



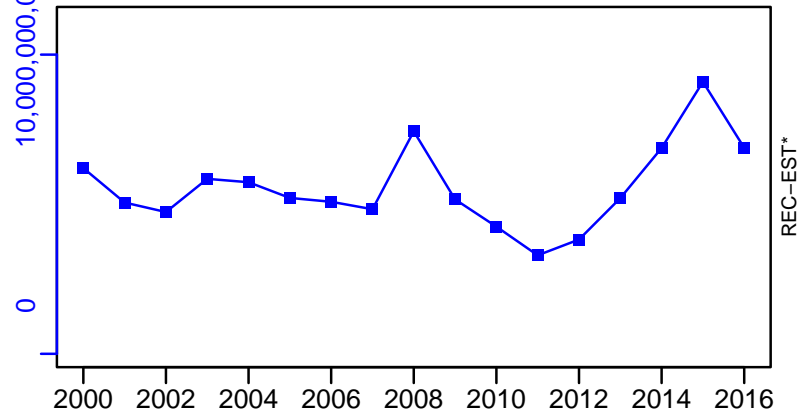
F-1/yr (2000-2016-MEDIMP2021-2)



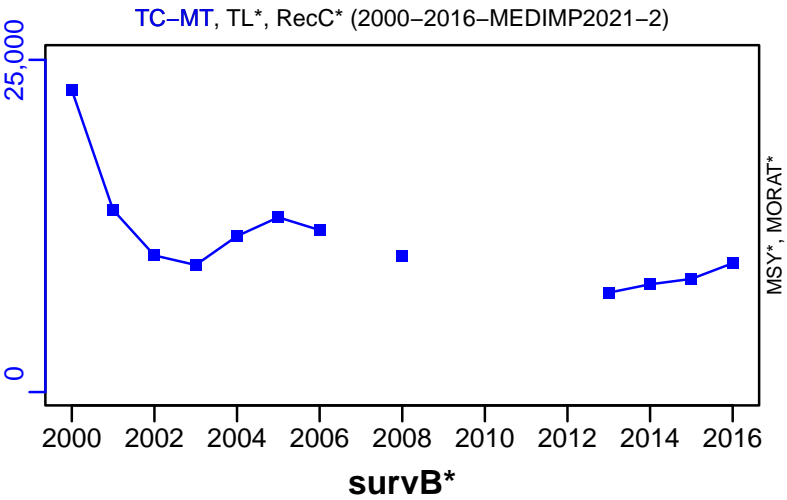
ER\*



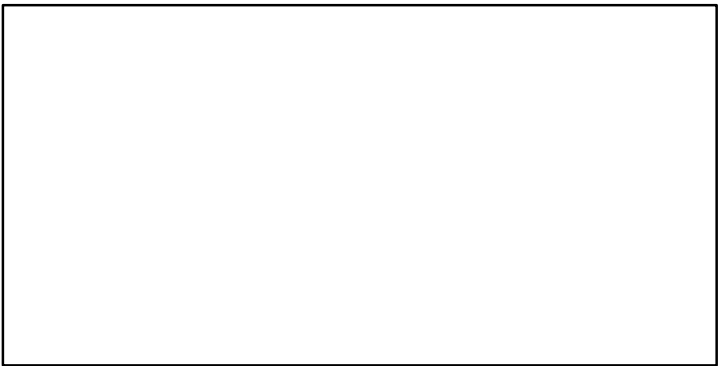
R-E00 (2000-2016-MEDIMP2021-2)



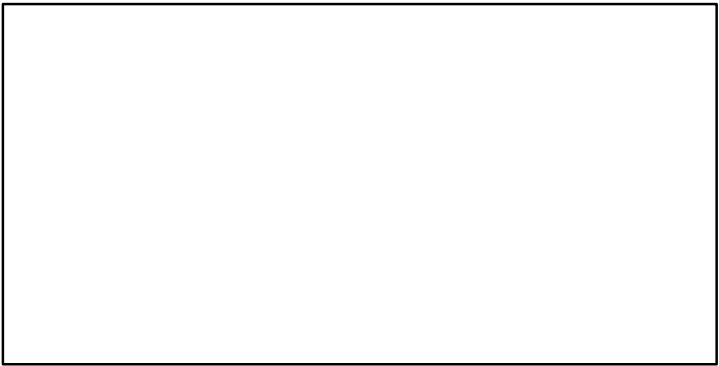
European pilchard Aegean Sea and Crete Island (GSA 22,23) [SARDMEDGSA22-23]



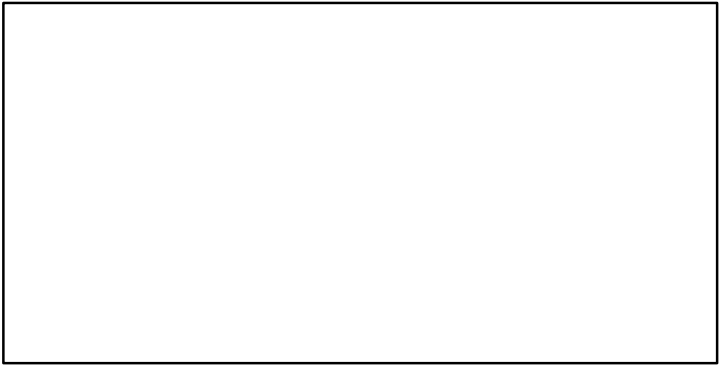
TAC\*, Cpair\*, Cadv\*



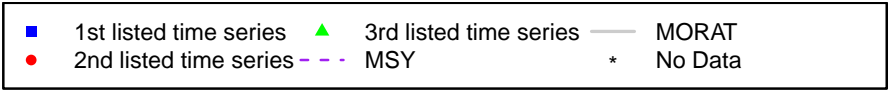
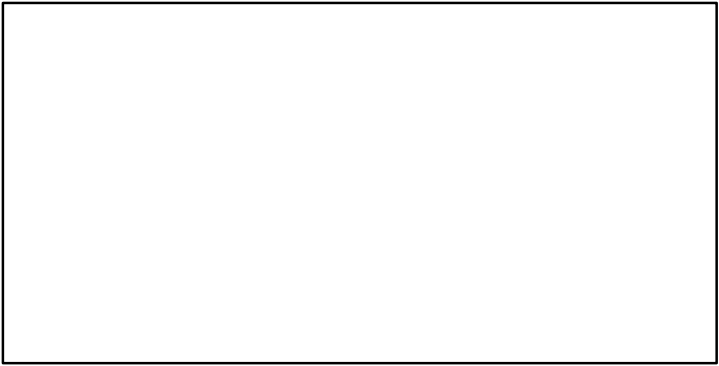
CPUE\*



EFFORT\*



CdivMSY\*



## European pilchard Northern Spain [SARDMEDGSA6]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sardina pilchardus  |
| <b>Current Assess ID</b>    | WGSASP-SARDMEDGSA6-2004-2022-HIVELY   |
| <b>Area</b>                 | Northern Spain  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Small Pelagic species                    |
| <b>Asmts in RAM</b>         | 2016, 2013, 2015, 2021, 2022  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2015      | 0.7   |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2022      | 0.47  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |               |     |     |
|-------------------|------------------|-----------|---------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value    | Sex | Age |
| <b>TB</b>         | TB-MT            | 2022      | 37,163        | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2022      | 27,800        | -   | -   |
| <b>TN</b>         | -                | -         | -             | -   | -   |
| <b>R</b>          | R-E00            | 2022      | 1,251,817,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2022      | 0.465         | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2022      | 0.124         | -   | -   |
| <b>TC</b>         | TC-MT            | 2022      | 4626          |     |     |
| <b>TL</b>         | TL-MT            | 2022      | 4626          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -             |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2015      | 2.529         |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -             |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -             |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2022      | 0.989         |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -             |     |     |



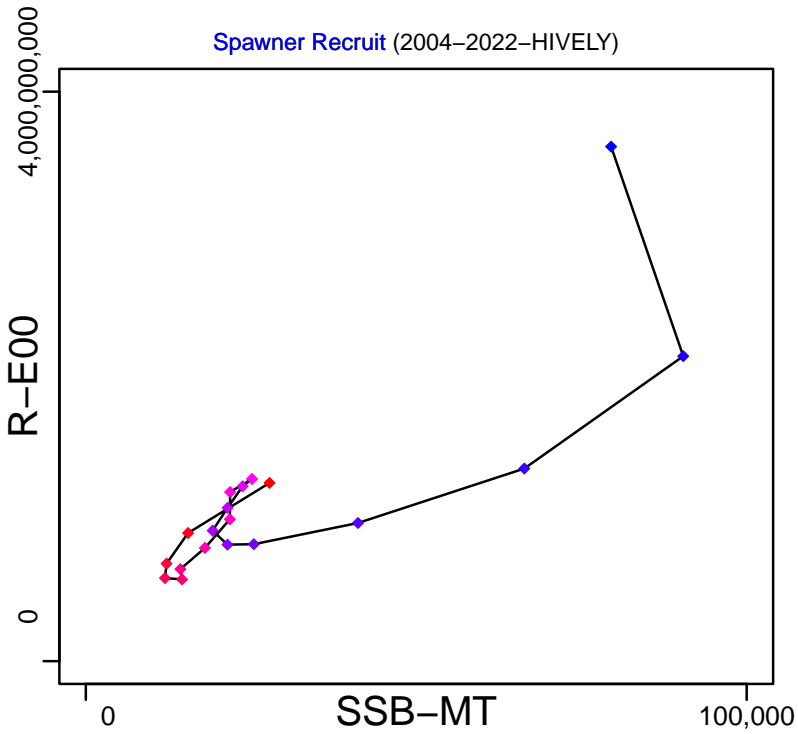
Kobe MSY\*



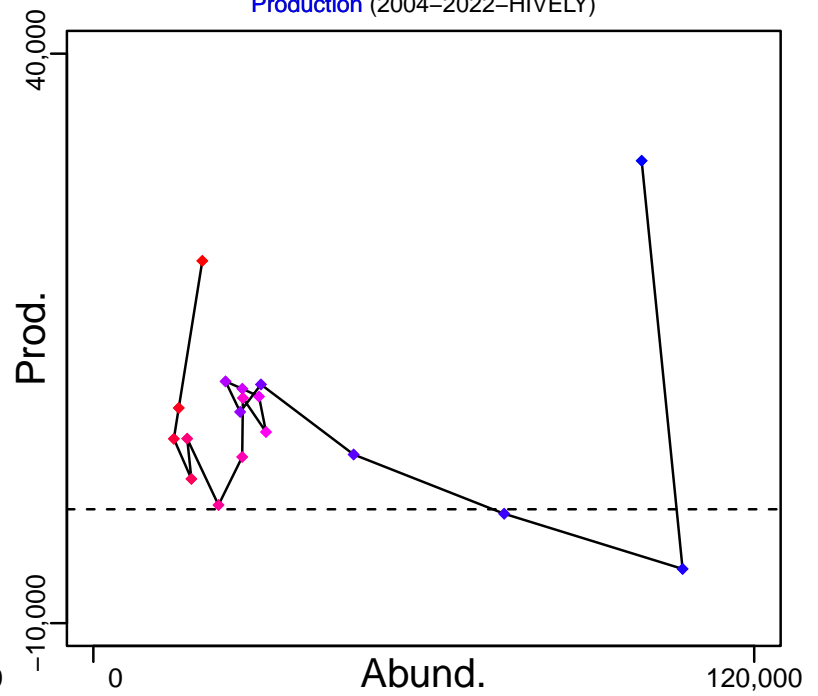
Kobe MGT\*



Spawner Recruit (2004–2022–HIVELY)



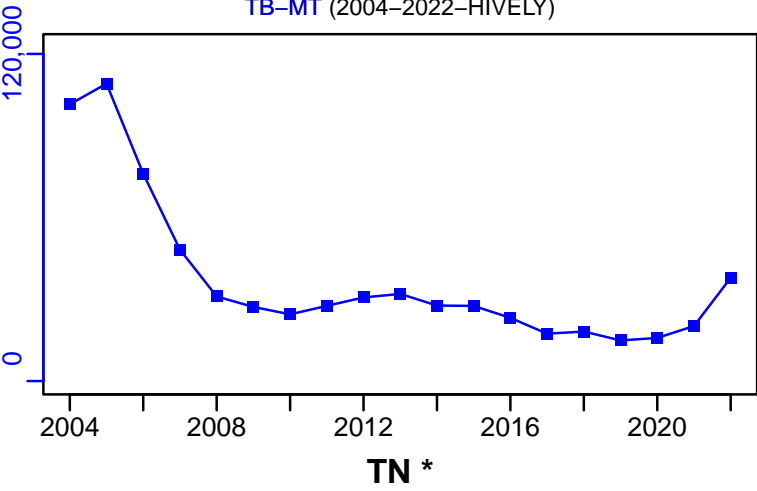
Production (2004–2022–HIVELY)



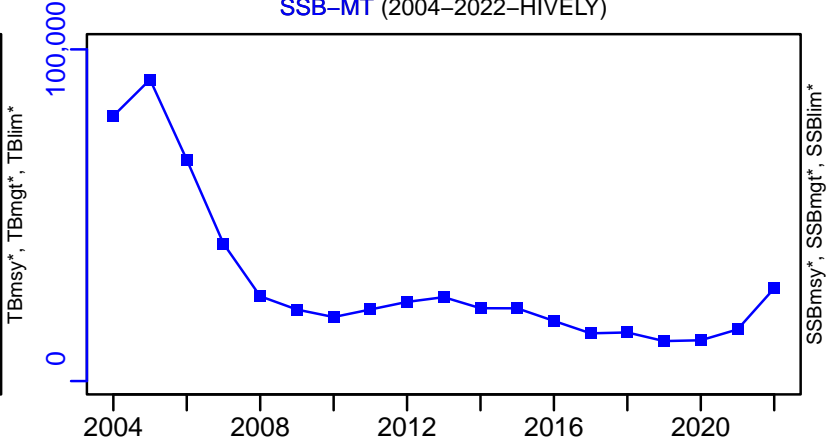
◆ Start Year ◆ End Year \* No Data

# European pilchard Northern Spain [SARDMEDGSA6]

TB-MT (2004–2022–HIVELY)



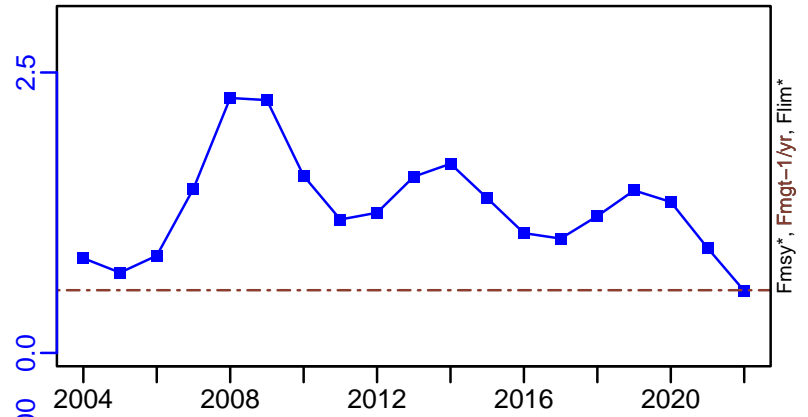
SSB-MT (2004–2022–HIVELY)



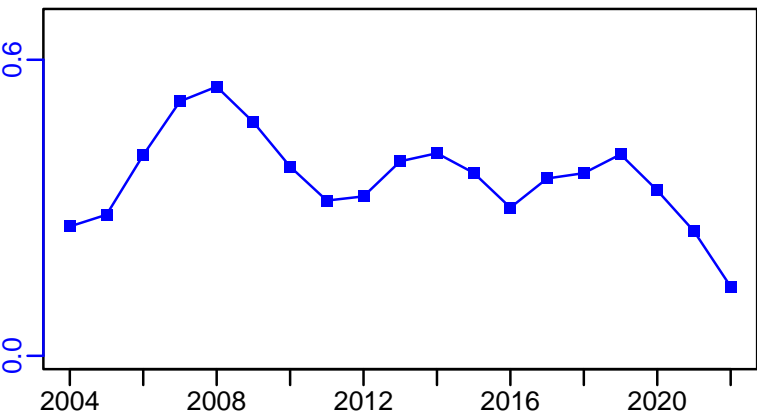
TN \*



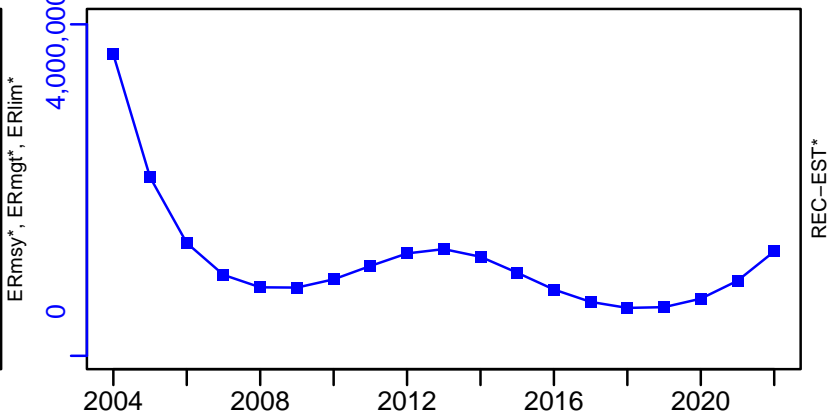
F-1/yr (2004–2022–HIVELY)



ER-calc-ratio (2004–2022–HIVELY)

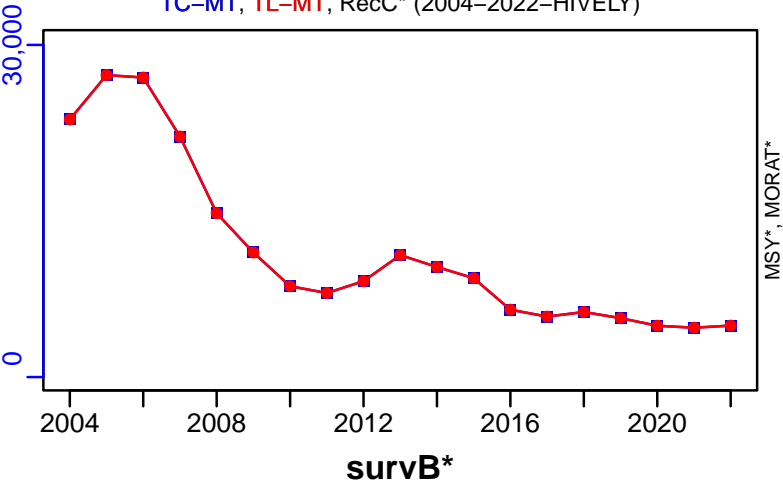


R-E00 (2004–2022–HIVELY)

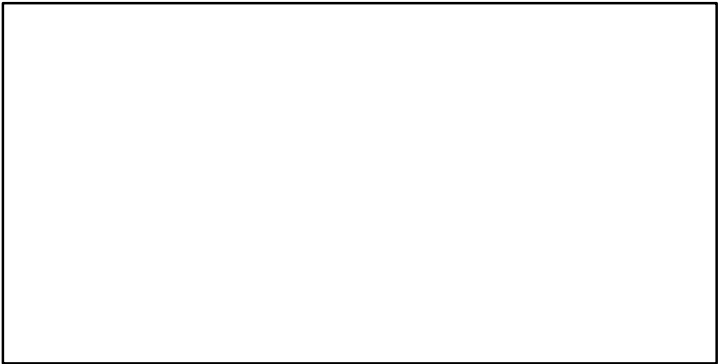


European pilchard Northern Spain [SARDMEDGSA6]

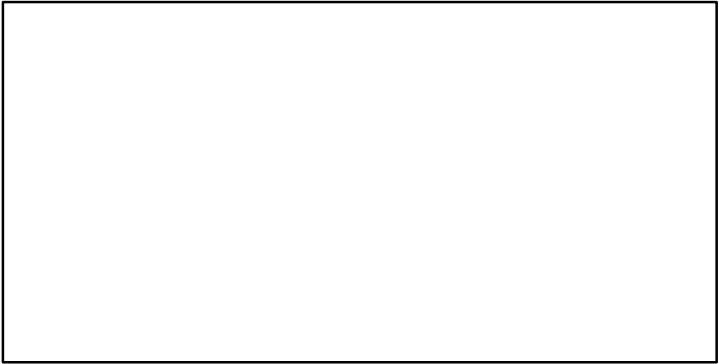
TC-MT, TL-MT, RecC\* (2004–2022–HIVELY)



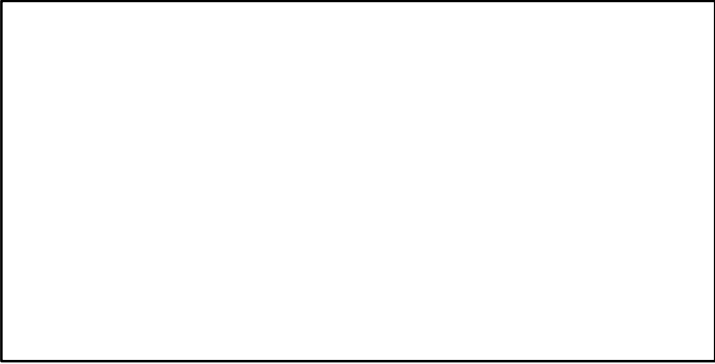
TAC\*, Cpair\*, Cadv\*



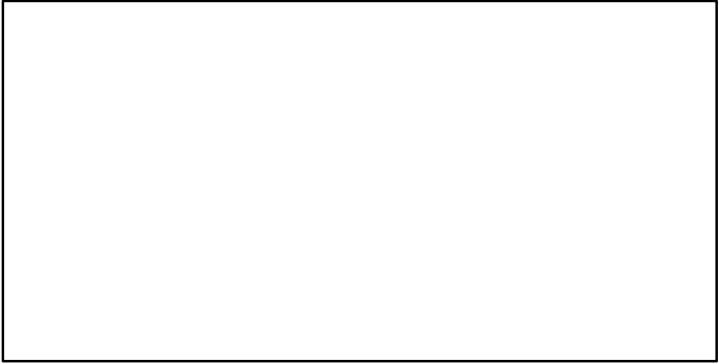
CPUE\*



EFFORT\*



CdivMSY\*



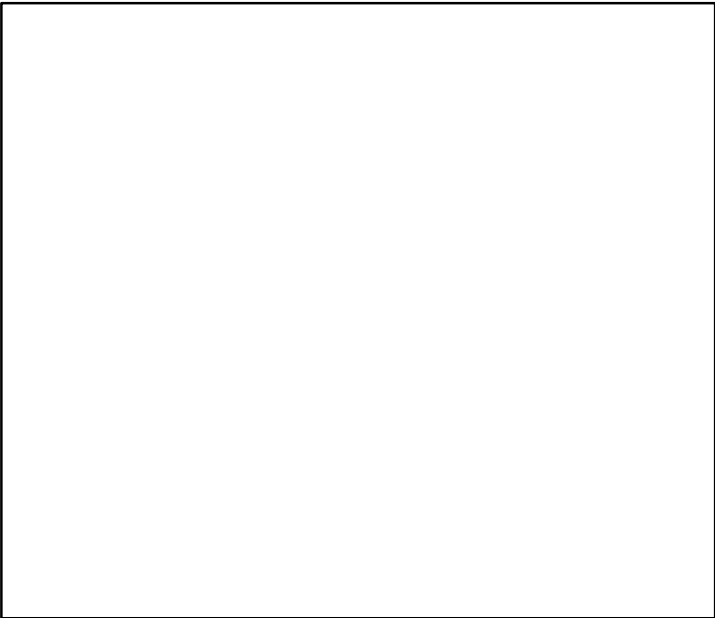
## Sardine Gulf of Lions [SARDMEDGSA7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sardina pilchardus  |
| <b>Current Assess ID</b>    | WGSASP-SARDMEDGSA7-1995-2022-HIVELY   |
| <b>Area</b>                 | Gulf of Lions   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Small Pelagic species                    |
| <b>Asmts in RAM</b>         | 2012, 2021, 2022  |

| Reference Points |             |           |       |
|------------------|-------------|-----------|-------|
| Type             | ID          | Asmt Year | Value |
| <b>TBmsy</b>     | -           | -         | -     |
| <b>SSBmsy</b>    | -           | -         | -     |
| <b>Fmsy</b>      | -           | -         | -     |
| <b>ERmsy</b>     | -           | -         | -     |
| <b>TBmgt</b>     | -           | -         | -     |
| <b>SSBmgt</b>    | -           | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr   | 2021      | 0.25  |
| <b>ERmgt</b>     | ERmgt-ratio | 2022      | 0.35  |
| <b>TB0</b>       | -           | -         | -     |
| <b>SSB0</b>      | -           | -         | -     |
| <b>MSY</b>       | -           | -         | -     |
| <b>M</b>         | -           | -         | -     |
| <b>TBlim</b>     | -           | -         | -     |
| <b>SSBlim</b>    | SSBlim-MT   | 2022      | 9861  |
| <b>Flim</b>      | -           | -         | -     |
| <b>ERlim</b>     | -           | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | TB-MT            | 2012      | 115,000    | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2022      | 47,815     | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-MT             | 2012      | 57,500     | -   | -   |
| <b>F</b>          | F-1/yr           | 2021      | 0.001      | -   | -   |
| <b>ER</b>         | ER-ratio         | 2022      | 0.001      | -   | -   |
| <b>TC</b>         | TC-MT            | 2012      | 782        |     |     |
| <b>TL</b>         | TL-MT            | 2022      | 27         |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2021      | 0.004      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

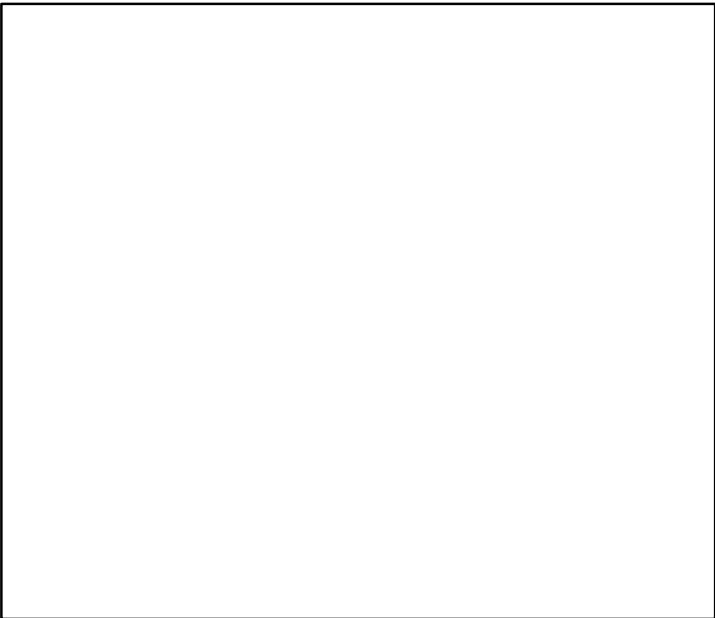
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



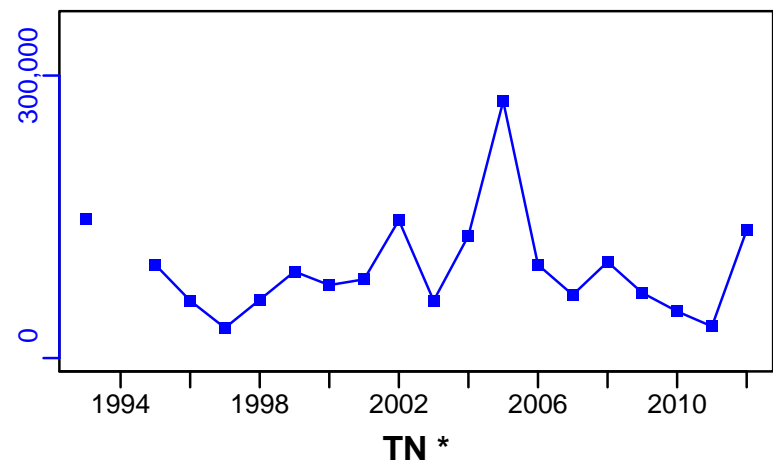
Production\*



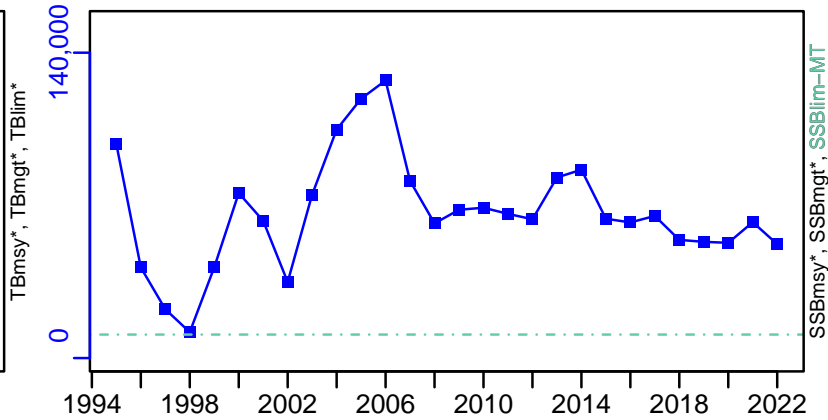
◆ Start Year   ◆ End Year   \* No Data

# Sardine Gulf of Lions [SARDMEDGSA7]

TB-MT (1993–2012–BANOB1)



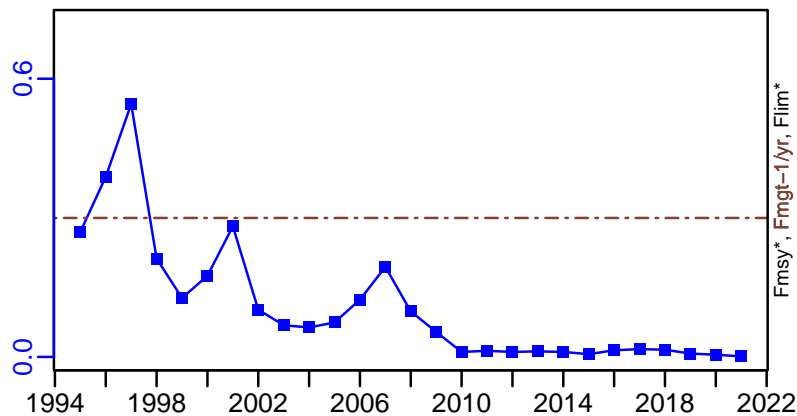
SSB-MT (1995–2022–HIVELY)



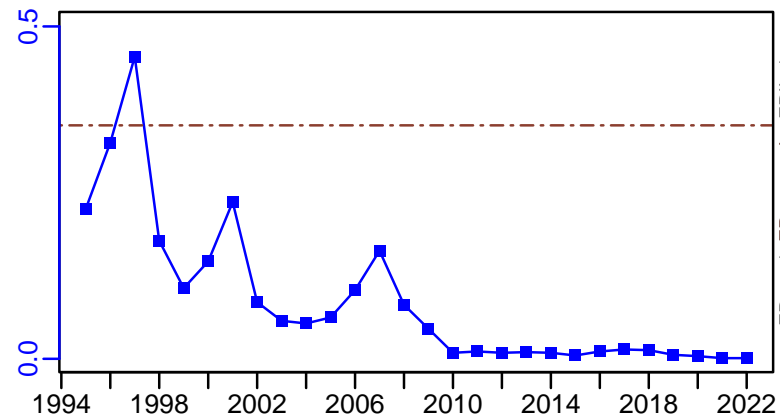
TN \*



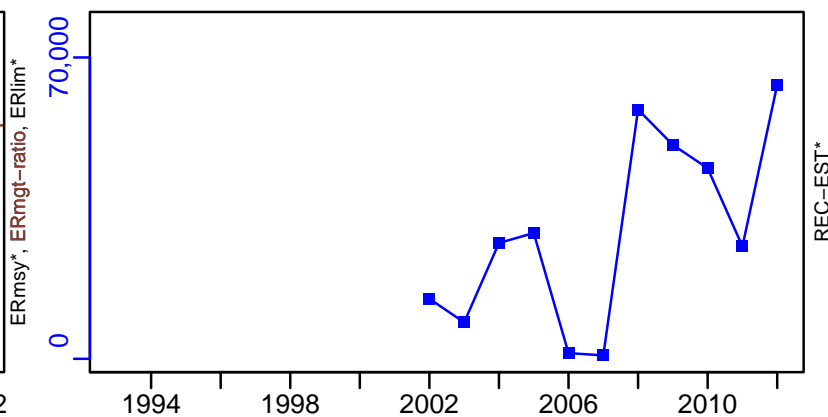
F-1/yr (1995–2021–HIVELY)



ER-ratio (1995–2022–HIVELY)



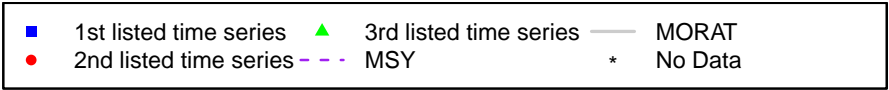
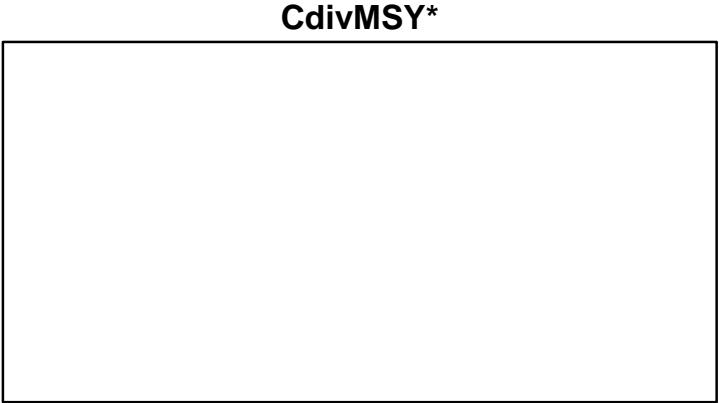
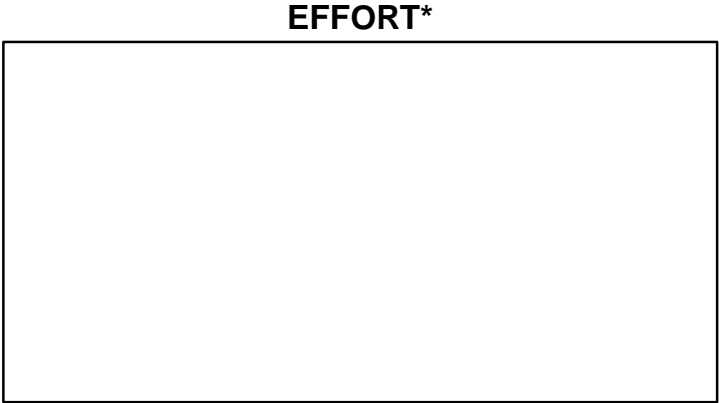
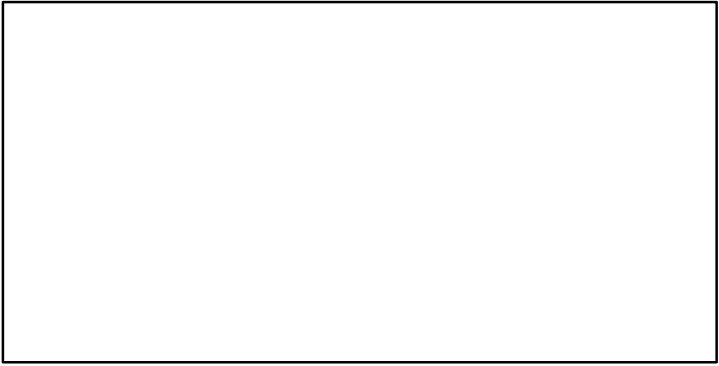
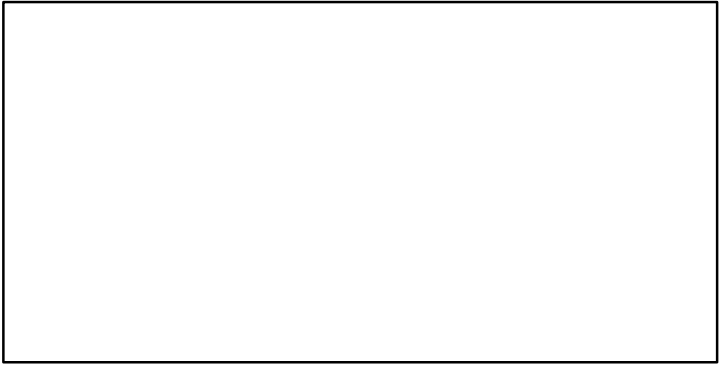
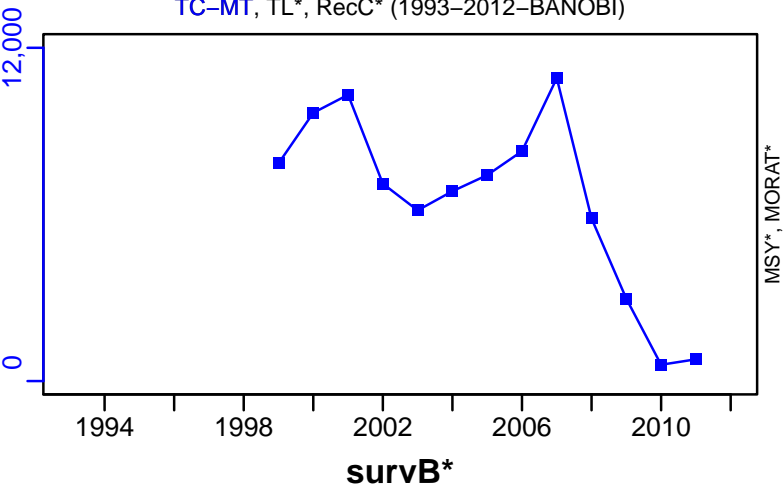
R-MT (1993–2012–BANOB1)



# Sardine Gulf of Lions [SARDMEDGSA7]

TC-MT, TL\*, RecC\* (1993–2012–BANOB)

TAC\*, Cpair\*, Cadv\*



## European pilchard Ligurian and North Tyrrhenian Sea [SARDMEDGSA9]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sardina pilchardus  |
| <b>Current Assess ID</b>    | STECF-SARDMEDGSA9-2006-2012-OSIO  |
| <b>Area</b>                 | Ligurian and North Tyrrhenian Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012  |

| Reference Points |    |           |       |
|------------------|----|-----------|-------|
| Type             | ID | Asmt Year | Value |
| TBmsy            | -  | -         | -     |
| SSBmsy           | -  | -         | -     |
| Fmsy             | -  | -         | -     |
| ERmsy            | -  | -         | -     |
| TBmgt            | -  | -         | -     |
| SSBmgt           | -  | -         | -     |
| Fmgt             | -  | -         | -     |
| ERmgt            | -  | -         | -     |
| TB0              | -  | -         | -     |
| SSB0             | -  | -         | -     |
| MSY              | -  | -         | -     |
| M                | -  | -         | -     |
| TBlim            | -  | -         | -     |
| SSBlim           | -  | -         | -     |
| Flim             | -  | -         | -     |
| ERlim            | -  | -         | -     |

| Time Series |       |           |            |     |     |
|-------------|-------|-----------|------------|-----|-----|
| Type        | ID    | Asmt Year | Curr Value | Sex | Age |
| TB          | -     | -         | -          | -   | -   |
| SSB         | -     | -         | -          | -   | -   |
| TN          | -     | -         | -          | -   | -   |
| R           | -     | -         | -          | -   | -   |
| F           | -     | -         | -          | -   | -   |
| ER          | -     | -         | -          | -   | -   |
| TC          | TC-MT | 2012      | 1730       |     |     |
| TL          | -     | -         | -          |     |     |
| TB/TBmsy    | -     | -         | -          |     |     |
| SSB/SSBmsy  | -     | -         | -          |     |     |
| F/Fmsy      | -     | -         | -          |     |     |
| ER/ERmsy    | -     | -         | -          |     |     |
| TB/TBmgt    | -     | -         | -          |     |     |
| SSB/SSBmgt  | -     | -         | -          |     |     |
| F/Fmgt      | -     | -         | -          |     |     |
| ER/ERmgt    | -     | -         | -          |     |     |



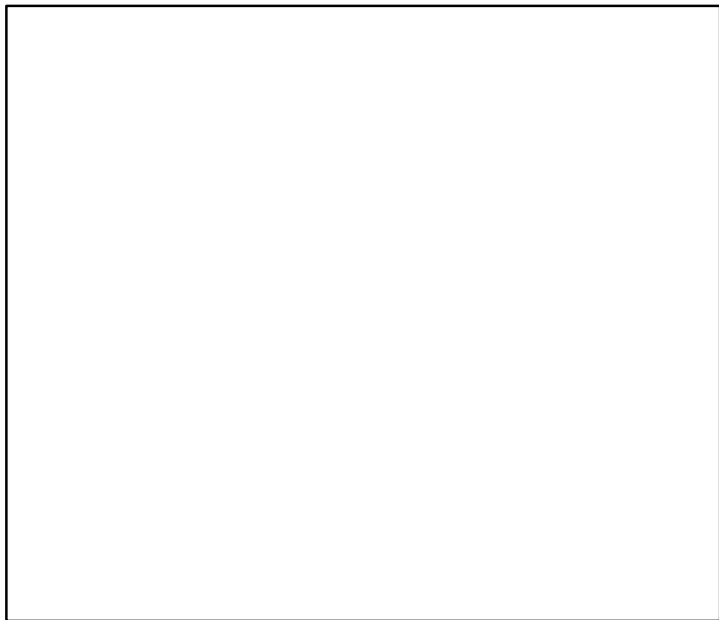
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



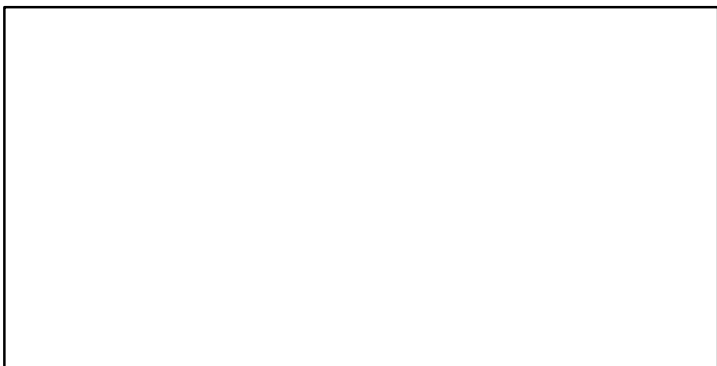
**Production\***



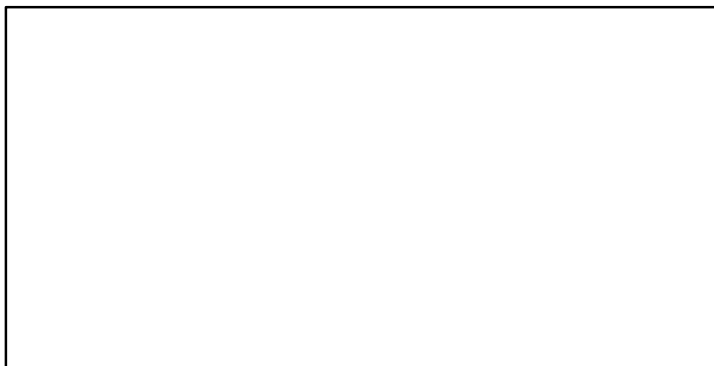
◆ Start Year ◆ End Year \* No Data

European pilchard Ligurian and North Tyrrhenian Sea [SARDMEDGSA9]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***

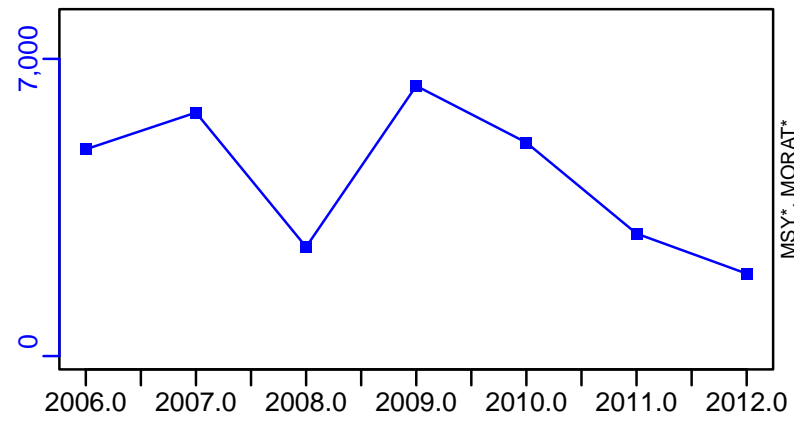


**Recruits\***



European pilchard Ligurian and North Tyrrhenian Sea [SARDMEDGSA9]

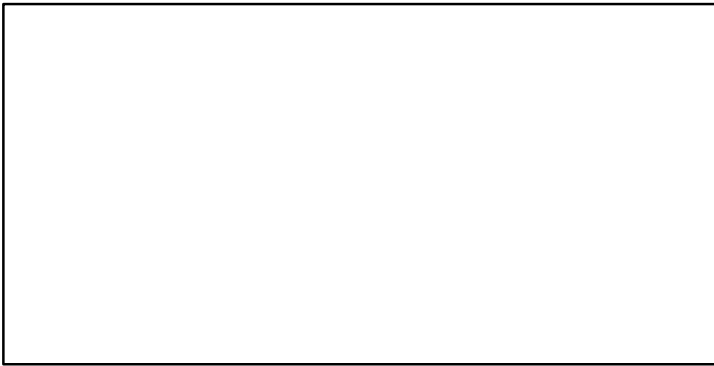
TC-MT, TL\*, RecC\* (2006–2012–OSIO)



TAC\*, Cpair\*, Cadv\*



survB\*



CPUE\*



EFFORT\*



CdivMSY\*



## Spiny dogfish Black Sea [SDOGBLKGSA29]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Squalus acanthias   |
| <b>Current Assess ID</b>    | STECF-SDOGBLKGSA29-1989-2016-MEDIMP2021-2                                     |
| <b>Area</b>                 | Black Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011, 2014, 2016  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2016      | 0.08  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | M-1/yr    | 2011      | 0.15  |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2016      | 703        | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2016      | 65,271     | -   | -   |
| <b>F</b>          | F-1/yr           | 2016      | 0.939      | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 137        |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2016      | 11.735     |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |

Spiny dogfish Black Sea [SDOGBLKGSA29]

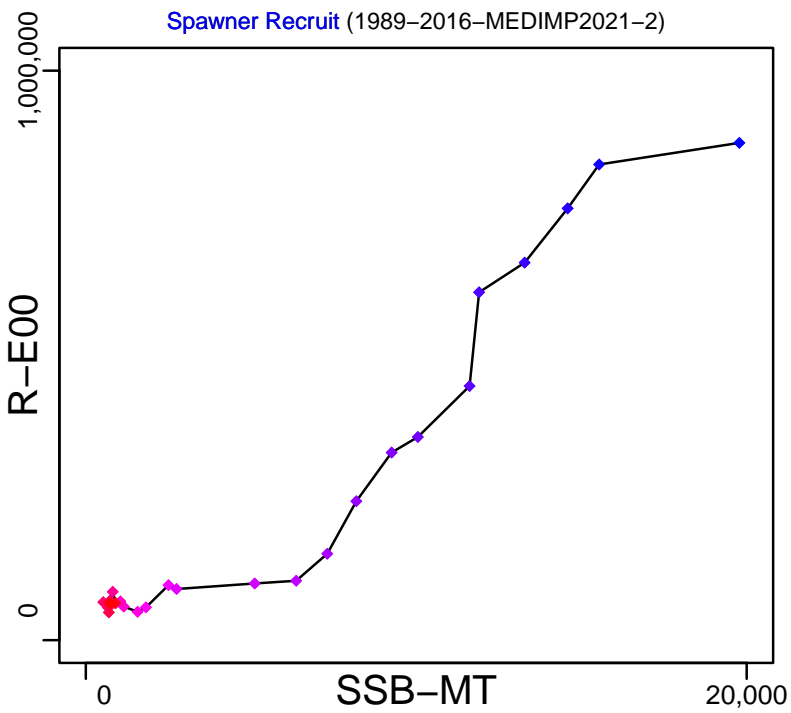
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (1989–2016–MEDIMP2021–2)



Production\*



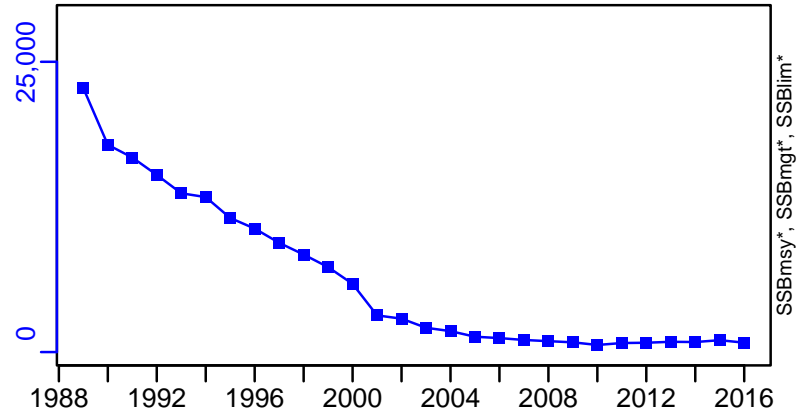
◆ Start Year ◆ End Year \* No Data

# Spiny dogfish Black Sea [SDOGBLKGS29]

TB\*



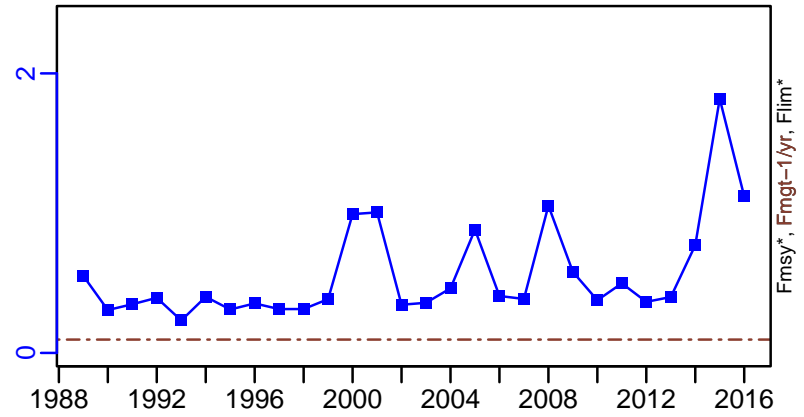
SSB-MT (1989-2016-MEDIMP2021-2)



TN \*



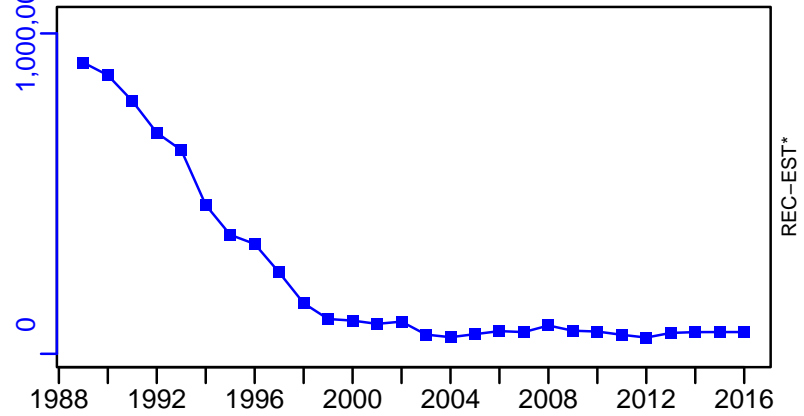
F-1/yr (1989-2016-MEDIMP2021-2)



ER\*

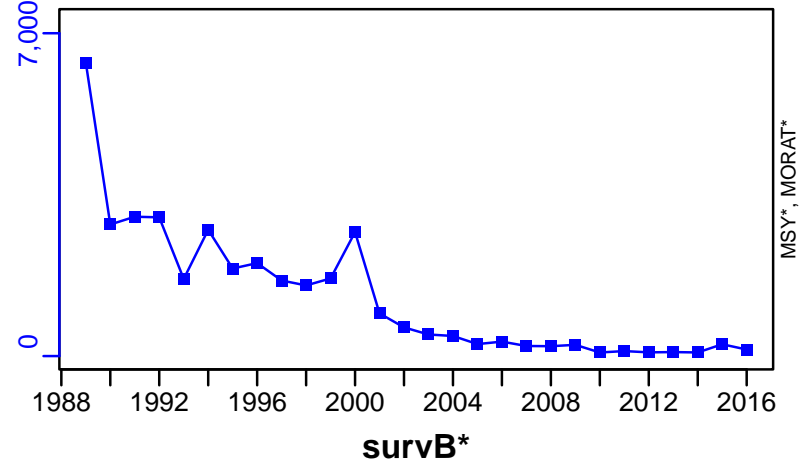


R-E00 (1989-2016-MEDIMP2021-2)



Spiny dogfish Black Sea [SDOGBLKGA29]

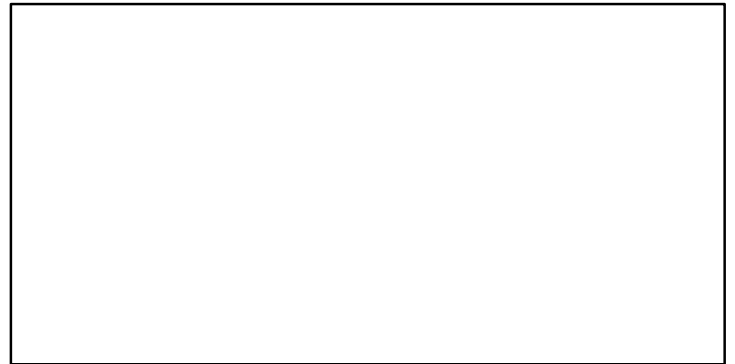
TC-MT, TL\*, RecC\* (1989-2016-MEDIMP2021-2)



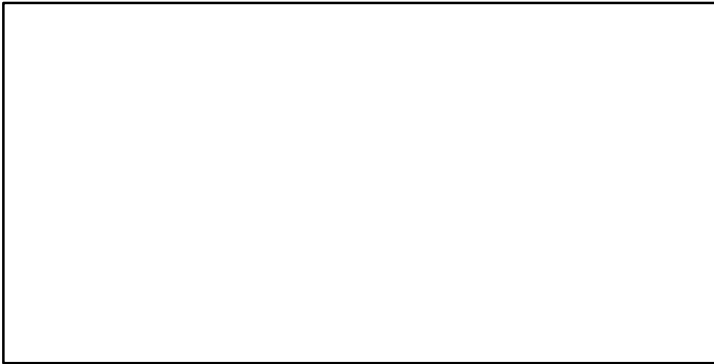
TAC\*, Cpair\*, Cadv\*



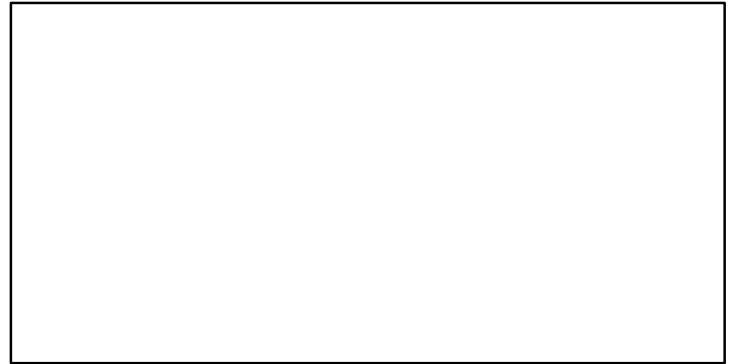
CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series ▲ 3rd listed time series — MORAT  
● 2nd listed time series - - - MSY \* No Data

## Spottail mantis shrimp South Tyrrhenian Sea [SMSHRMPMEDGSA10]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Squilla mantis  |
| <b>Current Assess ID</b>    | STECF-SMSHRMPMEDGSA10-2011-2011-OSIO  |
| <b>Area</b>                 | South Tyrrhenian Sea  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2011      | 0.41  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | -                | -         | -          | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | -                | -         | -          | -   | -   |
| <b>F</b>          | F-1/yr           | 2011      | 1.08       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2011      | 387        |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2011      | 2.634      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



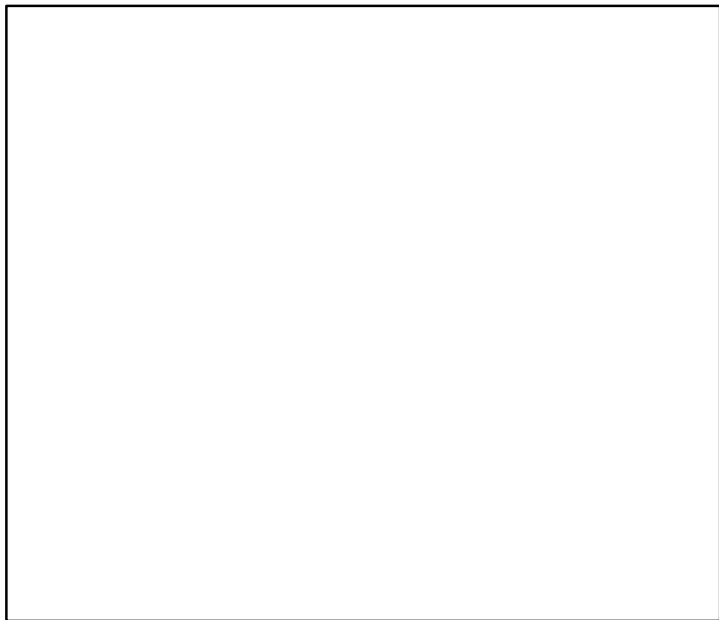
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



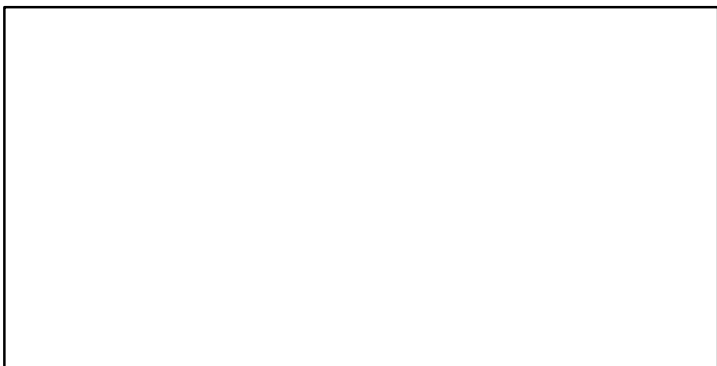
**Production\***



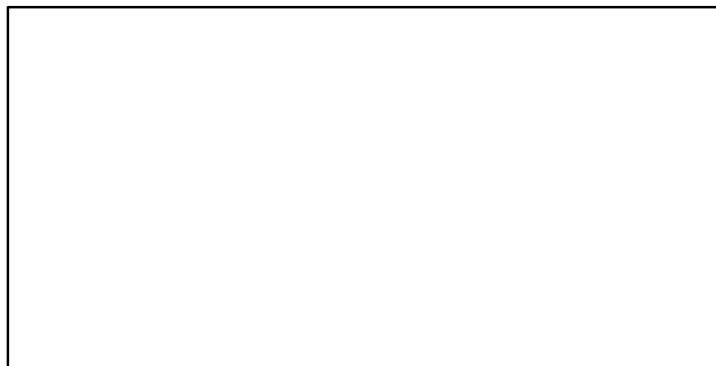
◆ Start Year ◆ End Year \* No Data

Spottail mantis shrimp South Tyrrhenian Sea [SMSHRMPMEDGSA10]

**TB\***



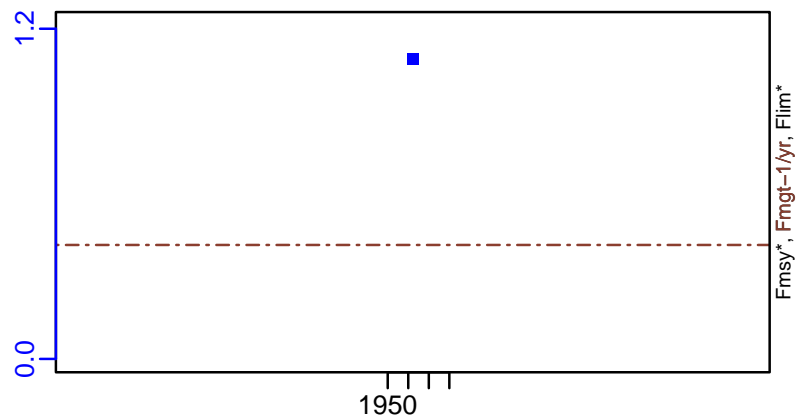
**SSB\***



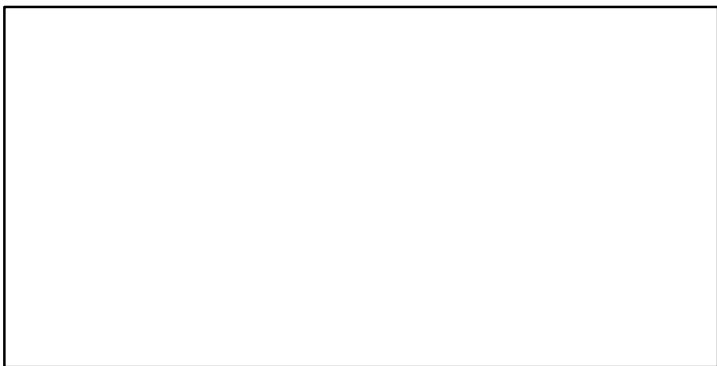
**TN \***



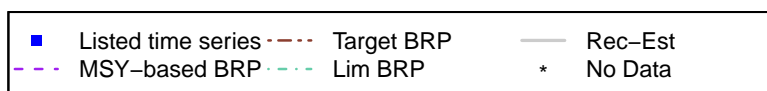
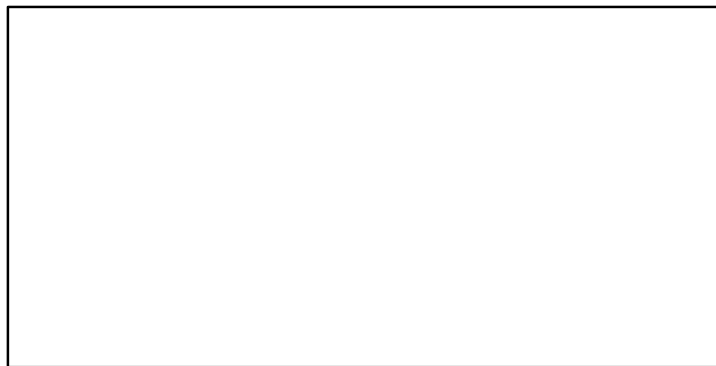
**F-1/yr (2011–2011–OSIO)**



**ER\***



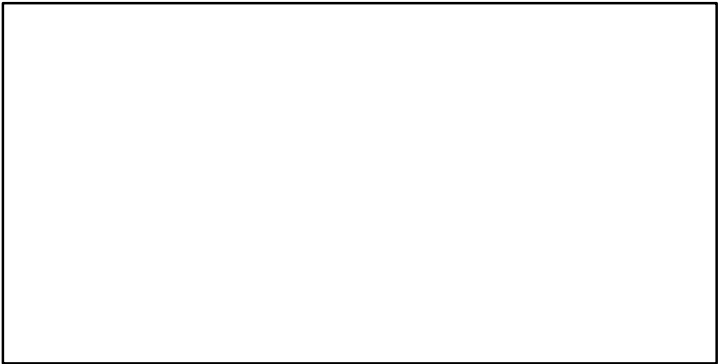
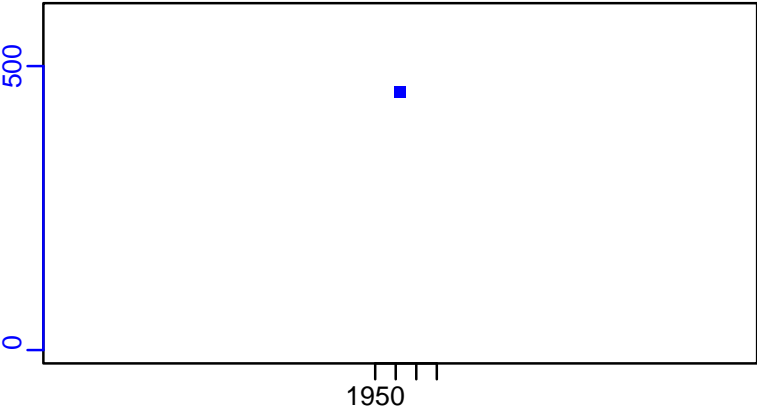
**Recruits\***



Spottail mantis shrimp South Tyrrhenian Sea [SMSHRMPMEDGSA10]

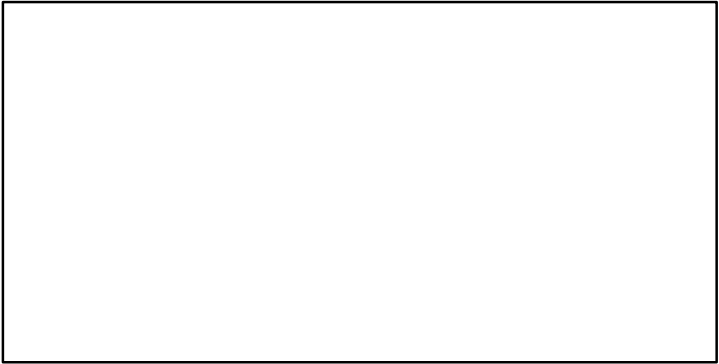
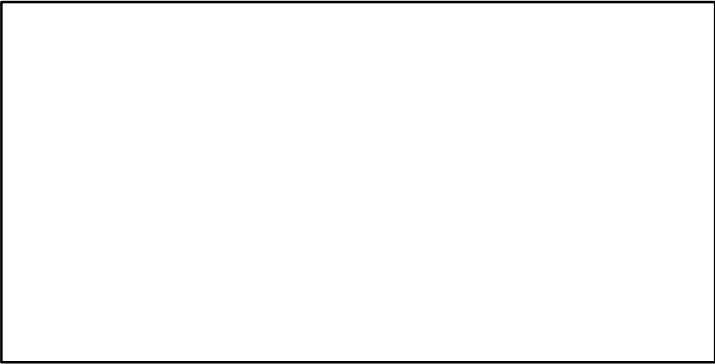
TC-MT, TL\*, RecC\* (2011-2011-OSIO)

TAC\*, Cpair\*, Cadv\*



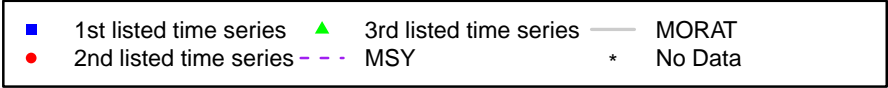
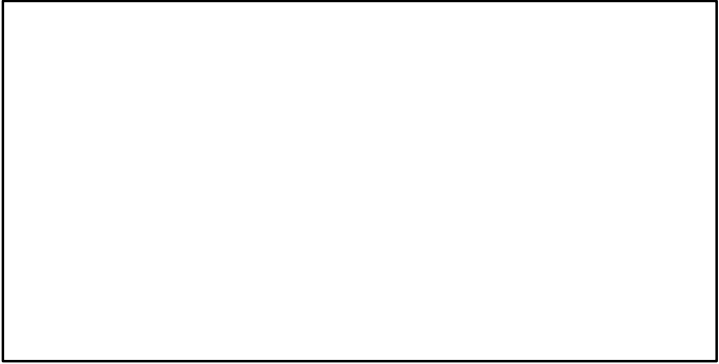
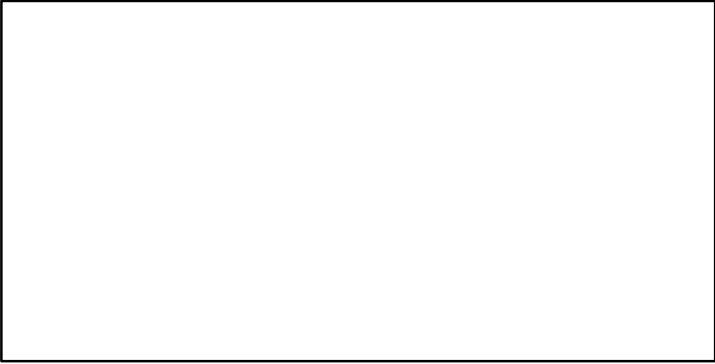
survB\*

CPUE\*



EFFORT\*

CdivMSY\*



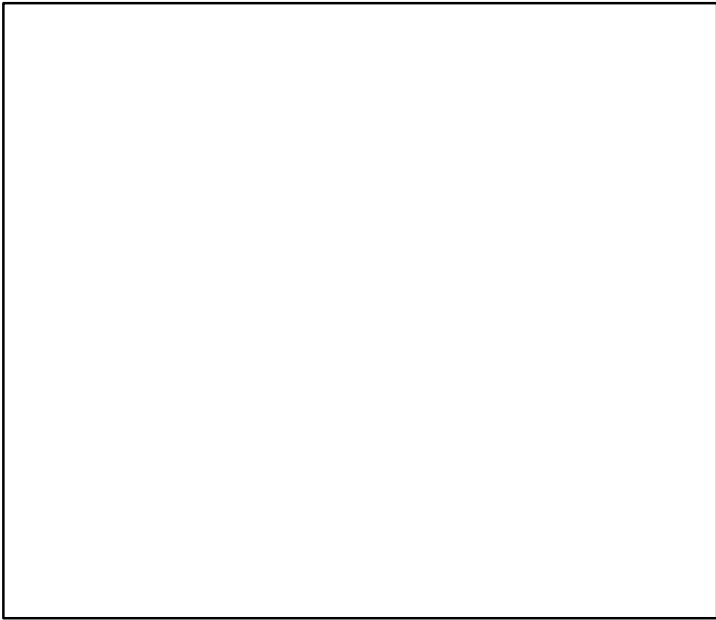
## Spottail mantis shrimp Adriatic Sea (GSA 17,18) [SMSHRMPMEDGSA17-18]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Squilla mantis  |
| <b>Current Assess ID</b>    | STECF-SMSHRMPMEDGSA17-18-2008-2019-MEDIMP2021-2                               |
| <b>Area</b>                 | Adriatic Sea (GSA 17,18)  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2014, 2019  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2019      | 0.449 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |               |     |     |
|-------------------|------------------|-----------|---------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value    | Sex | Age |
| <b>TB</b>         | -                | -         | -             | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2019      | 14,193        | -   | -   |
| <b>TN</b>         | -                | -         | -             | -   | -   |
| <b>R</b>          | R-E00            | 2019      | 2,901,990,201 | -   | -   |
| <b>F</b>          | F-1/yr           | 2019      | 0.686         | -   | -   |
| <b>ER</b>         | -                | -         | -             | -   | -   |
| <b>TC</b>         | TC-MT            | 2019      | 4372          |     |     |
| <b>TL</b>         | -                | -         | -             |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -             |     |     |
| <b>F/Fmsy</b>     | -                | -         | -             |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -             |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -             |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2019      | 1.526         |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -             |     |     |

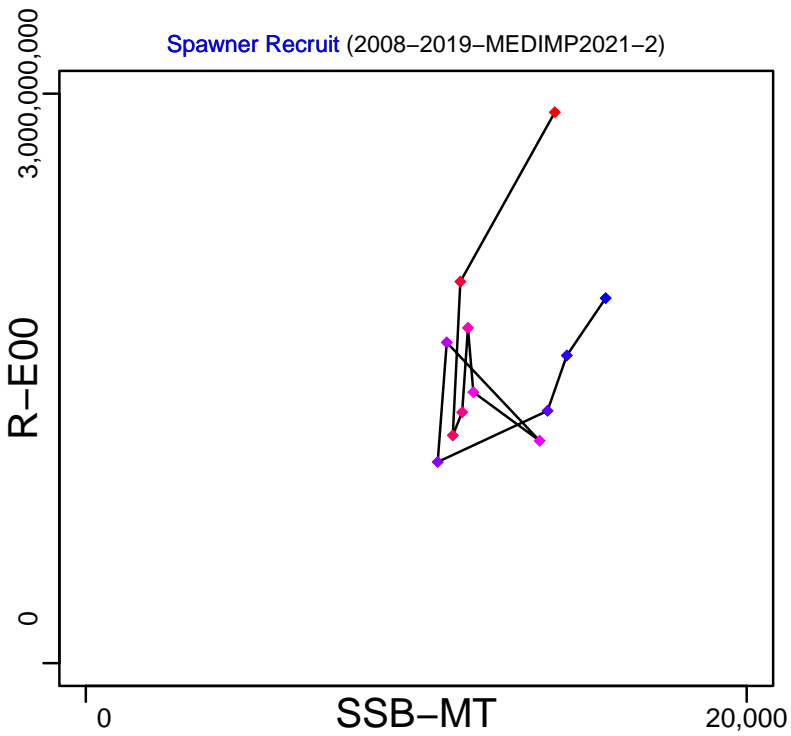
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2008–2019–MEDIMP2021–2)

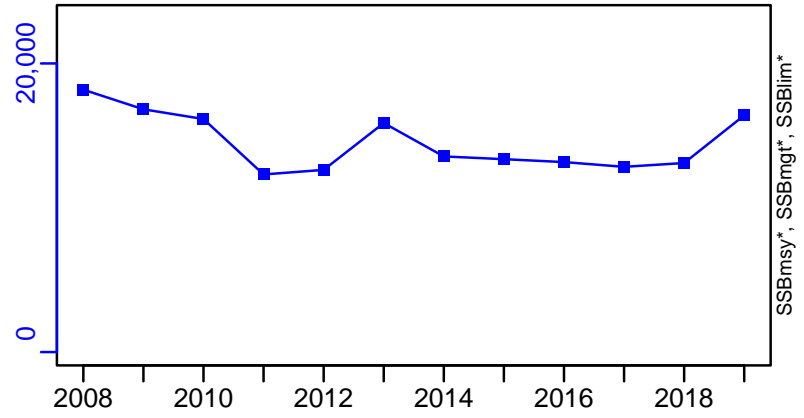


Spottail mantis shrimp Adriatic Sea (GSA 17,18) [SMHRMPMEDGSA17-18]

TB\*



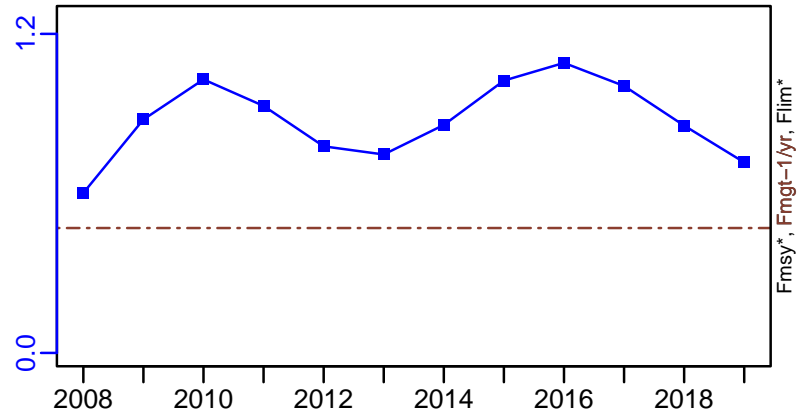
SSB-MT (2008-2019-MEDIMP2021-2)



TN \*



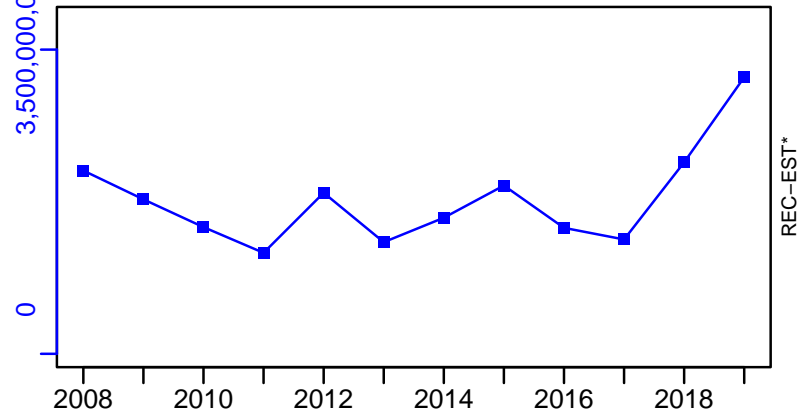
F-1/yr (2008-2019-MEDIMP2021-2)



ER\*

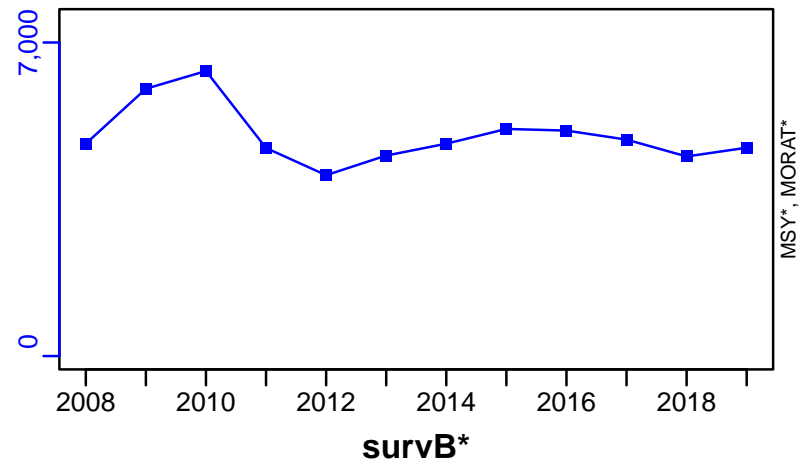


R-E00 (2008-2019-MEDIMP2021-2)

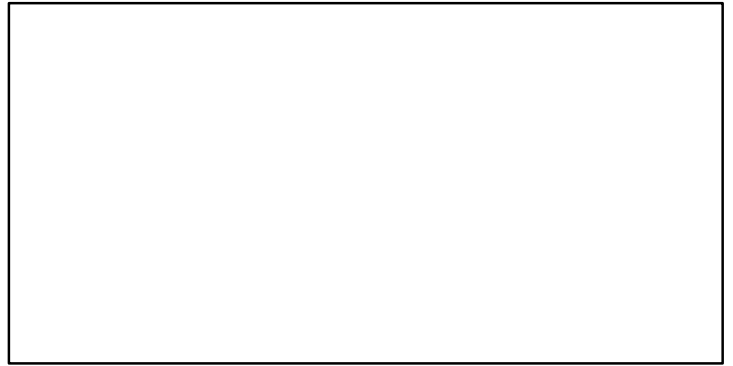


Spottail mantis shrimp Adriatic Sea (GSA 17,18) [SMSHRMPMEDGSA17-18]

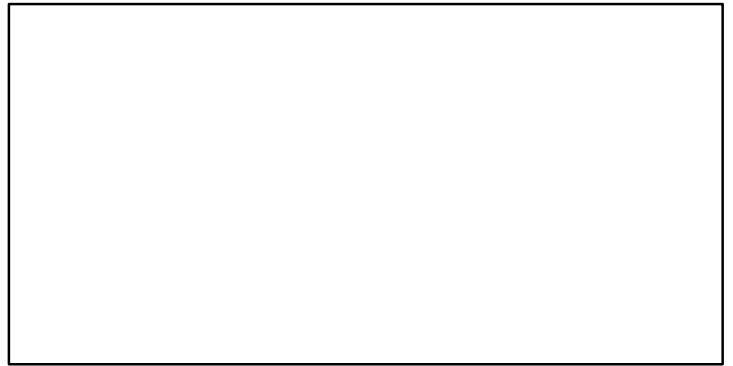
TC-MT, TL\*, RecC\* (2008-2019-MEDIMP2021-2)



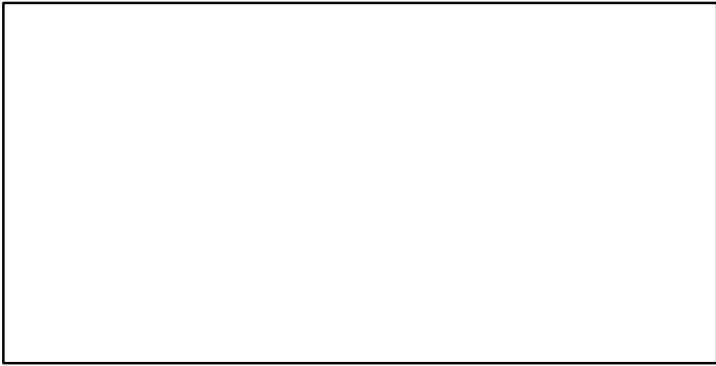
TAC\*, Cpair\*, Cadv\*



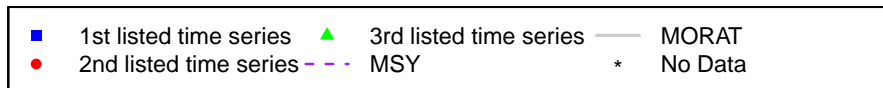
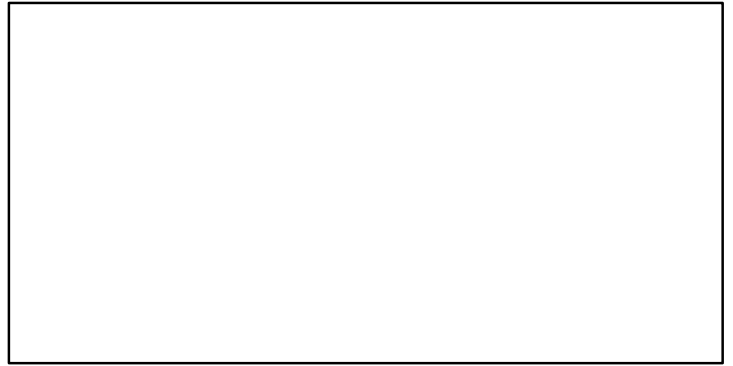
CPUE\*



EFFORT\*



CdivMSY\*



## Spottail mantis shrimp Ligurian and North Tyrrhenian Sea [SMSHRMPMEDGSA9]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Squilla mantis  |
| <b>Current Assess ID</b>    | STECF-SMSHRMPMEDGSA9-2004-2010-OSIO   |
| <b>Area</b>                 | Ligurian and North Tyrrhenian Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2010  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2010      | 0.54  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |                   |     |     |
|-------------------|------------------|-----------|-------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value        | Sex | Age |
| <b>TB</b>         | -                | -         | -                 | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2010      | 430               | -   | -   |
| <b>TN</b>         | -                | -         | -                 | -   | -   |
| <b>R</b>          | R-E00            | 2010      | $4.5 \times 10^7$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2010      | 1.2               | -   | -   |
| <b>ER</b>         | -                | -         | -                 | -   | -   |
| <b>TC</b>         | TC-MT            | 2010      | 386               |     |     |
| <b>TL</b>         | -                | -         | -                 |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -                 |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                 |     |     |
| <b>F/Fmsy</b>     | -                | -         | -                 |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                 |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -                 |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                 |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2010      | 2.222             |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                 |     |     |



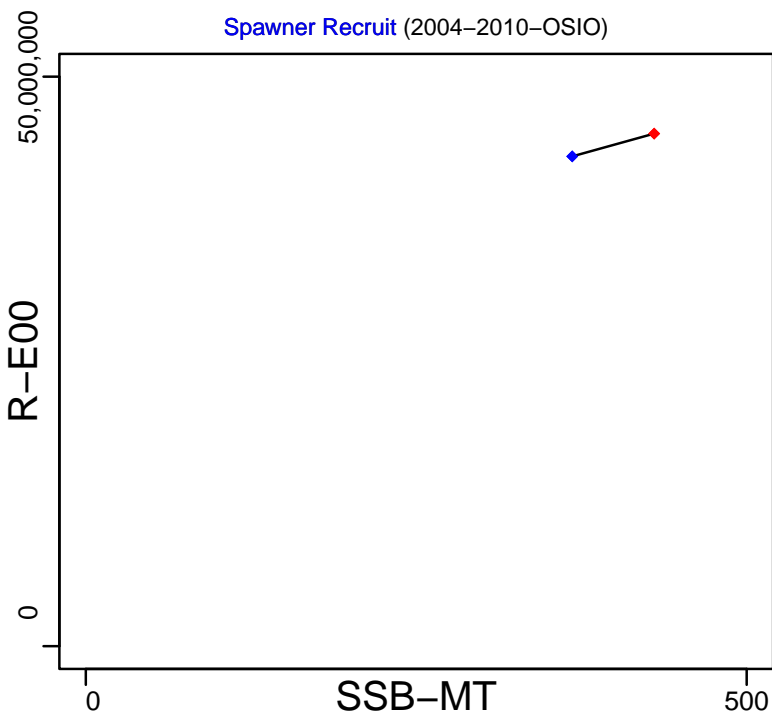
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2004–2010–OSIO)



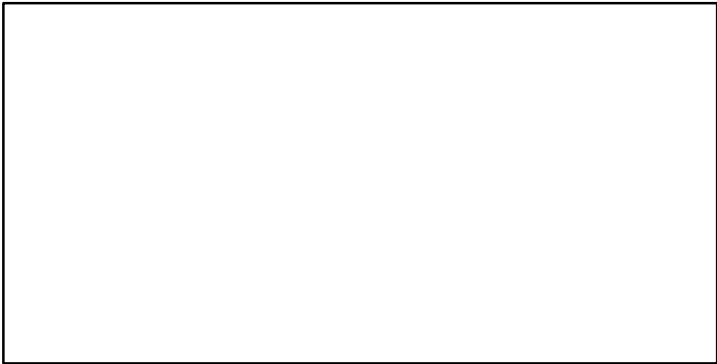
Production\*



◆ Start Year ◆ End Year \* No Data

Spottail mantis shrimp Ligurian and North Tyrrhenian Sea [SMSHRMPMEDGSA9]

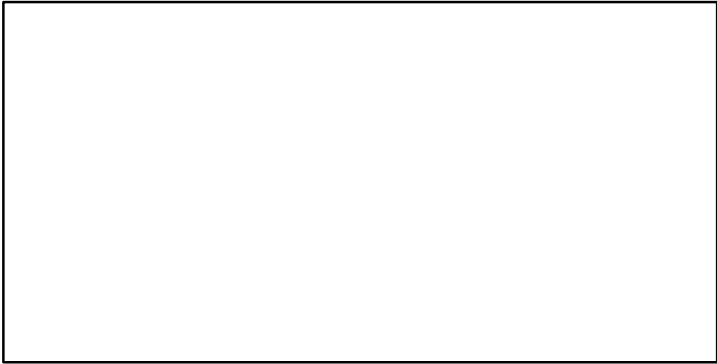
TB\*



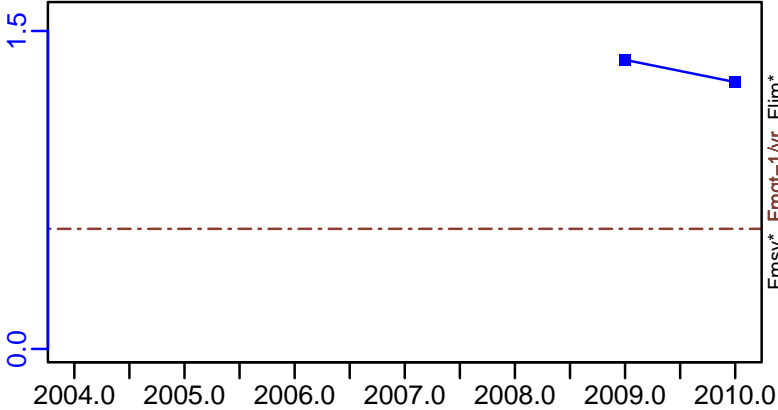
SSB-MT (2004–2010–OSIO)



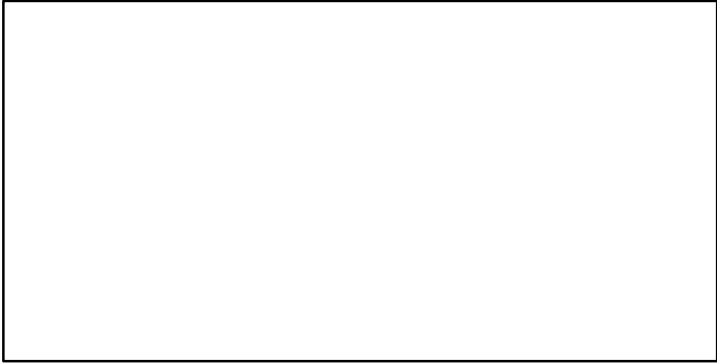
TN \*



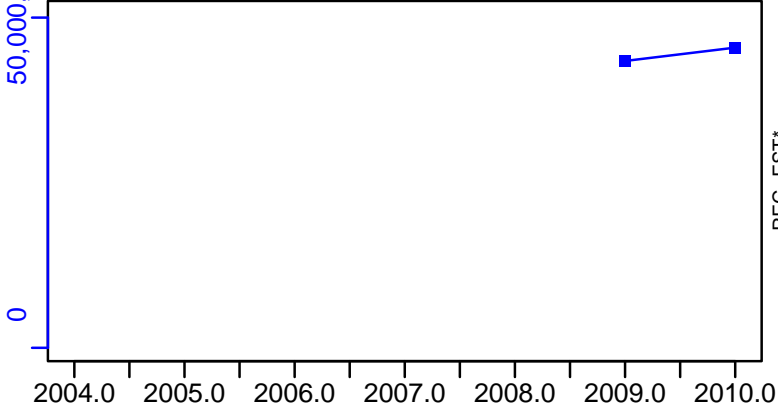
F-1/yr (2004–2010–OSIO)



ER\*

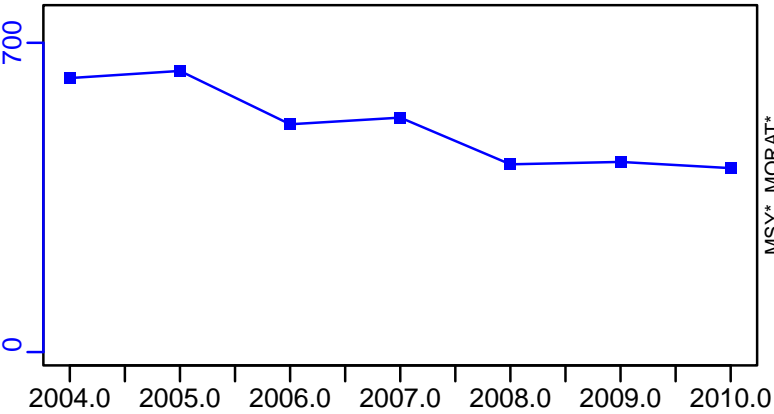


R-E00 (2004–2010–OSIO)



Spottail mantis shrimp Ligurian and North Tyrrhenian Sea [SMSHRMPMEDGSA9]

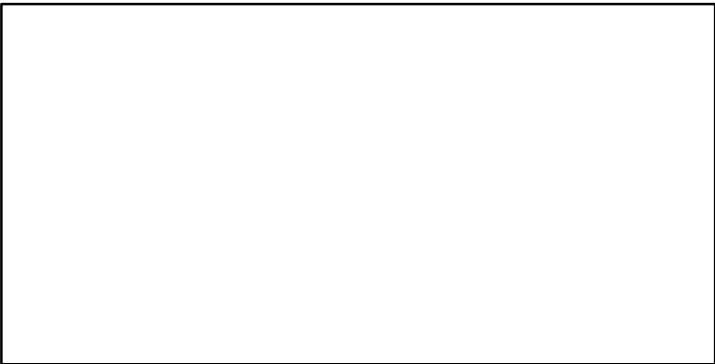
TC-MT, TL\*, RecC\* (2004–2010–OSIO)



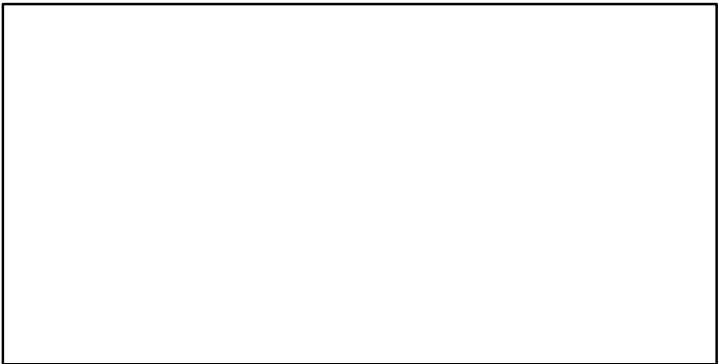
TAC\*, Cpair\*, Cadv\*



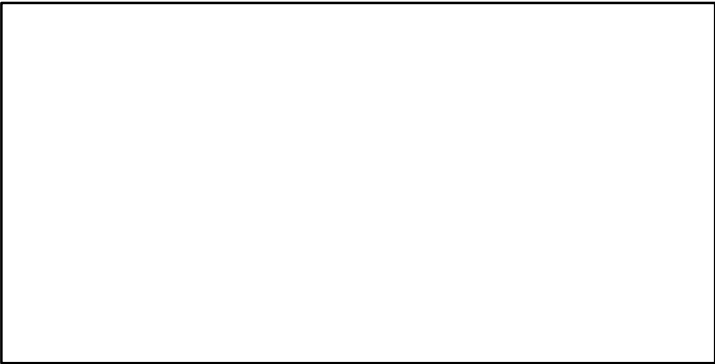
survB\*



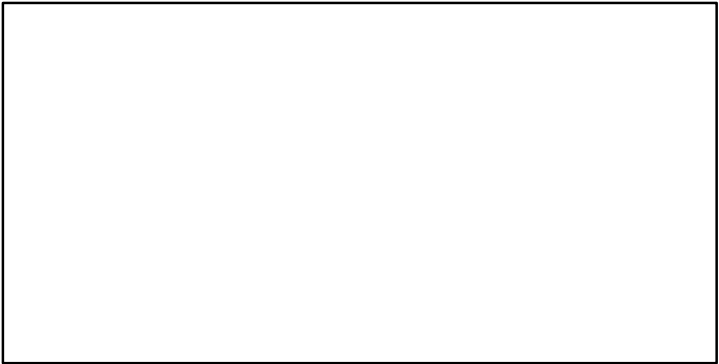
CPUE\*



EFFORT\*



CdivMSY\*



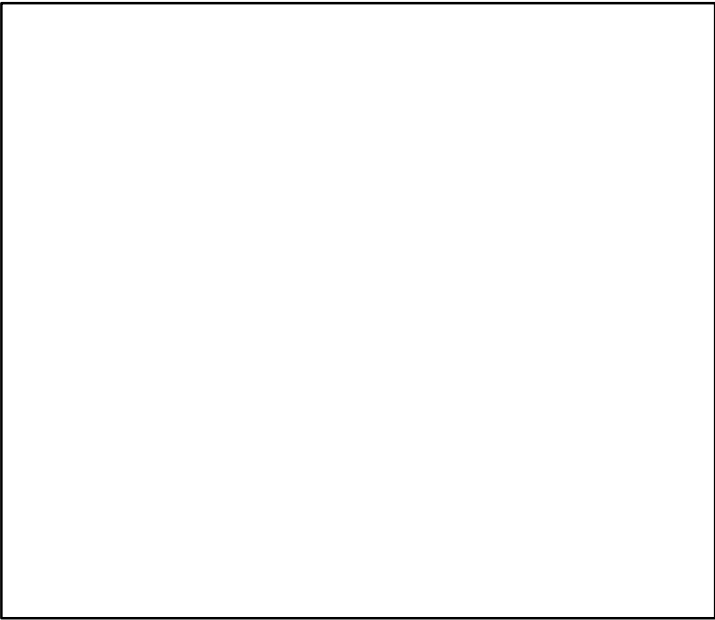
## Surmullet Malta Island and South of Sicily (GSA 15, 16) [SMULLMEDGSA15-16]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus surmuletus   |
| <b>Current Assess ID</b>    | STECF-SMULLMEDGSA15-16-2002-2012-OSIO   |
| <b>Area</b>                 | Malta Island and South of Sicily (GSA 15, 16)                                 |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2012  |

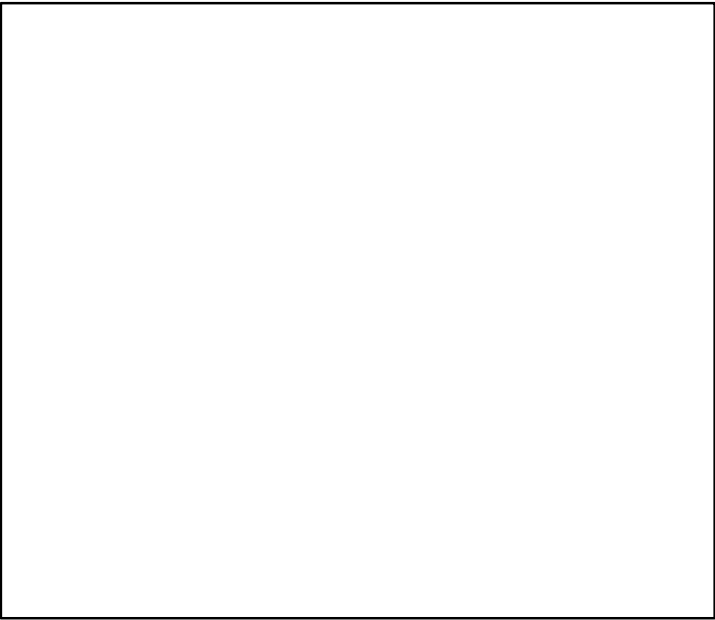
| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| TBmsy            | -         | -         | -     |
| SSBmsy           | -         | -         | -     |
| Fmsy             | -         | -         | -     |
| ERmsy            | -         | -         | -     |
| TBmgt            | -         | -         | -     |
| SSBmgt           | -         | -         | -     |
| Fmgt             | Fmgt-1/yr | 2012      | 0.19  |
| ERmgt            | -         | -         | -     |
| TB0              | -         | -         | -     |
| SSB0             | -         | -         | -     |
| MSY              | -         | -         | -     |
| M                | -         | -         | -     |
| TBlim            | -         | -         | -     |
| SSBlim           | -         | -         | -     |
| Flim             | -         | -         | -     |
| ERlim            | -         | -         | -     |

| Time Series |                  |           |                   |     |     |
|-------------|------------------|-----------|-------------------|-----|-----|
| Type        | ID               | Asmt Year | Curr Value        | Sex | Age |
| TB          | -                | -         | -                 | -   | -   |
| SSB         | SSB-MT           | 2012      | 2460              | -   | 2+  |
| TN          | -                | -         | -                 | -   | -   |
| R           | R-E00            | 2012      | $4.2 \times 10^7$ | -   | -   |
| F           | F-1/yr           | 2012      | 0.78              | -   | -   |
| ER          | -                | -         | -                 | -   | -   |
| TC          | TC-MT            | 2012      | 753               |     |     |
| TL          | -                | -         | -                 |     |     |
| TB/TBmsy    | -                | -         | -                 |     |     |
| SSB/SSBmsy  | -                | -         | -                 |     |     |
| F/Fmsy      | -                | -         | -                 |     |     |
| ER/ERmsy    | -                | -         | -                 |     |     |
| TB/TBmgt    | -                | -         | -                 |     |     |
| SSB/SSBmgt  | -                | -         | -                 |     |     |
| F/Fmgt      | F-1/yr/Fmgt-1/yr | 2012      | 4.105             |     |     |
| ER/ERmgt    | -                | -         | -                 |     |     |

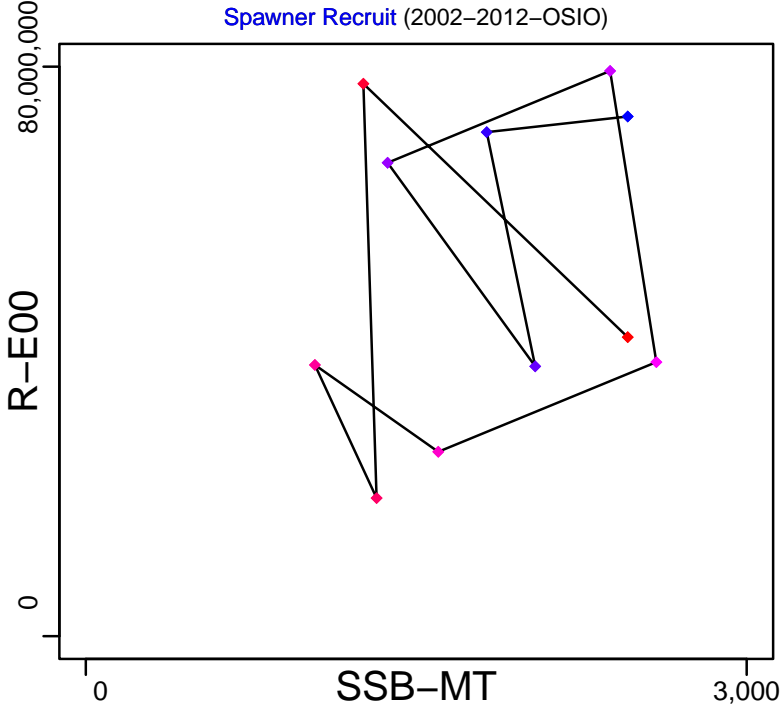
Kobe MSY\*



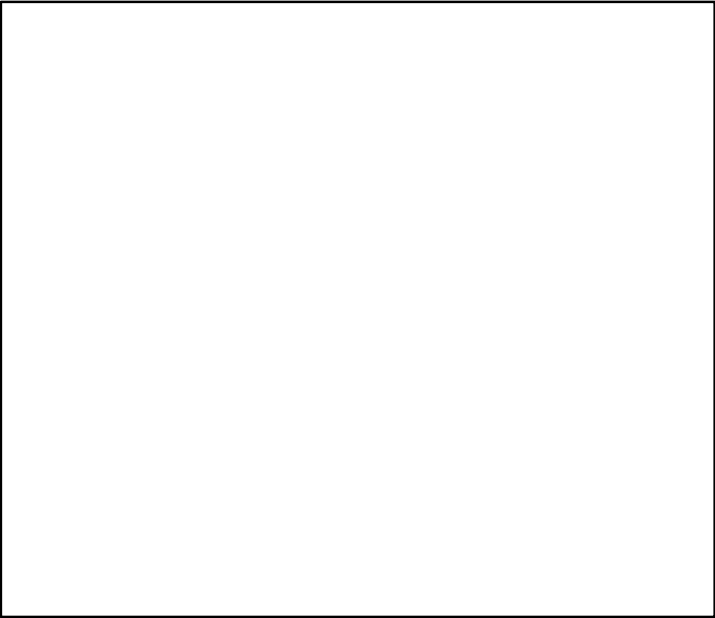
Kobe MGT\*



Spawner Recruit (2002-2012-OSIO)

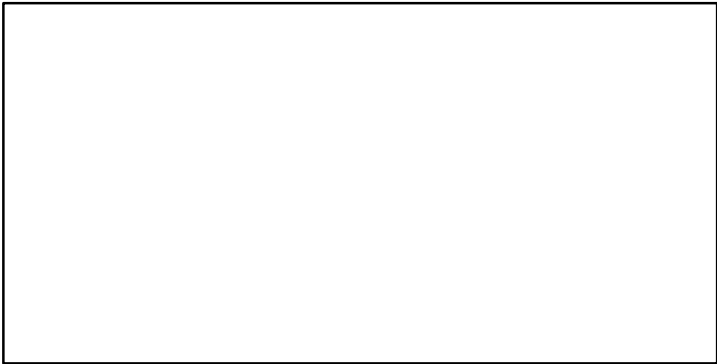


Production\*

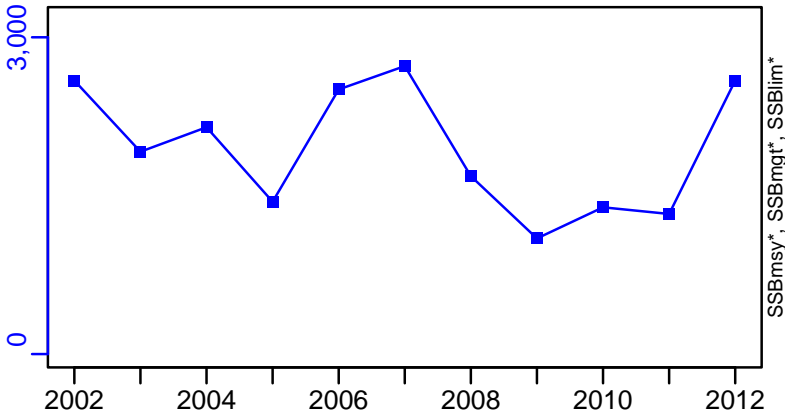


◆ Start Year ◆ End Year \* No Data

TB\*



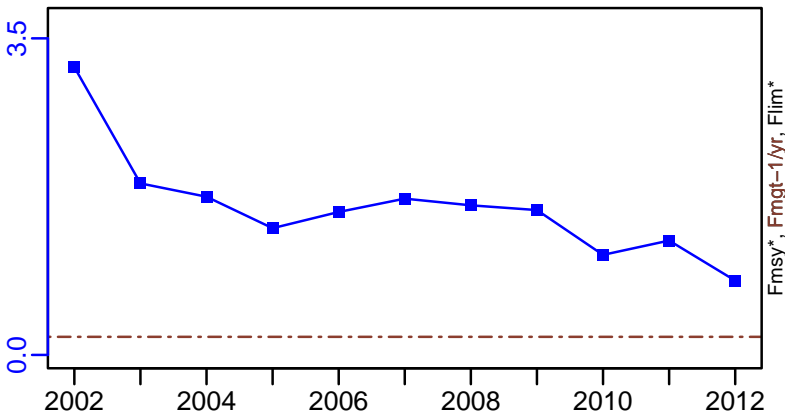
SSB-MT (2002-2012-OSIO)



TN \*



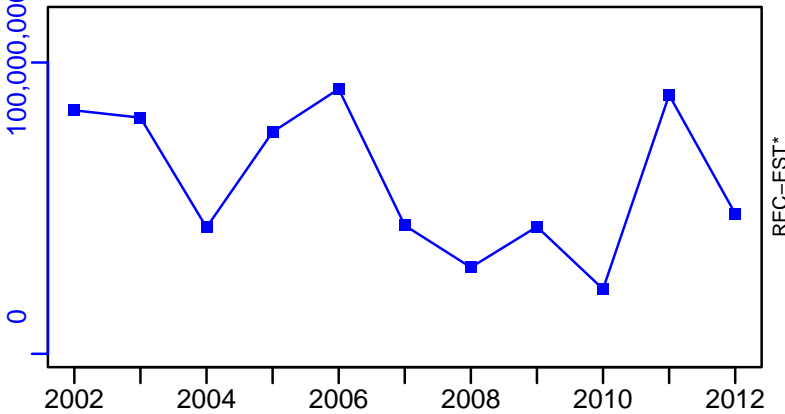
F-1/yr (2002-2012-OSIO)



ER\*

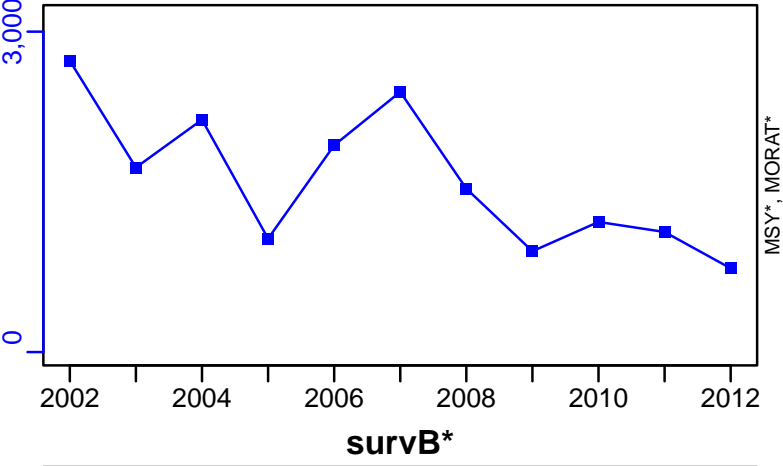


R-E00 (2002-2012-OSIO)



Surmullet Malta Island and South of Sicily (GSA 15, 16) [SMULLMEDGSA15-16]

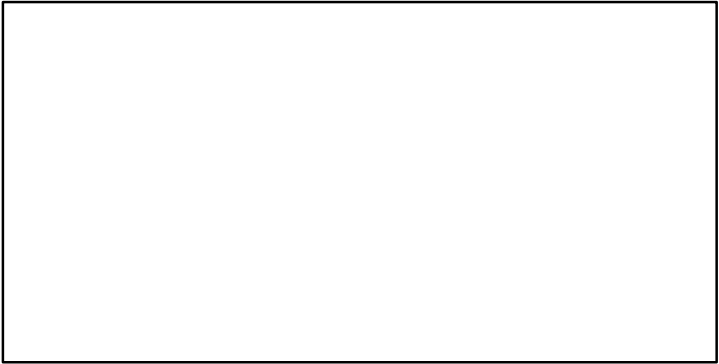
TC-MT, TL\*, RecC\* (2002-2012-OSIO)



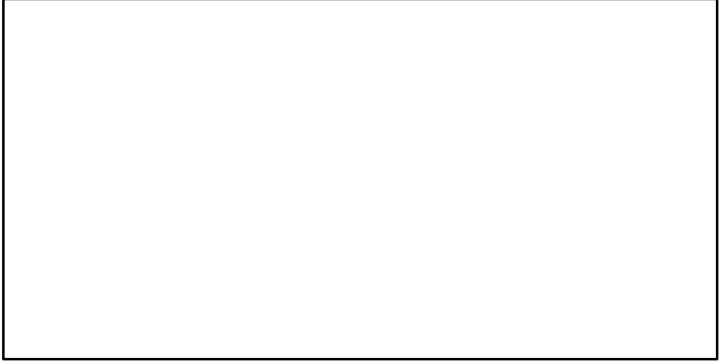
TAC\*, Cpair\*, Cadv\*



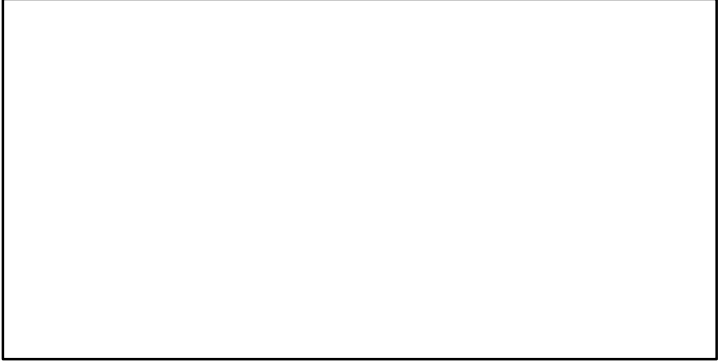
CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series

● 2nd listed time series

▲ 3rd listed time series

- - MSY

— MORAT

\* No Data

## Surmullet Balearic Island [SMULLMEDGSA5]

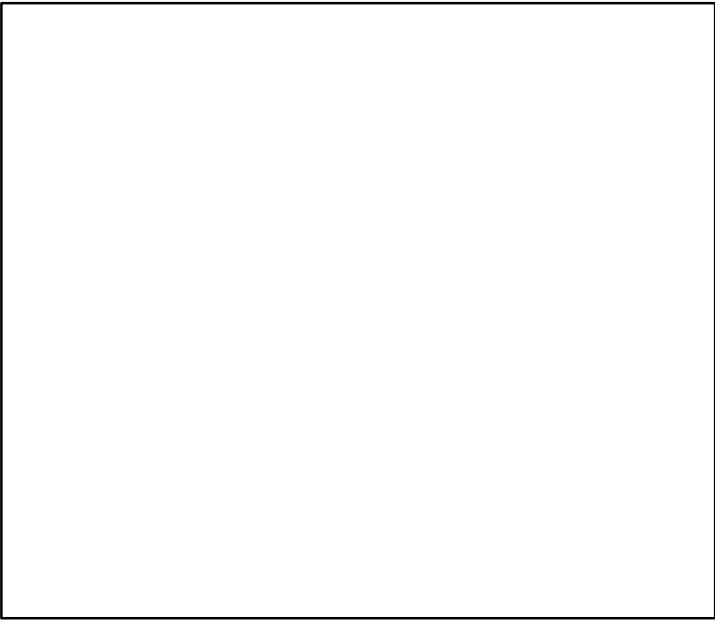
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus surmuletus   |
| <b>Current Assess ID</b>    | WGSAD-SMULLMEDGSA5-2000-2022-HIVELY   |
| <b>Area</b>                 | Balearic Island   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Working Group on Stock Assessment of Demersal Species                         |
| <b>Asmts in RAM</b>         | 2012, 2019, 2021, 2022  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2022      | 0.24  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

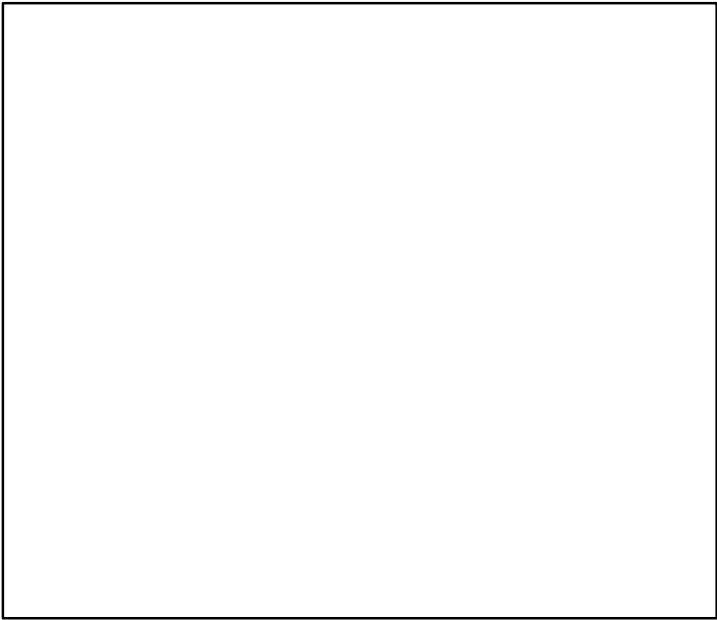
| Time Series       |                  |           |            |     |        |
|-------------------|------------------|-----------|------------|-----|--------|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age    |
| <b>TB</b>         | TB-MT            | 2021      | 428        | -   | -      |
| <b>SSB</b>        | SSB-MT           | 2022      | 370        | -   | -      |
| <b>TN</b>         | -                | -         | -          | -   | -      |
| <b>R</b>          | R-E00            | 2022      | 6,393,800  | -   | -      |
| <b>F</b>          | F-1/yr           | 2022      | 0.283      | -   | 1 to 3 |
| <b>ER</b>         | ER-calc-ratio    | 2021      | 0.191      | -   | -      |
| <b>TC</b>         | TC-MT            | 2022      | 83         |     |        |
| <b>TL</b>         | TL-MT            | 2022      | 83         |     |        |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |        |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |        |
| <b>F/Fmsy</b>     | -                | -         | -          |     |        |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |        |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |        |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |        |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2022      | 1.18       |     |        |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |        |



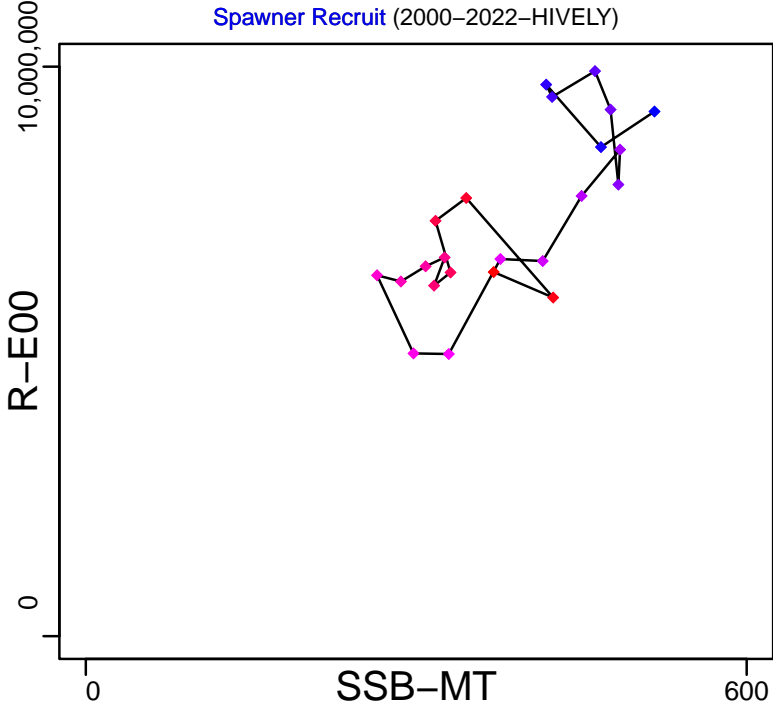
Kobe MSY\*



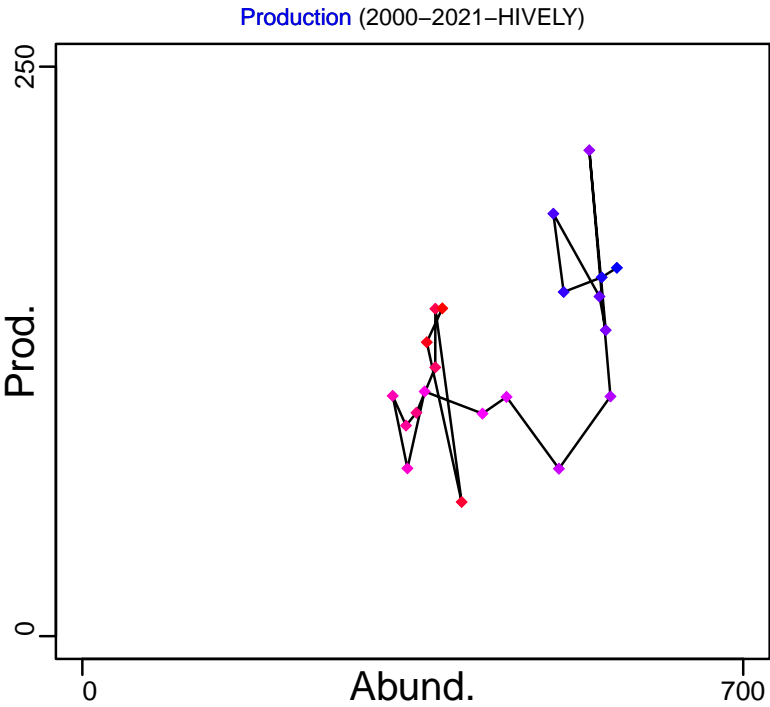
Kobe MGT\*



Spawner Recruit (2000–2022–HIVELY)



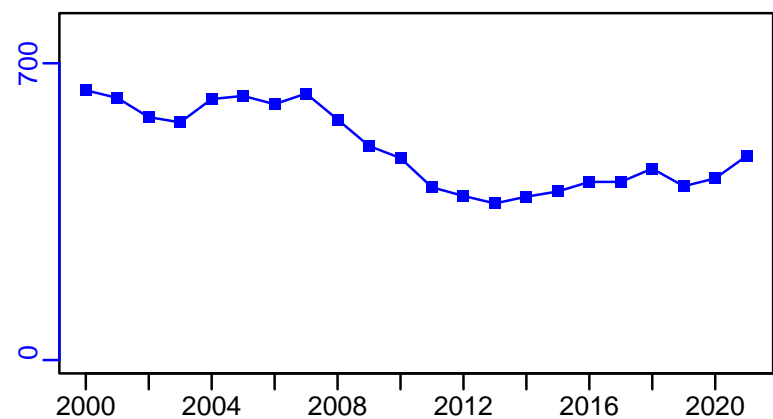
Production (2000–2021–HIVELY)



◆ Start Year ◆ End Year \* No Data

# Surmullet Balearic Island [SMULLMEDGSA5]

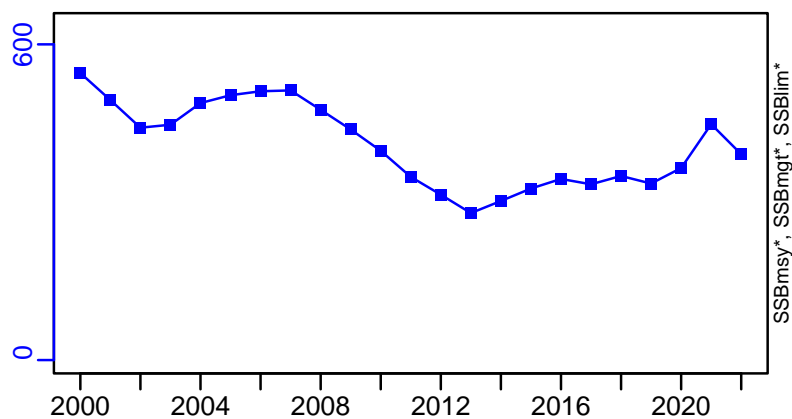
TB-MT (2000–2021–HIVELY)



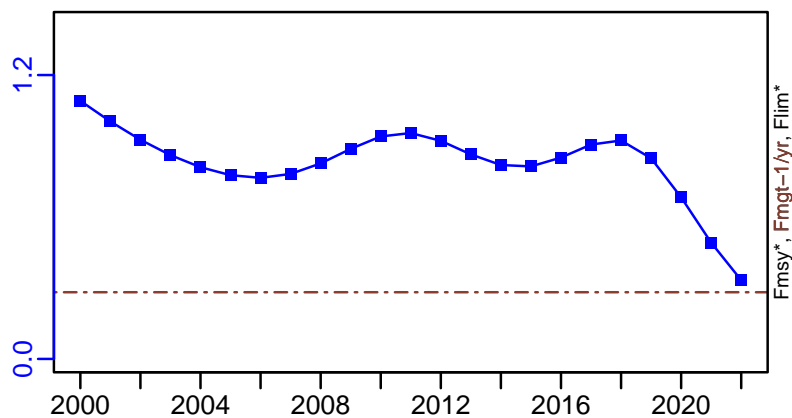
TN \*



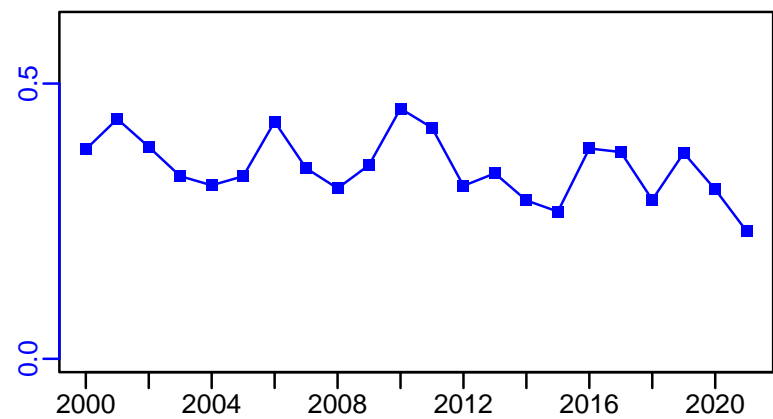
SSB-MT (2000–2022–HIVELY)



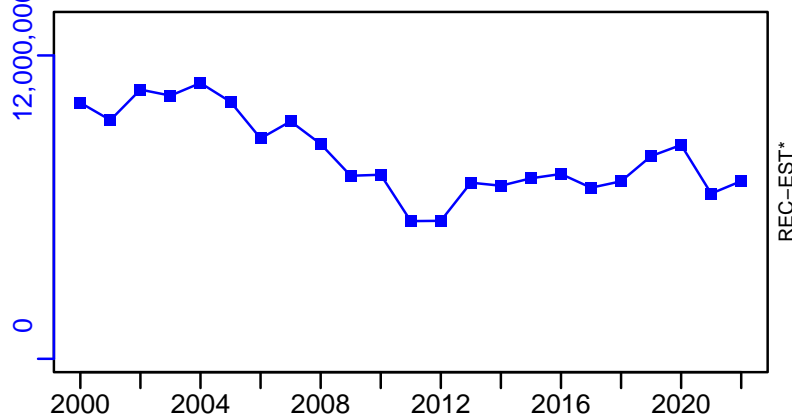
F-1/yr (2000–2022–HIVELY)



ER-calc-ratio (2000–2021–HIVELY)

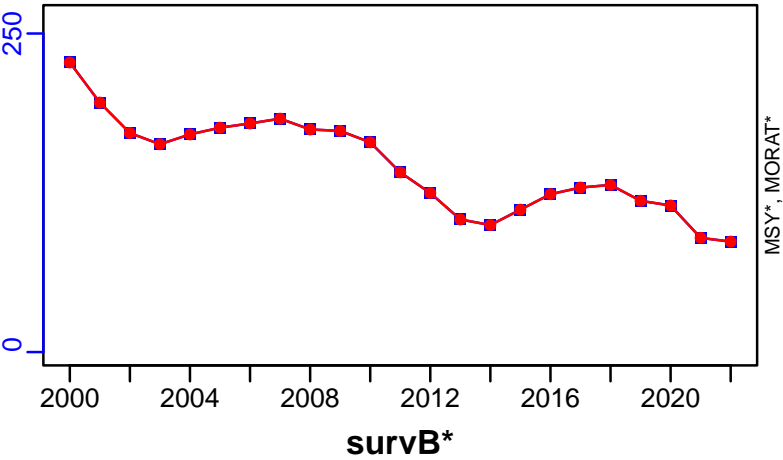


R-E00 (2000–2022–HIVELY)



Surmullet Balearic Island [SMULLMEDGSA5]

TC-MT, TL-MT, RecC\* (2000-2022-HIVELY)



TAC\*, Cpair\*, Cadv\*



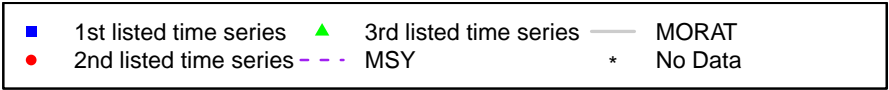
CPUE\*



EFFORT\*



CdivMSY\*



## Surmullet Ligurian and North Tyrrhenian Sea [SMULLMEDGSA9]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Mullus surmuletus   |
| <b>Current Assess ID</b>    | STECF-SMULLMEDGSA9-2006-2015-OSIO   |
| <b>Area</b>                 | Ligurian and North Tyrrhenian Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2010, 2015  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2015      | 0.52  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |      |     |
|-------------------|------------------|-----------|------------|------|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex  | Age |
| <b>TB</b>         | TB-MT            | 2015      | 1270       | -    | -   |
| <b>SSB</b>        | SSB-MT           | 2015      | 463        | Both | -   |
| <b>TN</b>         | -                | -         | -          | -    | -   |
| <b>R</b>          | R-E00            | 2015      | 16,600,000 | -    | -   |
| <b>F</b>          | F-1/yr           | 2015      | 0.492      | -    | -   |
| <b>ER</b>         | ER-calc-ratio    | 2015      | 0.205      | -    | -   |
| <b>TC</b>         | TC-MT            | 2015      | 260        |      |     |
| <b>TL</b>         | TL-MT            | 2015      | 260        |      |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |      |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |      |     |
| <b>F/Fmsy</b>     | -                | -         | -          |      |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |      |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |      |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |      |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2015      | 0.946      |      |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |      |     |

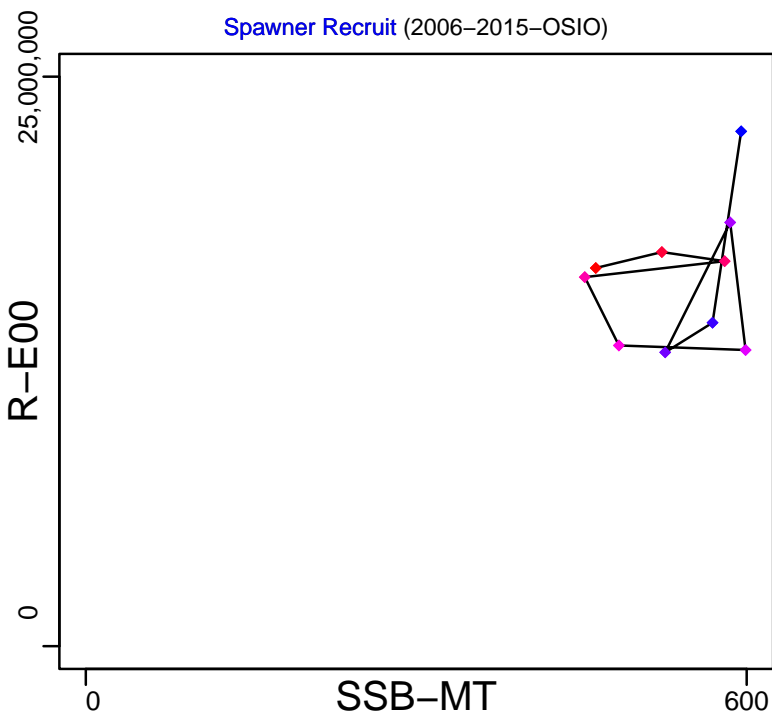
Kobe MSY\*



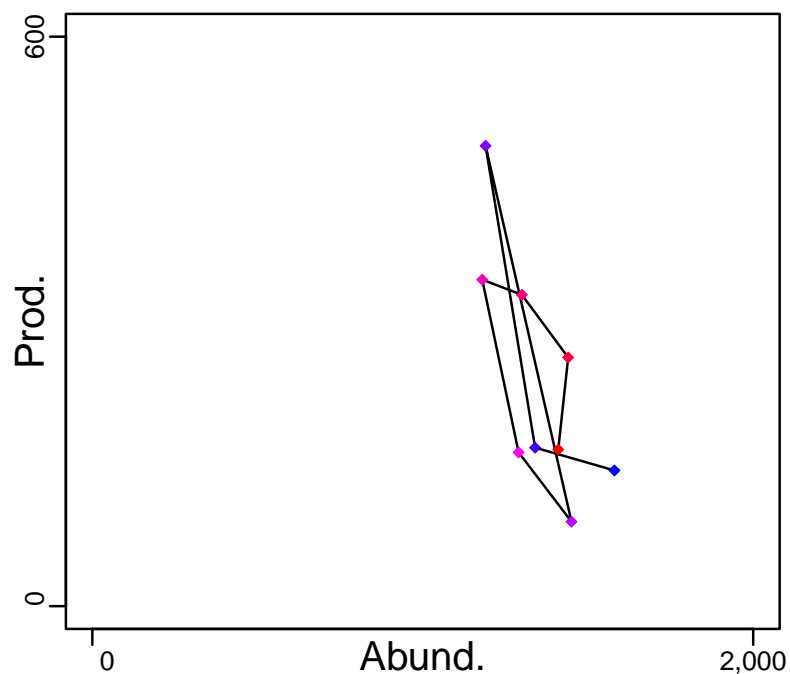
Kobe MGT\*



Spawner Recruit (2006–2015–OSIO)



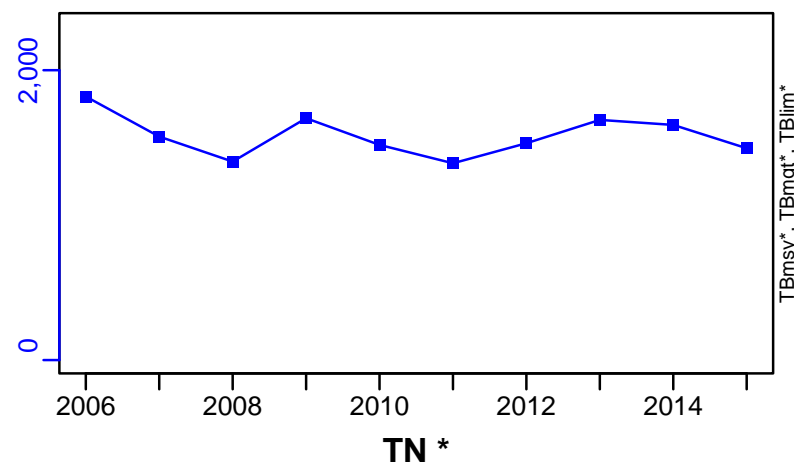
Production (2006–2015–OSIO)



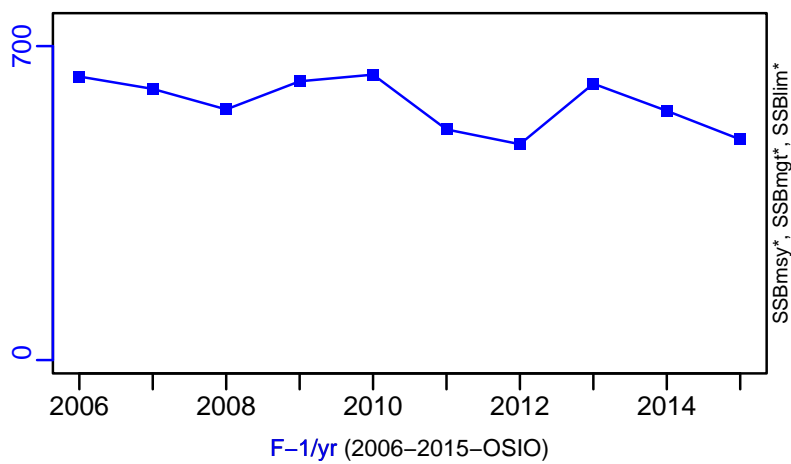
◆ Start Year ◆ End Year \* No Data

# Surmullet Ligurian and North Tyrrhenian Sea [SMULLMEDGSA9]

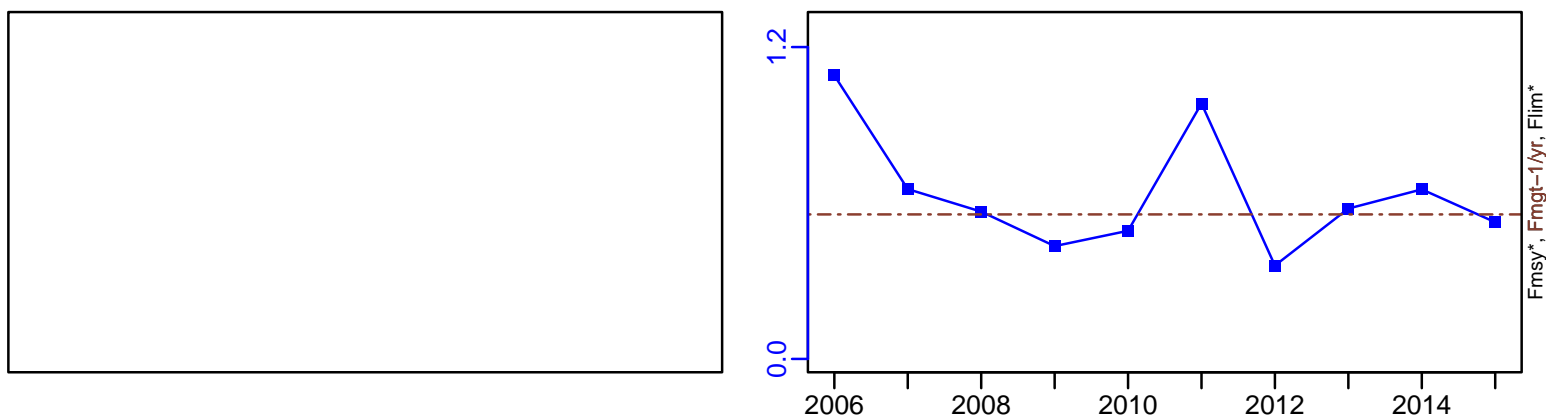
TB-MT (2006–2015–OSIO)



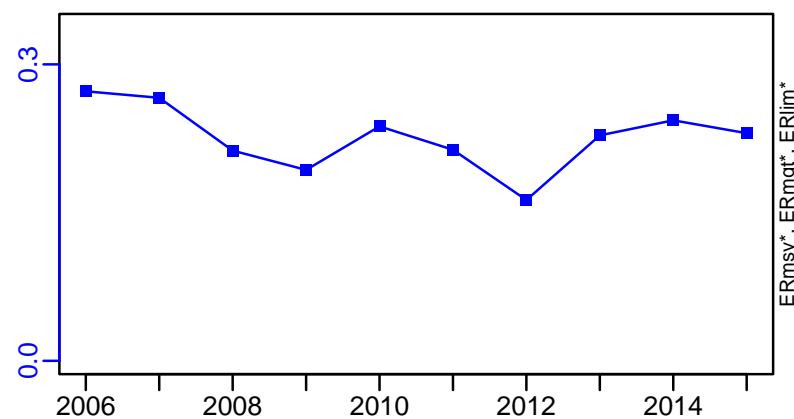
SSB-MT (2006–2015–OSIO)



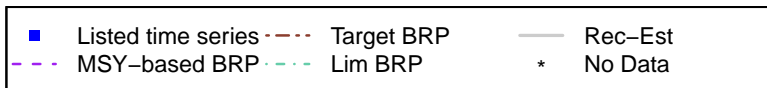
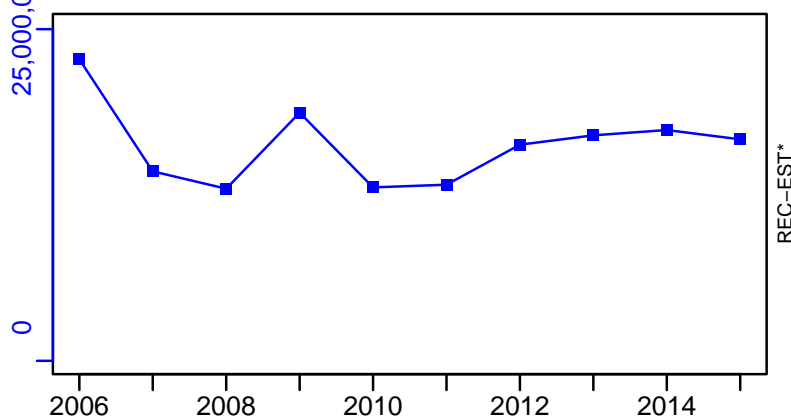
F-1/yr (2006–2015–OSIO)



ER-calc-ratio (2006–2015–OSIO)



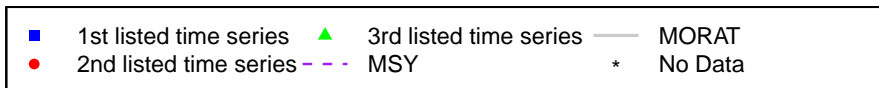
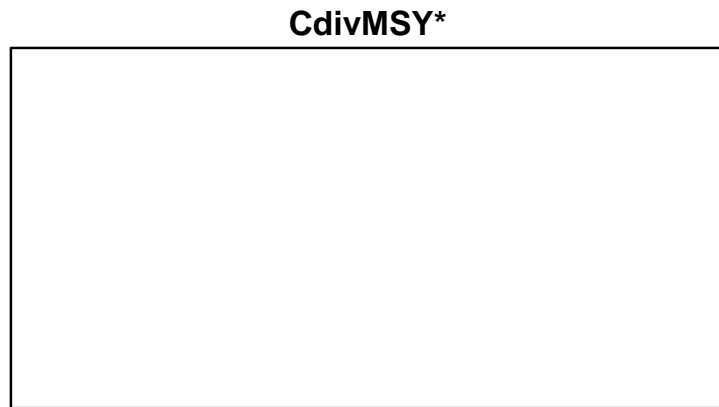
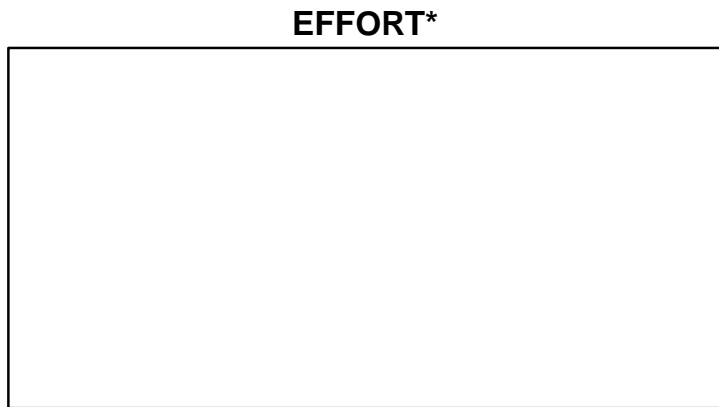
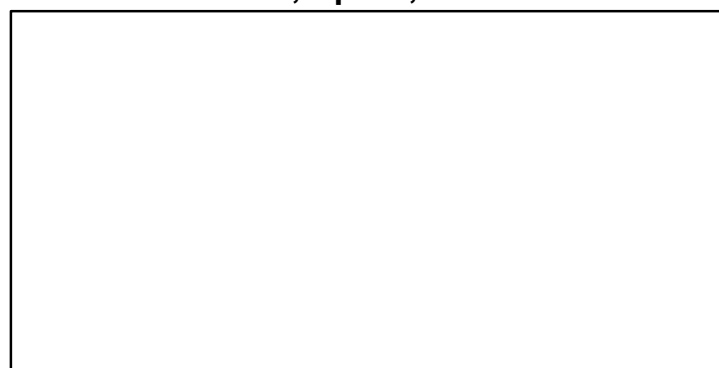
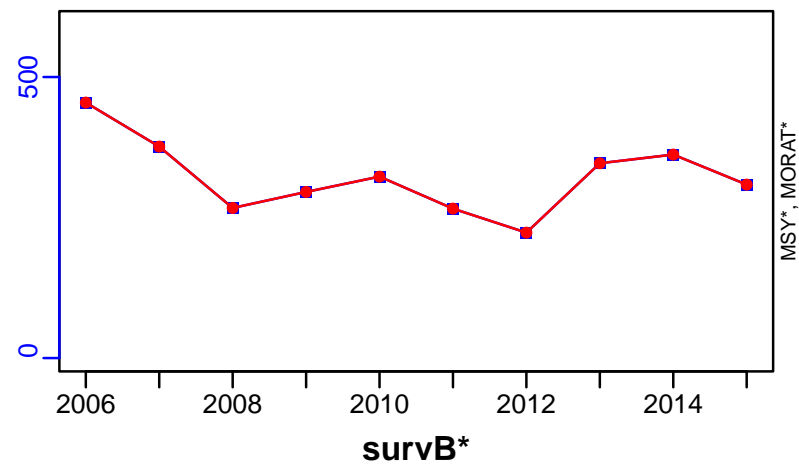
R-E00 (2006–2015–OSIO)



# Surmullet Ligurian and North Tyrrhenian Sea [SMULLMEDGSA9]

TC-MT, TL-MT, RecC\* (2006–2015–OSIO)

TAC\*, Cpair\*, Cadv\*



## Common sole Northern Adriatic Sea [SOLMEDGSA17]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Solea solea   |
| <b>Current Assess ID</b>    | STECF-SOLMEDGSA17-2006-2018-MEDIMP2021-2                                      |
| <b>Area</b>                 | Northern Adriatic Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2011, 2014, 2018  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2018      | 0.23  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | M-1/yr    | 2011      | 0.35  |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2018      | 2859       | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2018      | 91,628,000 | -   | -   |
| <b>F</b>          | F-1/yr           | 2018      | 0.68       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2018      | 1849       |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2018      | 2.957      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



Common sole Northern Adriatic Sea [SOLMEDGSA17]

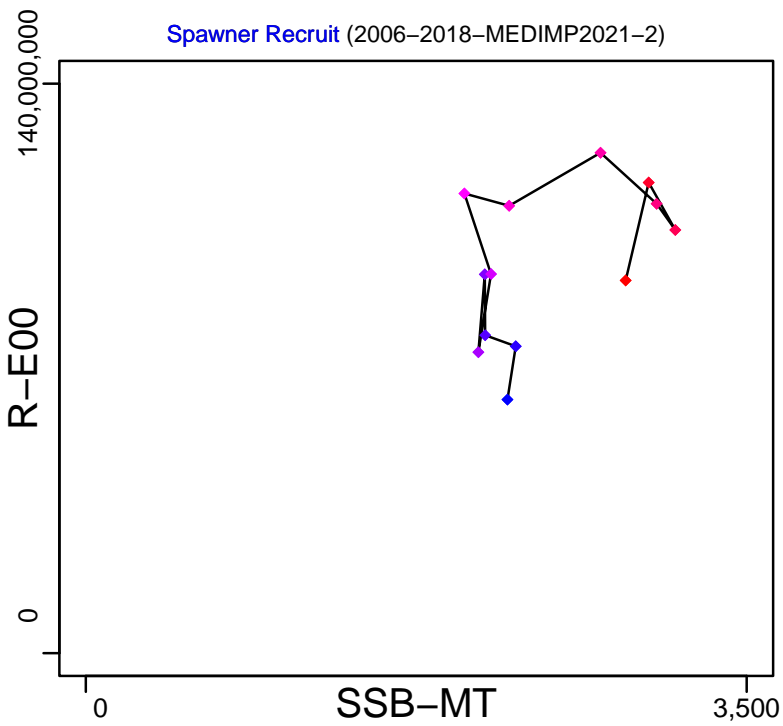
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2006–2018–MEDIMP2021–2)

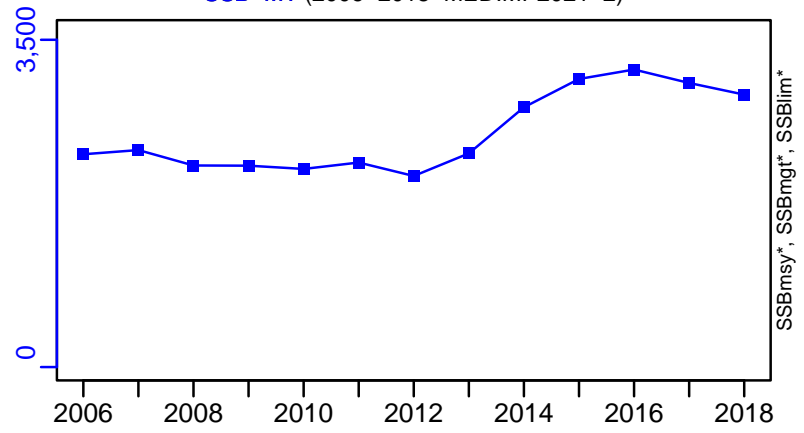


Common sole Northern Adriatic Sea [SOLMEDGSA17]

TB\*



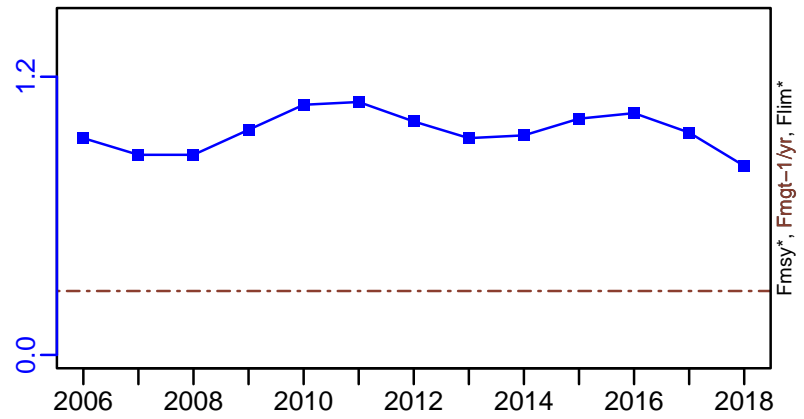
SSB-MT (2006–2018–MEDIMP2021–2)



TN \*



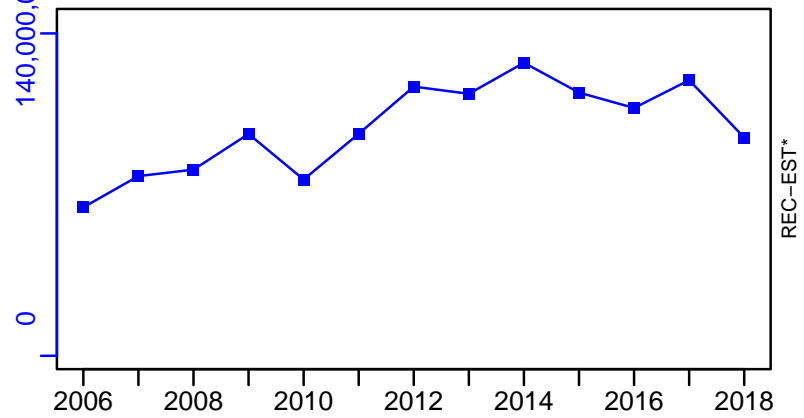
F-1/yr (2006–2018–MEDIMP2021–2)



ER\*

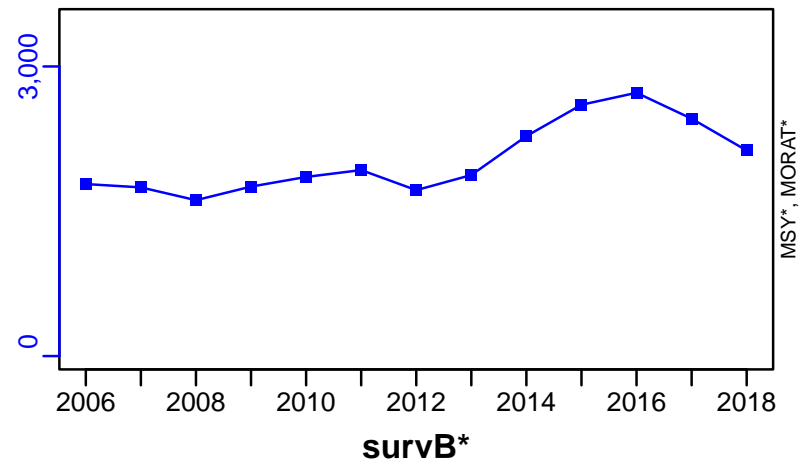


R-E00 (2006–2018–MEDIMP2021–2)



Common sole Northern Adriatic Sea [SOLMEDGSA17]

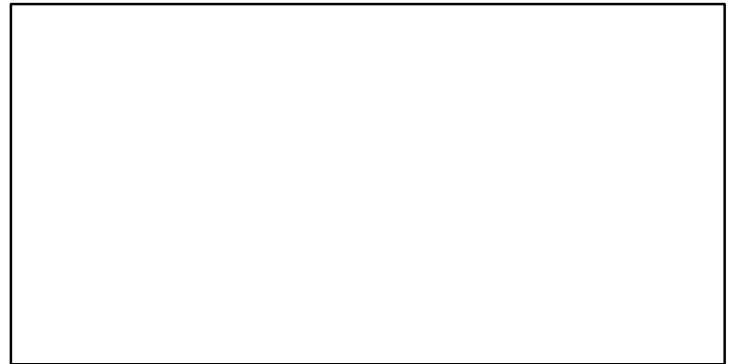
TC-MT, TL\*, RecC\* (2006-2018-MEDIMP2021-2)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*

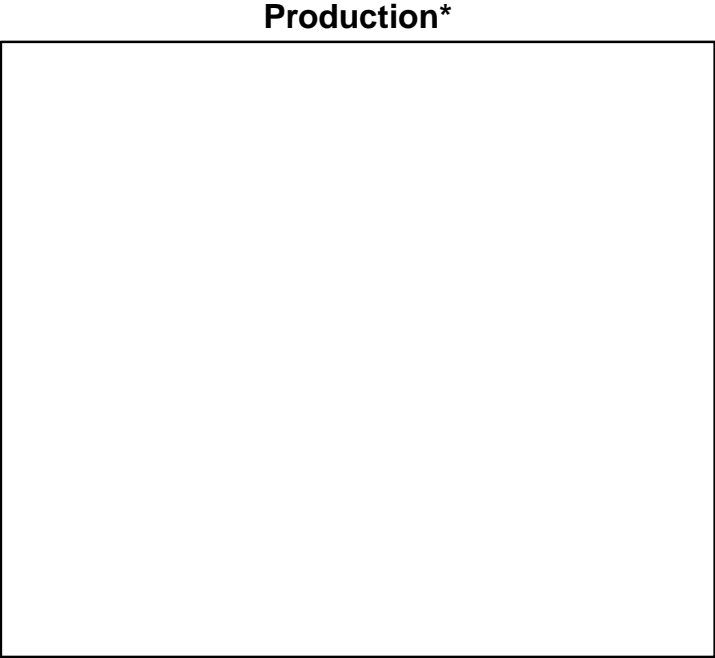
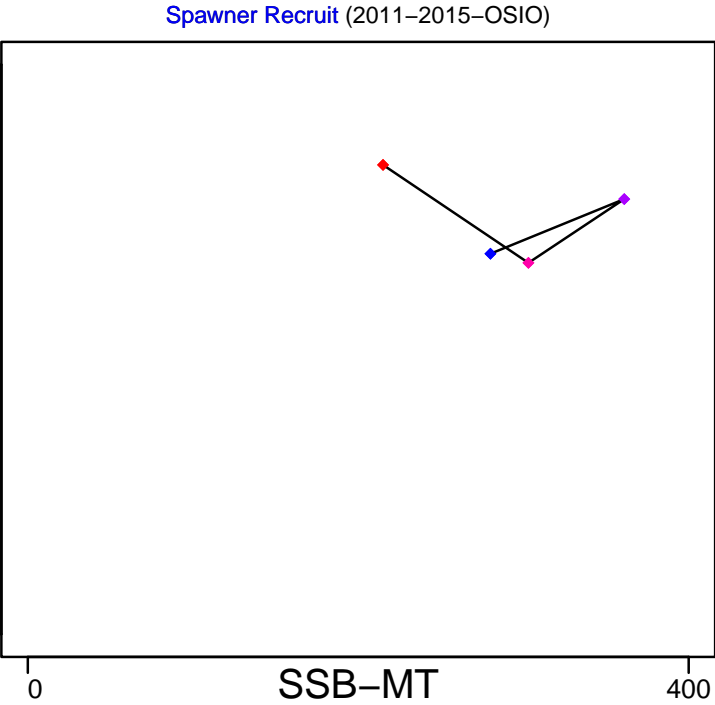
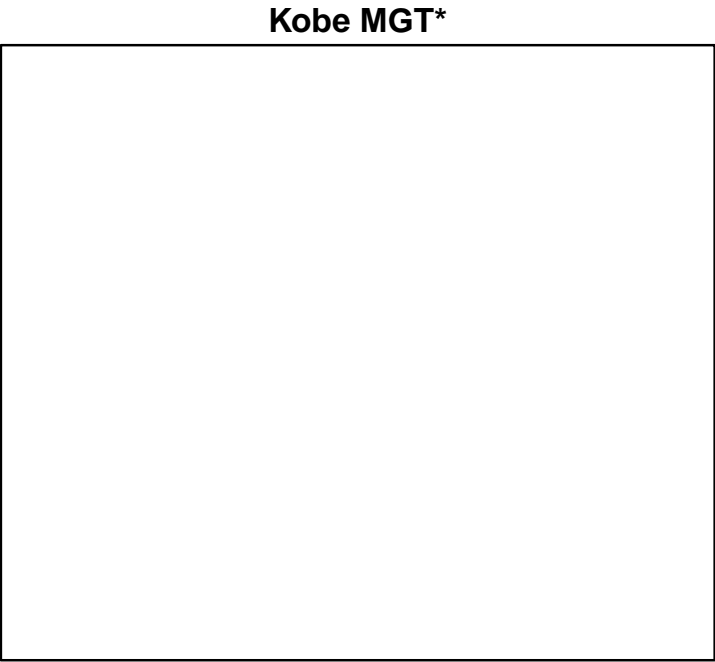
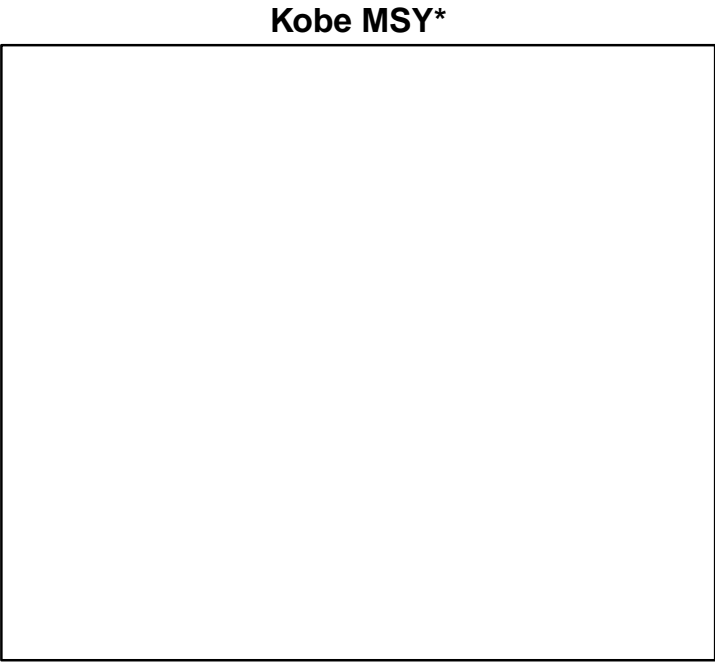


## Common sole Gulf of Lions [SOLMEDGSA7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Solea solea   |
| <b>Current Assess ID</b>    | STECF-SOLMEDGSA7-2011-2015-OSIO   |
| <b>Area</b>                 | Gulf of Lions   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2015  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2015      | 0.085 |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2015      | 215        | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2015      | 2,060,000  | -   | -   |
| <b>F</b>          | F-1/yr           | 2015      | 0.63       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | -                | -         | -          |     |     |
| <b>TL</b>         | TL-MT            | 2015      | 184        |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2015      | 7.412      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



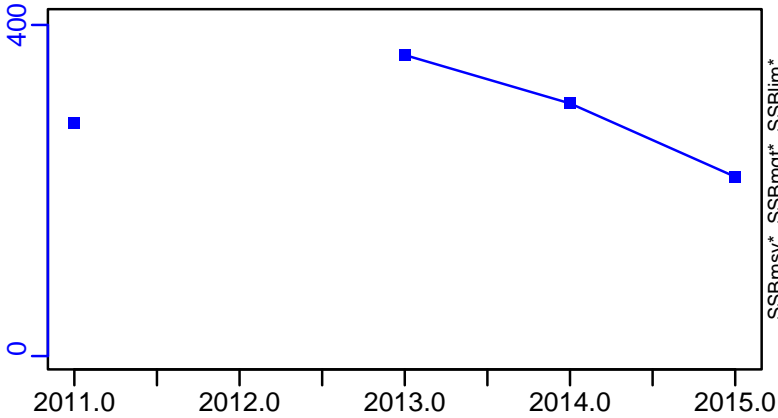
◆ Start Year ◆ End Year \* No Data

Common sole Gulf of Lions [SOLMEDGSA7]

TB\*



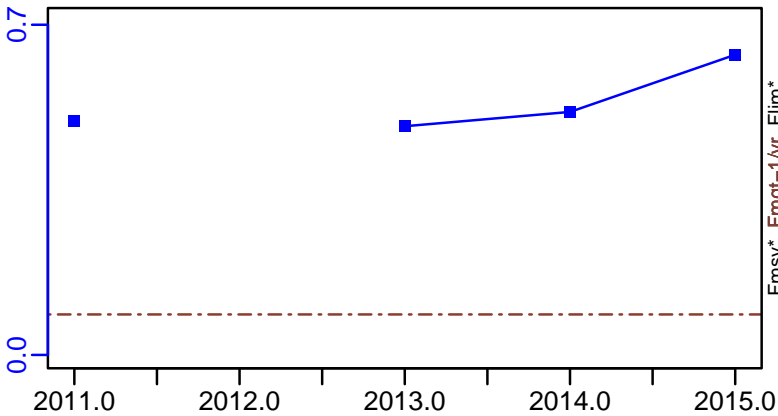
SSB-MT (2011–2015–OSIO)



TN \*



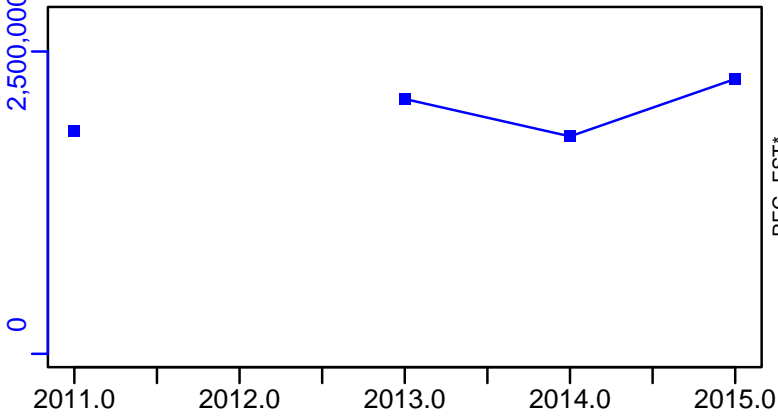
F-1/yr (2011–2015–OSIO)



ER\*

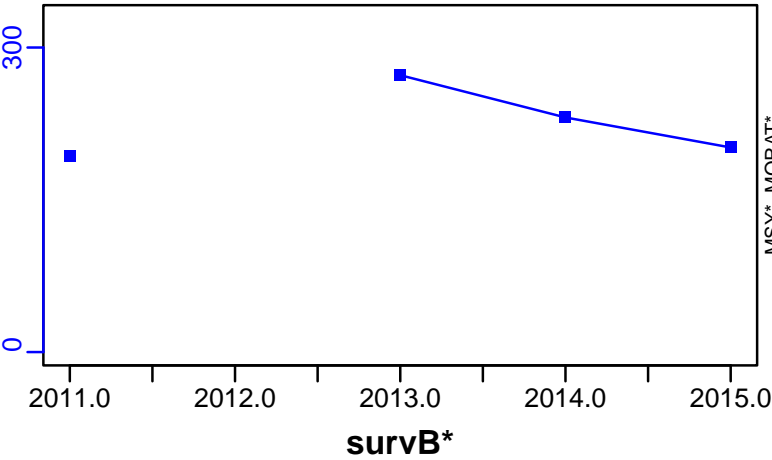


R-E00 (2011–2015–OSIO)



Common sole Gulf of Lions [SOLMEDGSA7]

TL-MT, TC\*, RecC\* (2011-2015-OSIO)



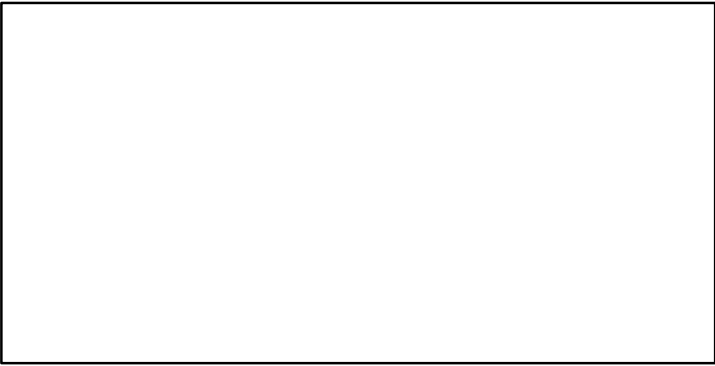
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Sprat Black Sea [SPRBLKGSA29]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Sprattus sprattus   |
| <b>Current Assess ID</b>    | SGSABS-SPRBLKGSA29-1991-2022-HIVELY   |
| <b>Area</b>                 | Black Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Subregional Group on Stock Assessment for the Black Sea                       |
| <b>Asmts in RAM</b>         | 2022, 2020, 2010, 2014, 2016  |

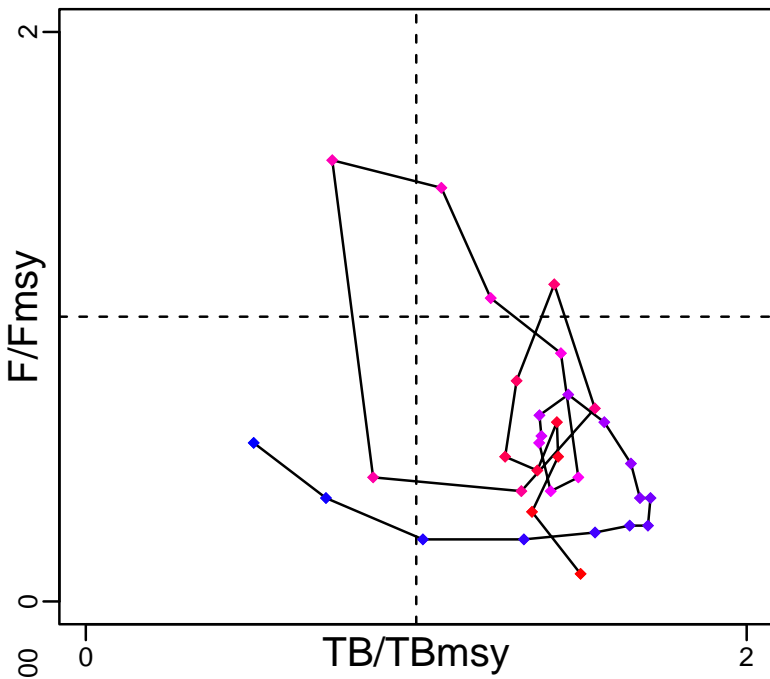
| Reference Points |           |           |         |
|------------------|-----------|-----------|---------|
| Type             | ID        | Asmt Year | Value   |
| <b>TBmsy</b>     | TBmsy-MT  | 2022      | 166,832 |
| <b>SSBmsy</b>    | -         | -         | -       |
| <b>Fmsy</b>      | Fmsy-1/yr | 2022      | 0.413   |
| <b>ERmsy</b>     | -         | -         | -       |
| <b>TBmgt</b>     | TBmgt-MT  | 2022      | 166,832 |
| <b>SSBmgt</b>    | -         | -         | -       |
| <b>Fmgt</b>      | Fmgt-1/yr | 2022      | 0.413   |
| <b>ERmgt</b>     | -         | -         | -       |
| <b>TB0</b>       | -         | -         | -       |
| <b>SSB0</b>      | -         | -         | -       |
| <b>MSY</b>       | -         | -         | -       |
| <b>M</b>         | M-1/yr    | 2010      | 0.95    |
| <b>TBlim</b>     | -         | -         | -       |
| <b>SSBlim</b>    | -         | -         | -       |
| <b>Flim</b>      | Flim-1/yr | 2010      | 0.64    |
| <b>ERlim</b>     | -         | -         | -       |

| Time Series       |                  |           |                       |     |     |
|-------------------|------------------|-----------|-----------------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value            | Sex | Age |
| <b>TB</b>         | TB-MT            | 2022      | 249,802               | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2020      | 190,865               | -   | -   |
| <b>TN</b>         | -                | -         | -                     | -   | -   |
| <b>R</b>          | R-E00            | 2020      | $2.02 \times 10^{11}$ | -   | -   |
| <b>F</b>          | F-1/yr           | 2022      | 0.04                  | -   | -   |
| <b>ER</b>         | ER-calc-ratio    | 2022      | 0.052                 | -   | -   |
| <b>TC</b>         | TC-MT            | 2022      | 12,951                |     |     |
| <b>TL</b>         | TL-MT            | 2010      | 91,700                |     |     |
| <b>TB/TBmsy</b>   | TB-MT/TBmsy-MT   | 2022      | 1.497                 |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -                     |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2022      | 0.097                 |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -                     |     |     |
| <b>TB/TBmgt</b>   | TB-MT/TBmgt-MT   | 2022      | 1.497                 |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -                     |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2022      | 0.097                 |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -                     |     |     |

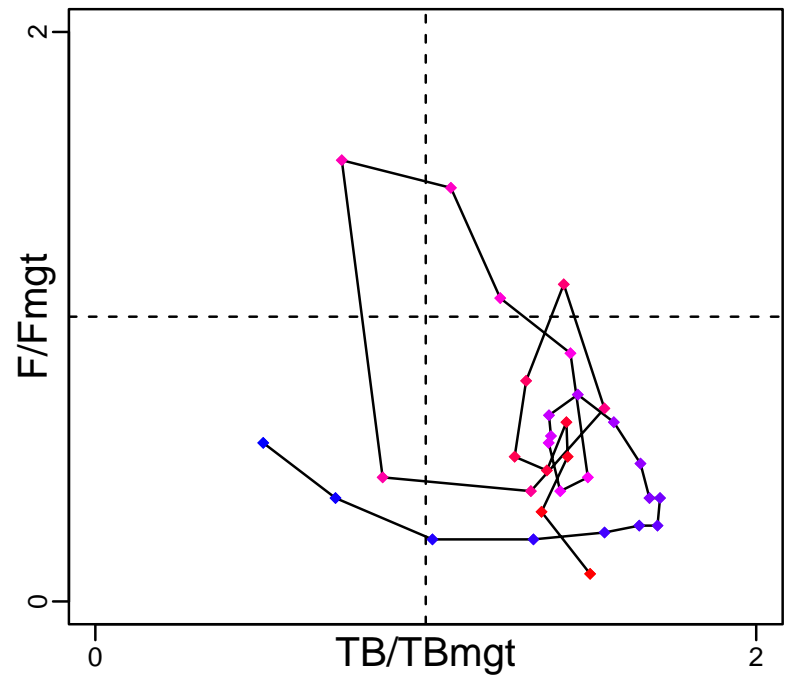


# Sprat Black Sea [SPRBLKGSA29]

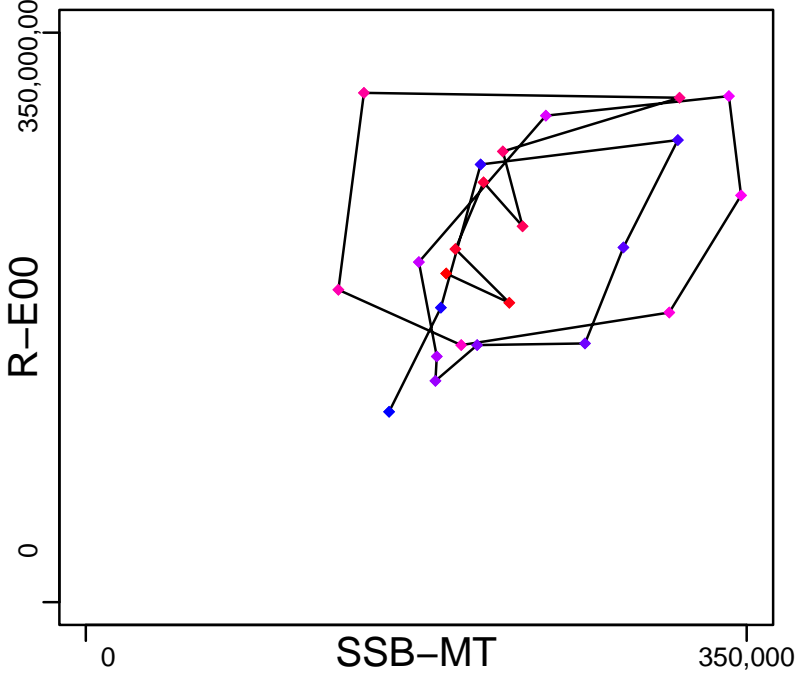
Kobe MSYpref (1991–2022–HIVELY)



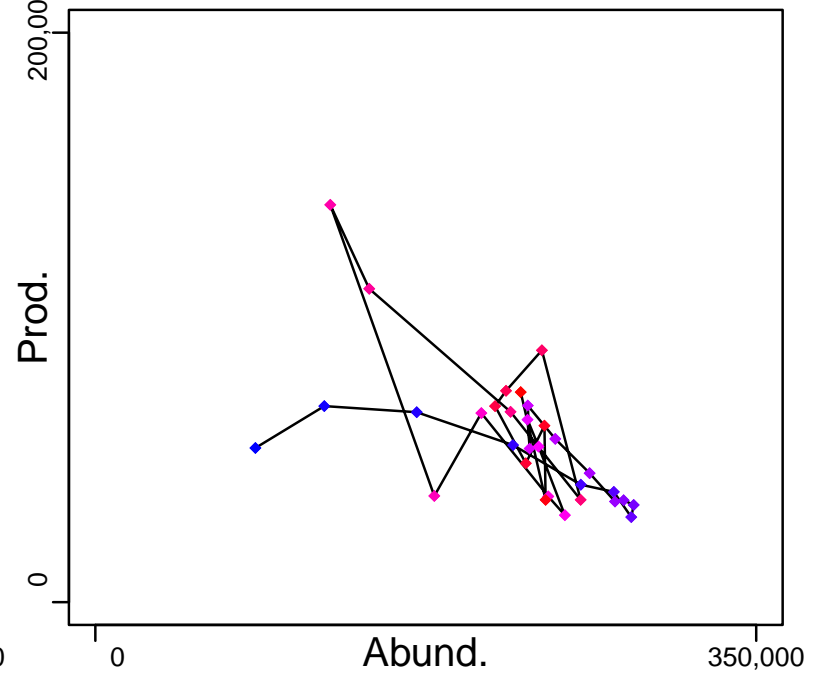
Kobe MGTpref (1991–2022–HIVELY)



Spawner Recruit (1997–2020–HIVELY)



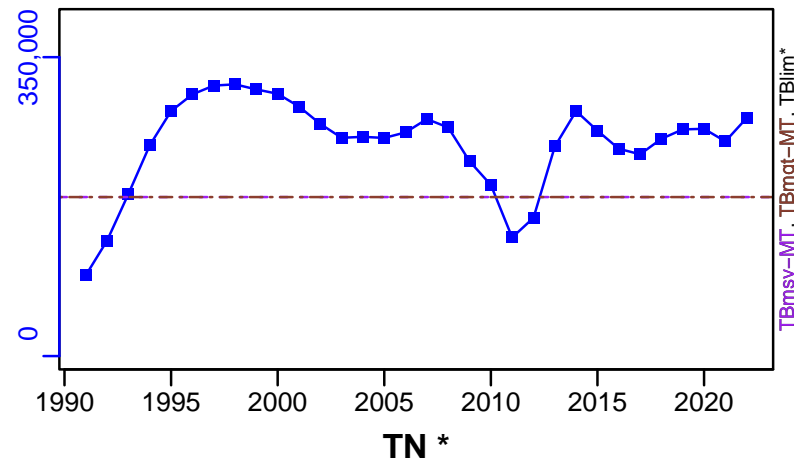
Production (1991–2022–HIVELY)



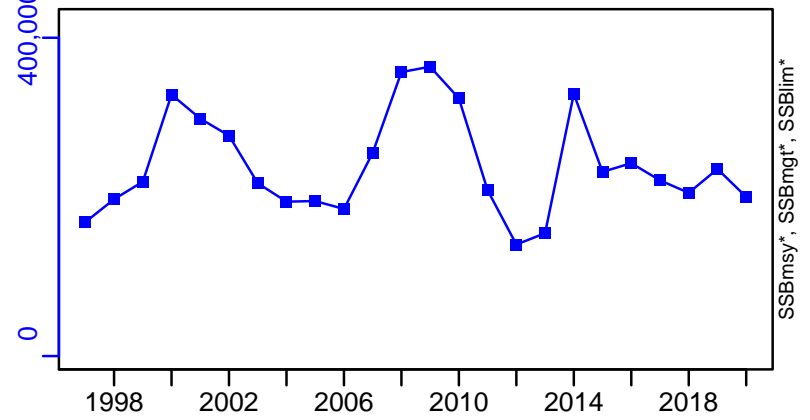
◆ Start Year ◆ End Year \* No Data

# Sprat Black Sea [SPRBLKGSA29]

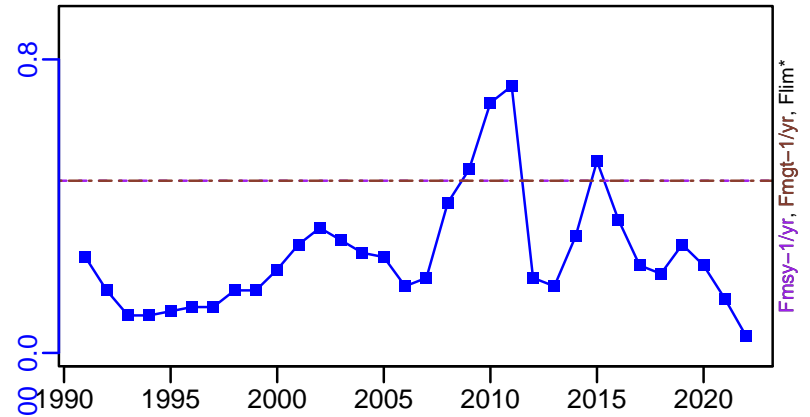
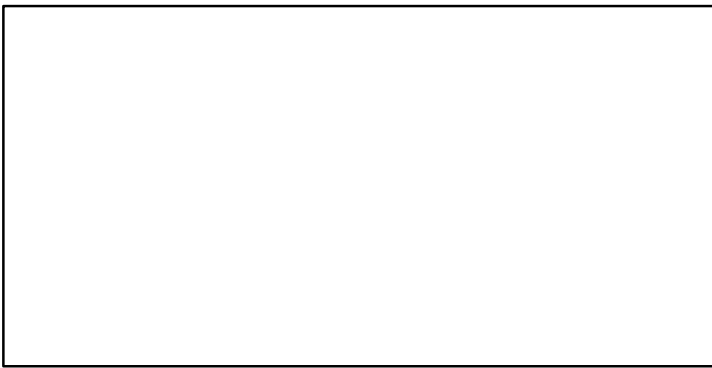
TB-MT (1991–2022–HIVELY)



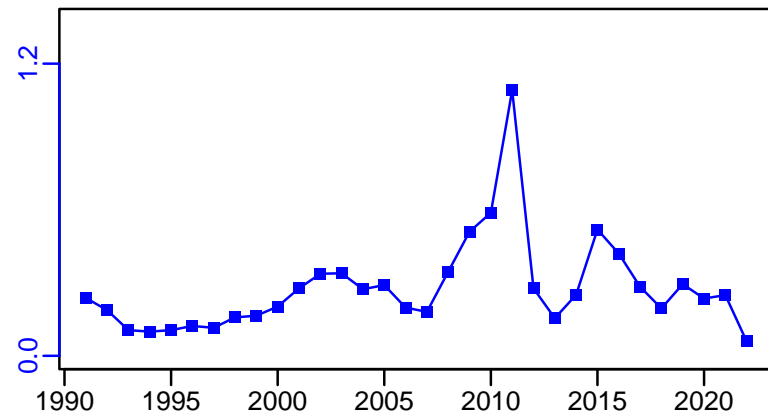
SSB-MT (1997–2020–HIVELY)



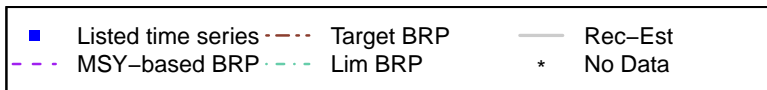
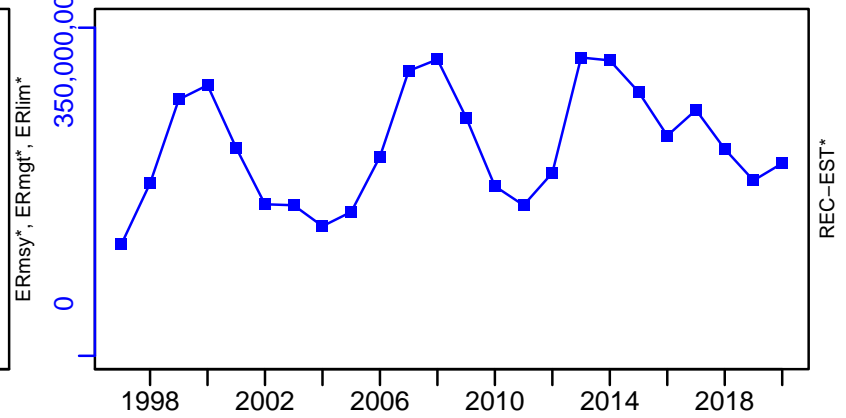
F-1/yr (1991–2022–HIVELY)



ER-calc-ratio (1991–2022–HIVELY)

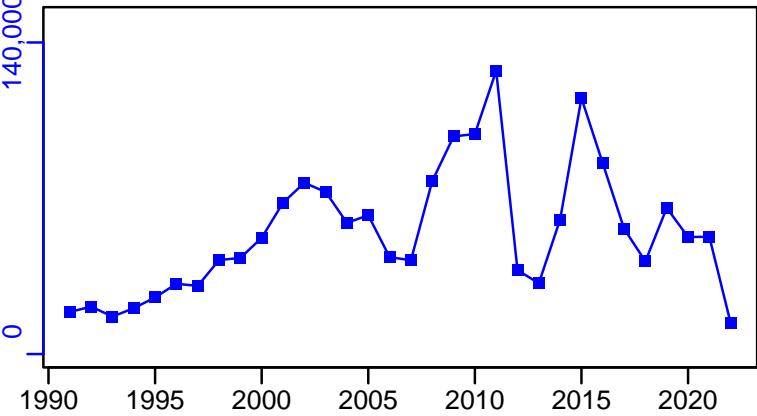


R-E00 (1997–2020–HIVELY)

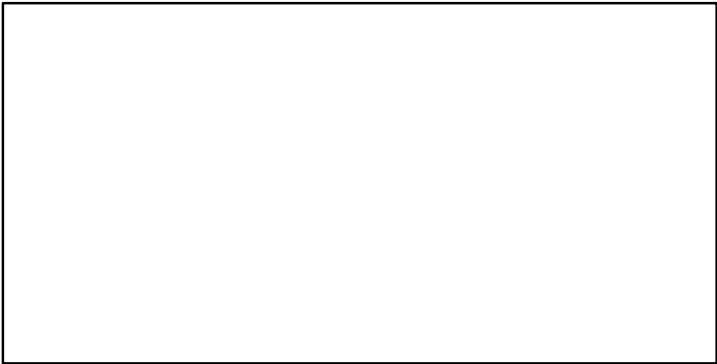


Sprat Black Sea [SPRBLKGSA29]

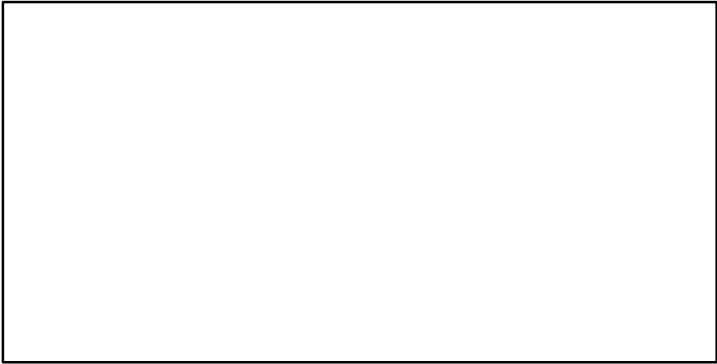
TC-MT, TL\*, RecC\* (1991-2022-HIVELY)



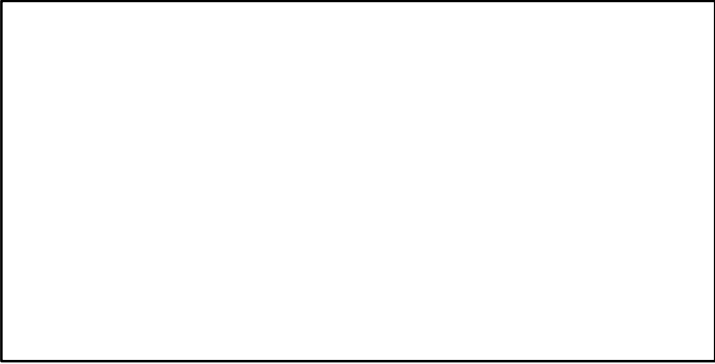
TAC\*, Cpair\*, Cadv\*



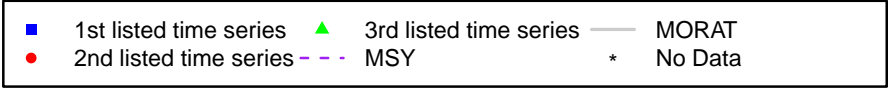
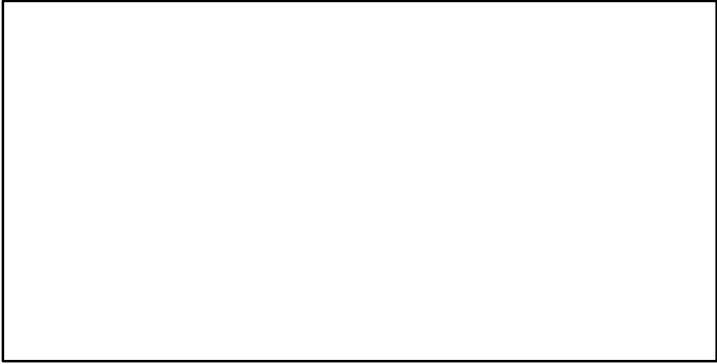
CPUE\*



EFFORT\*



CdivMSY\*



## Swordfish Mediterranean Sea [SWORDMED]

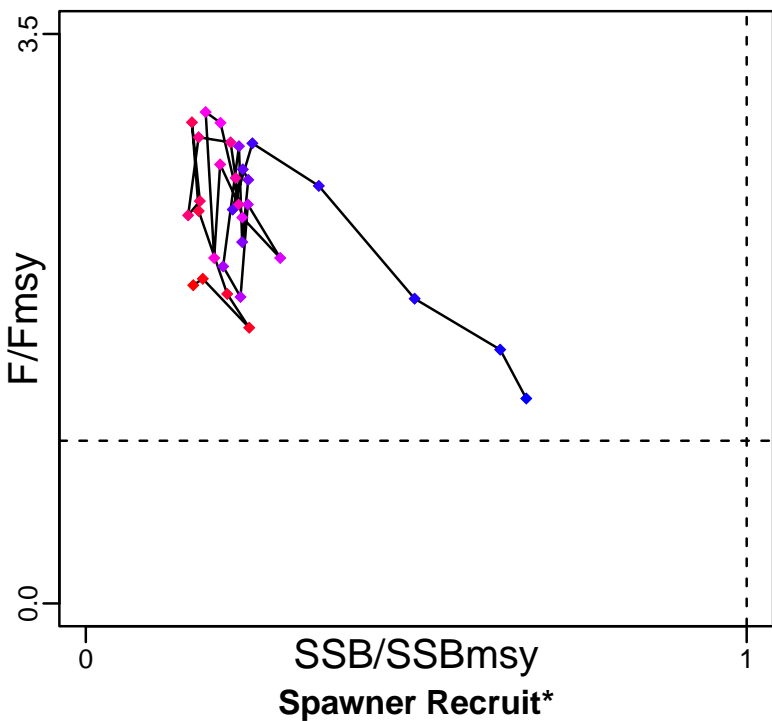
| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Xiphias gladius   |
| <b>Current Assess ID</b>    | ICCAT-SWORDMED-1950-2018-PONS                                   |
| <b>Area</b>                 | Mediterranean Sea   |
| <b>Management Authority</b> | International Commission for the Conservation of Atlantic Tunas |
| <b>Assessor</b>             | International Commission for the Conservation of Atlantic Tunas |
| <b>Asmts in RAM</b>         | 2009, 2018  |

| Reference Points |                  |           |        |
|------------------|------------------|-----------|--------|
| Type             | ID               | Asmt Year | Value  |
| <b>TBmsy</b>     | TBmsy-extr-MT    | 2009      | 73,728 |
| <b>SSBmsy</b>    | -                | -         | -      |
| <b>Fmsy</b>      | Fmsy-1/yr        | 2009      | 0.26   |
| <b>ERmsy</b>     | ERmsy-calc-ratio | 2009      | 0.198  |
| <b>TBmgt</b>     | -                | -         | -      |
| <b>SSBmgt</b>    | -                | -         | -      |
| <b>Fmgt</b>      | -                | -         | -      |
| <b>ERmgt</b>     | -                | -         | -      |
| <b>TB0</b>       | -                | -         | -      |
| <b>SSB0</b>      | -                | -         | -      |
| <b>MSY</b>       | MSY-MT           | 2018      | 19,683 |
| <b>M</b>         | -                | -         | -      |
| <b>TBlim</b>     | -                | -         | -      |
| <b>SSBlim</b>    | -                | -         | -      |
| <b>Flim</b>      | -                | -         | -      |
| <b>ERlim</b>     | -                | -         | -      |

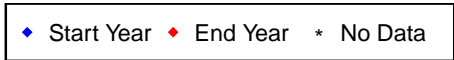
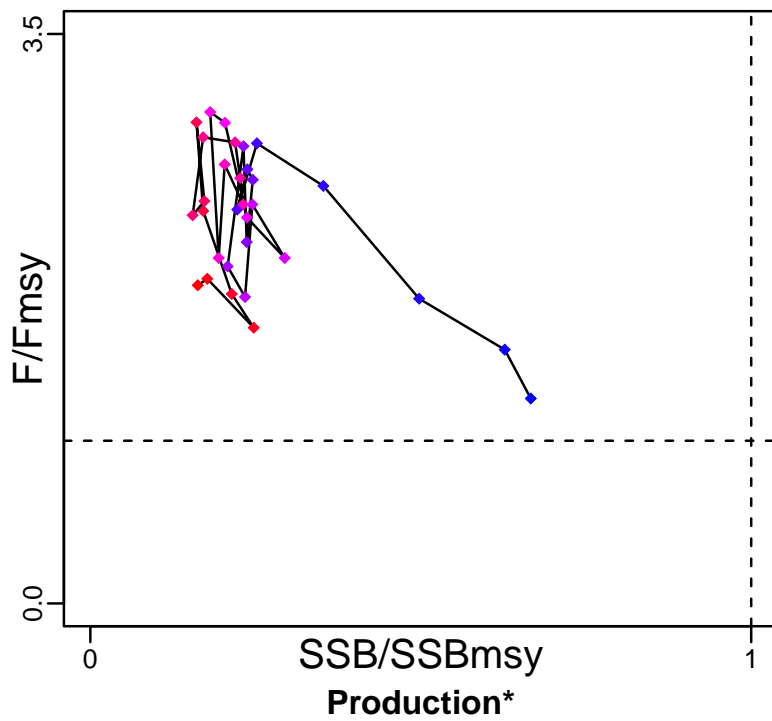
| Time Series       |                            |           |            |     |     |
|-------------------|----------------------------|-----------|------------|-----|-----|
| Type              | ID                         | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | TB-MT                      | 2009      | 64,600     | -   | -   |
| <b>SSB</b>        | SSB-MT                     | 2009      | 33,600     | -   | 3+  |
| <b>TN</b>         | -                          | -         | -          | -   | -   |
| <b>R</b>          | -                          | -         | -          | -   | -   |
| <b>F</b>          | -                          | -         | -          | -   | -   |
| <b>ER</b>         | ER-ratio                   | 2018      | 0.487      | -   | -   |
| <b>TC</b>         | TC-MT                      | 2009      | 9340       |     |     |
| <b>TL</b>         | TL-MT                      | 2018      | 7079       |     |     |
| <b>TB/TBmsy</b>   | TBdivTBmsy-dimensionless   | 2009      | 0.96       |     |     |
| <b>SSB/SSBmsy</b> | SSBdivSSBmsy-dimensionless | 2018      | 0.163      |     |     |
| <b>F/Fmsy</b>     | FdivFmsy-dimensionless     | 2018      | 1.956      |     |     |
| <b>ER/ERmsy</b>   | ER-ratio/ERmsy-calc-ratio  | 2009      | 0.954      |     |     |
| <b>TB/TBmgt</b>   | -                          | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                          | -         | -          |     |     |
| <b>F/Fmgt</b>     | -                          | -         | -          |     |     |
| <b>ER/ERmgt</b>   | -                          | -         | -          |     |     |

Swordfish Mediterranean Sea [SWORDMED]

Kobe MSY<sub>pref</sub> (1950–2018–PONS)

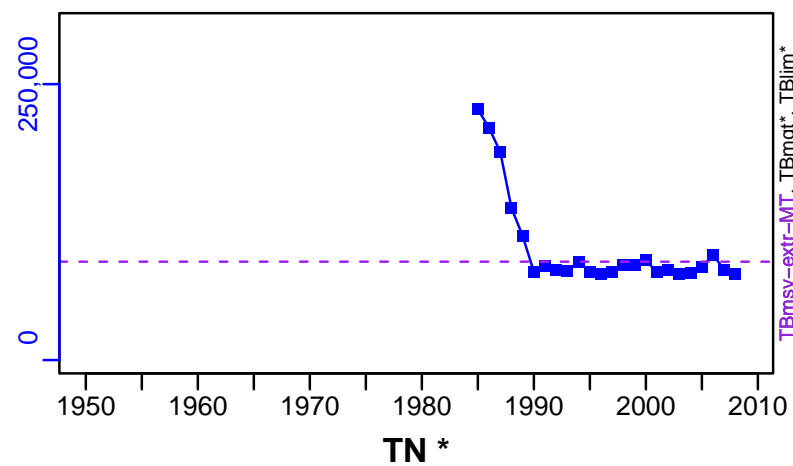


Kobe MGT<sub>pref</sub> (1950–2018–PONS)

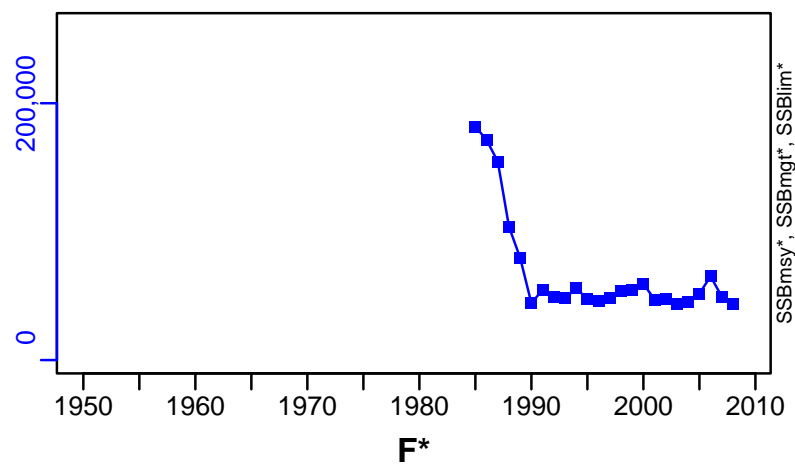


# Swordfish Mediterranean Sea [SWORDMED]

TB-MT (1950–2009–CHING)



SSB-MT (1950–2009–CHING)



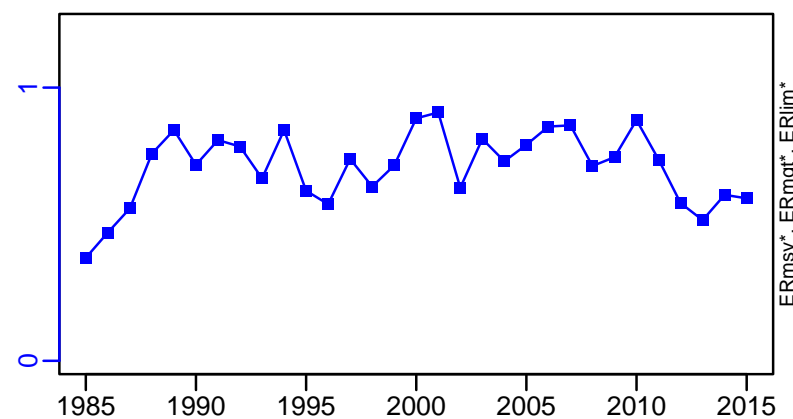
TN \*



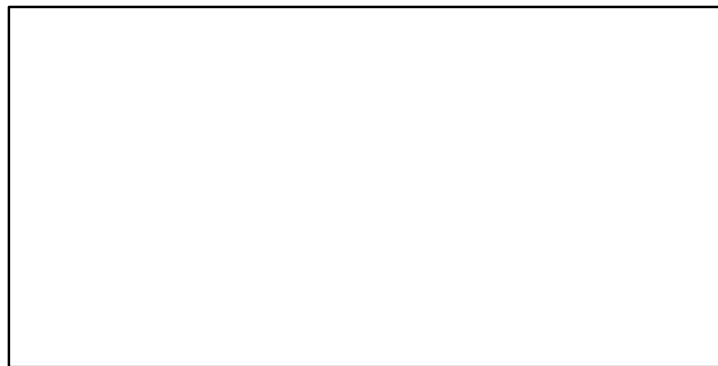
F\*



ER-ratio (1950–2018–PONS)



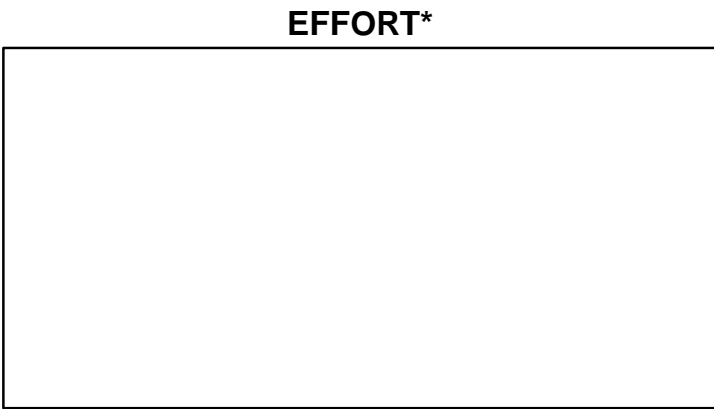
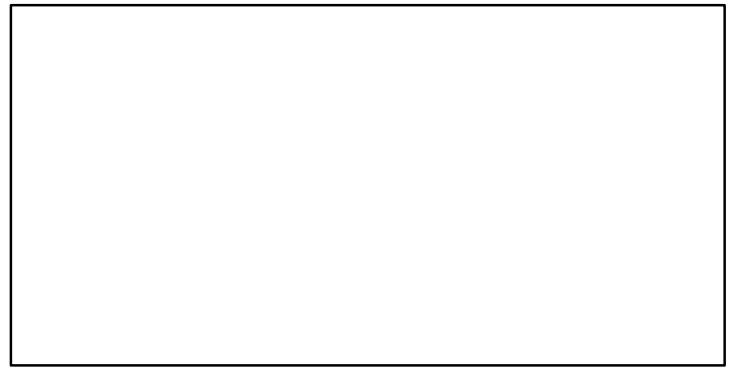
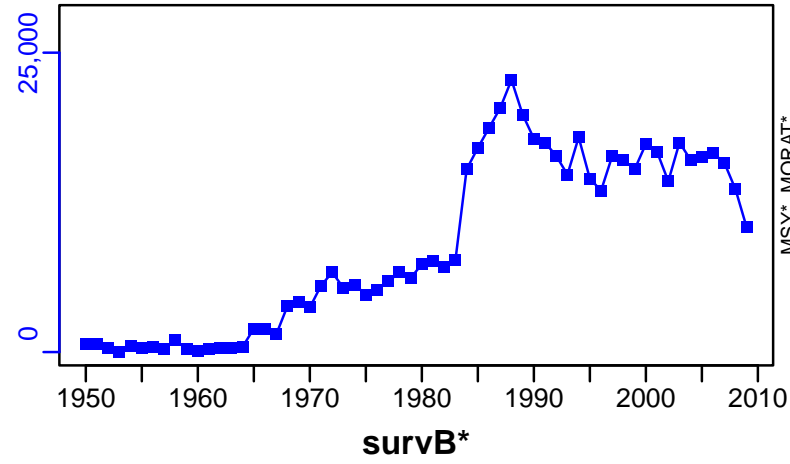
Recruits\*



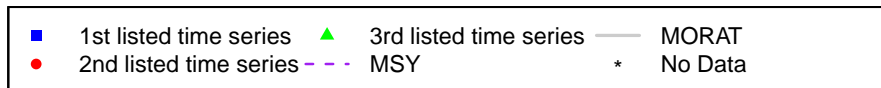
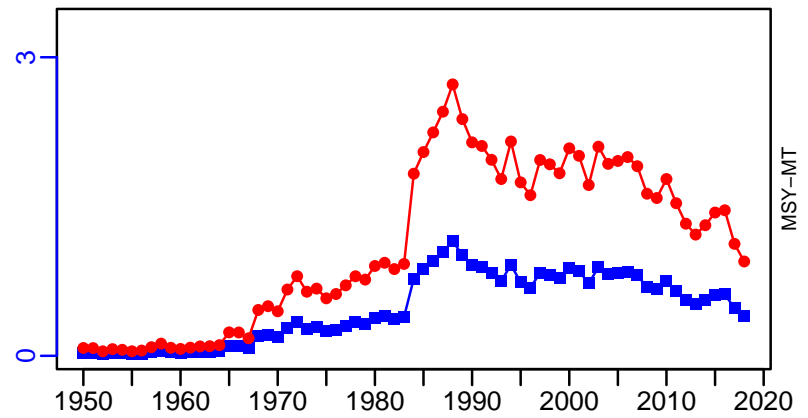
# Swordfish Mediterranean Sea [SWORDMED]

TC-MT, TL\*, RecC\* (1950–2009–CHING)

TAC\*, Cpair\*, Cadv\*



TL-MT/MSY-MT, CdivMEANC-ratio, (1950–2018–PONS)



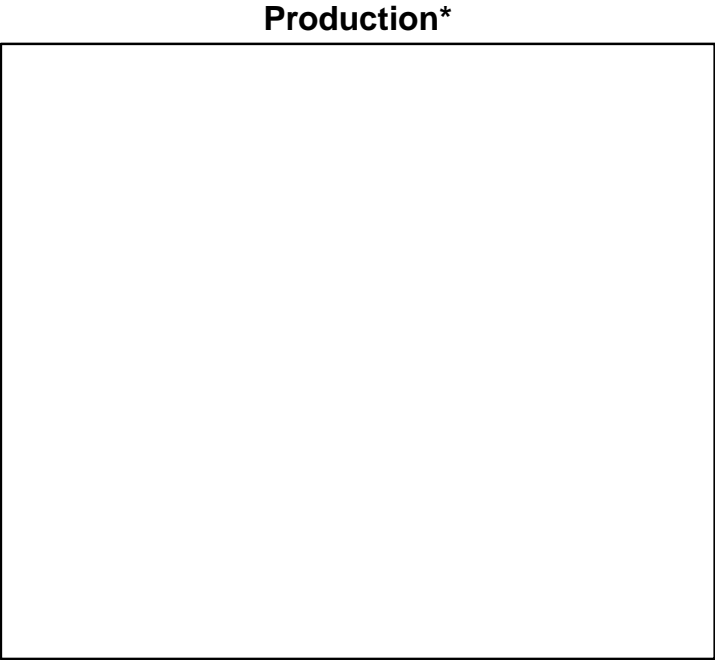
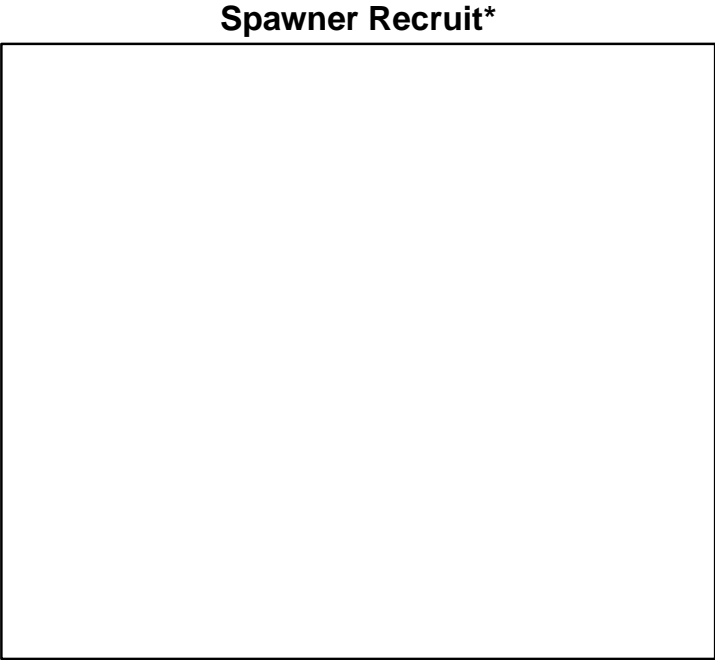
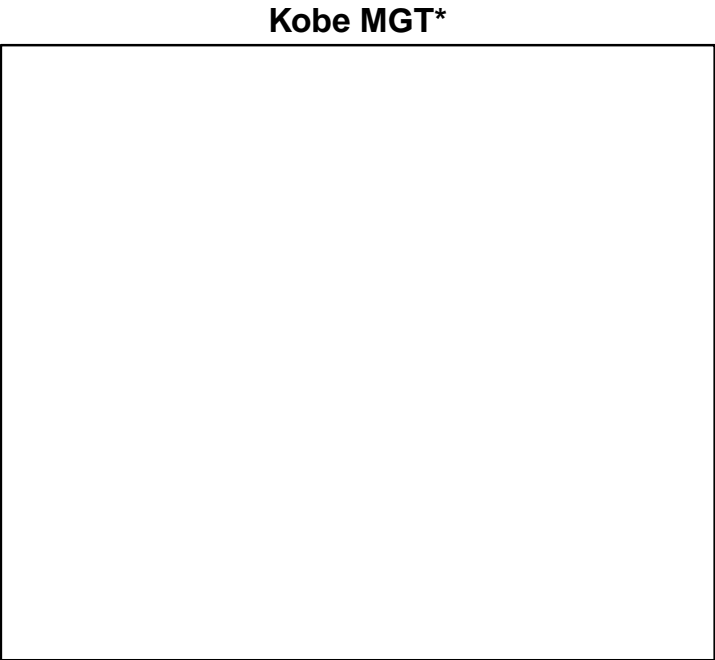
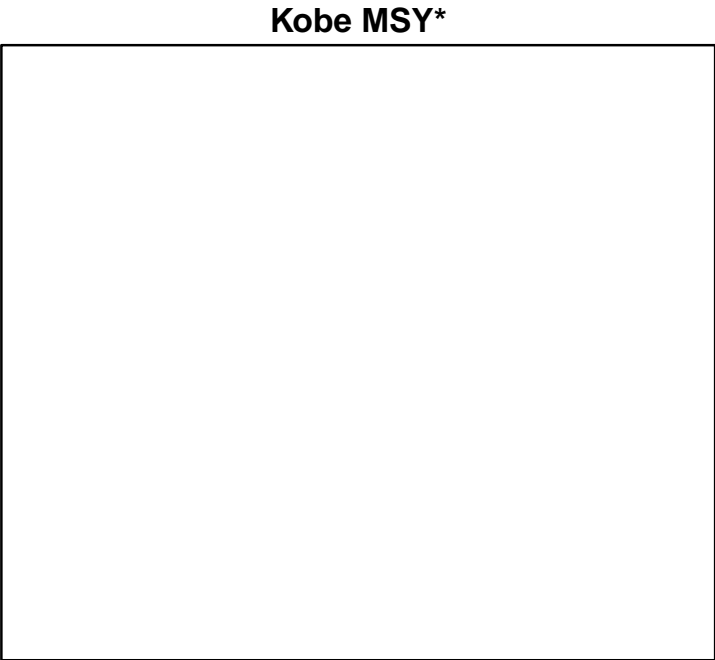
## Thornback skate Black Sea [TBSKAMEDGSA29]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Raja clavata  |
| <b>Current Assess ID</b>    | STECF-TBSKAMEDGSA29-2008-2014-OSIO  |
| <b>Area</b>                 | Black Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2014  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2014      | 0.16  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | -                | -         | -          | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | -                | -         | -          | -   | -   |
| <b>F</b>          | F-1/yr           | 2014      | 0.21       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2014      | 96         |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2014      | 1.312      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |





◆ Start Year    ◆ End Year    \* No Data

Thornback skate Black Sea [TBSKAMEDGSA29]

TB\*



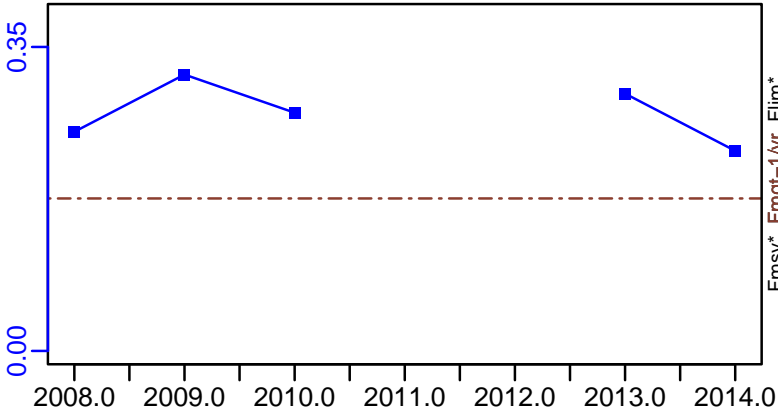
SSB\*



TN \*



F-1/yr (2008–2014–OSIO)



ER\*



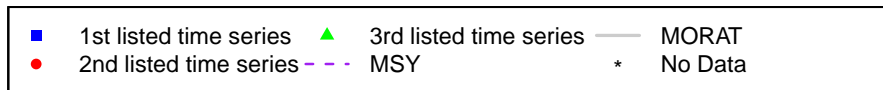
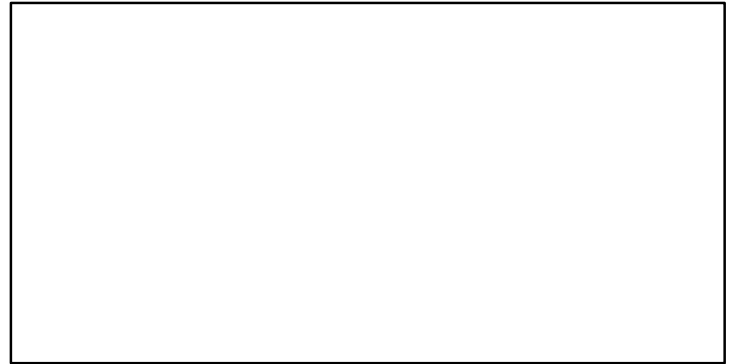
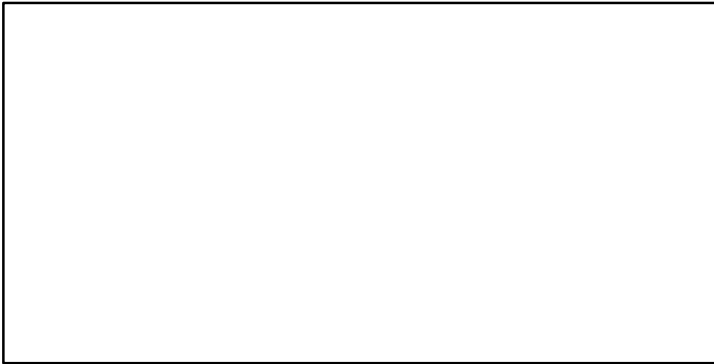
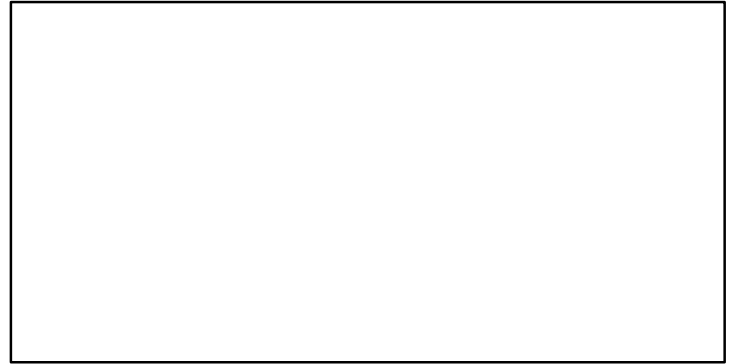
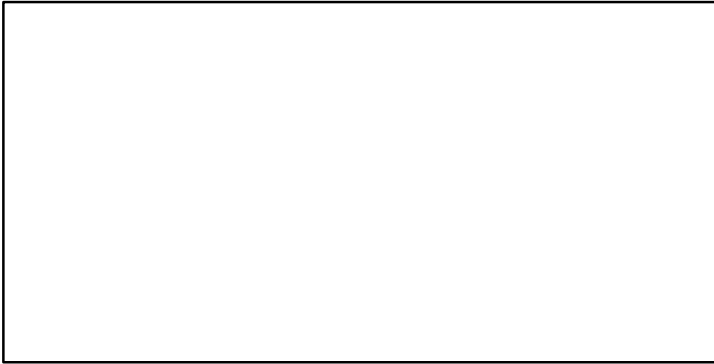
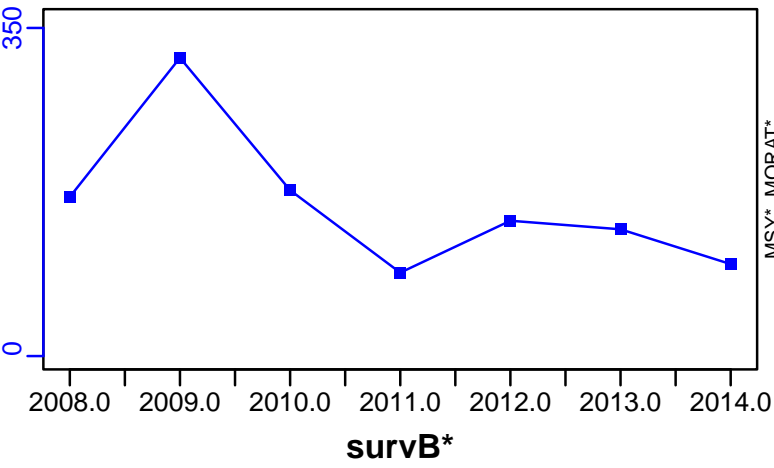
Recruits\*



# Thornback skate Black Sea [TBSKAMEDGSA29]

TC-MT, TL\*, RecC\* (2008–2014–OSIO)

TAC\*, Cpair\*, Cadv\*



## Turbot Black Sea [TURBLKGSA29]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Psetta maxima   |
| <b>Current Assess ID</b>    | STECF-TURBLKGSA29-1950-2016-MEDIMP2021-2                                      |
| <b>Area</b>                 | Black Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2014, 2016, 2010  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2016      | 0.26  |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2016      | 0.26  |
| <b>ERMgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | M-1/yr    | 2010      | 0.19  |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | SSBlim-MT | 2014      | 3535  |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2016      | 1993       | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2016      | 901,897    | -   | -   |
| <b>F</b>          | F-1/yr           | 2016      | 0.974      | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 1100       |     |     |
| <b>TL</b>         | -                | -         | -          |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2016      | 3.744      |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2016      | 3.744      |     |     |
| <b>ER/ERMgt</b>   | -                | -         | -          |     |     |

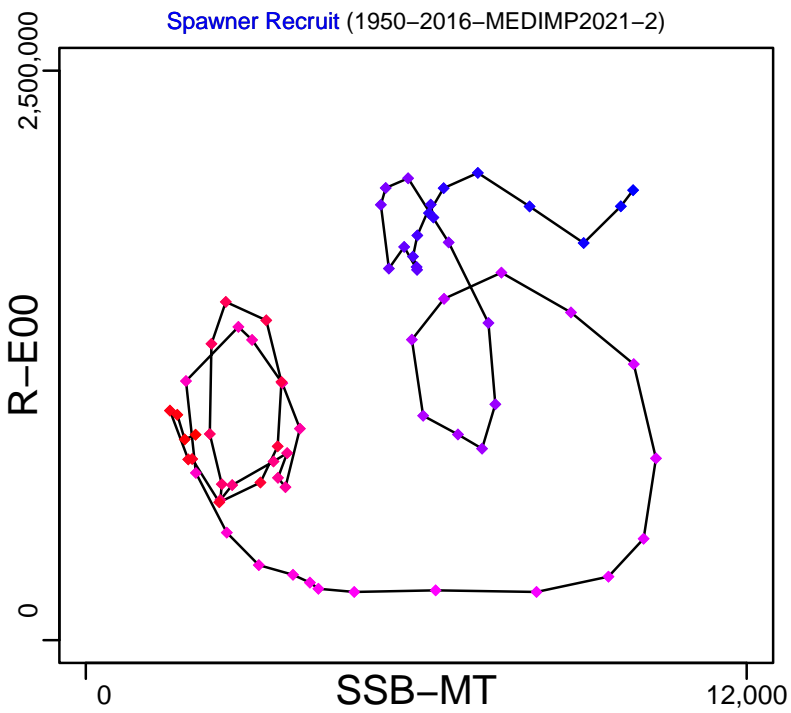
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (1950–2016–MEDIMP2021–2)



Production\*



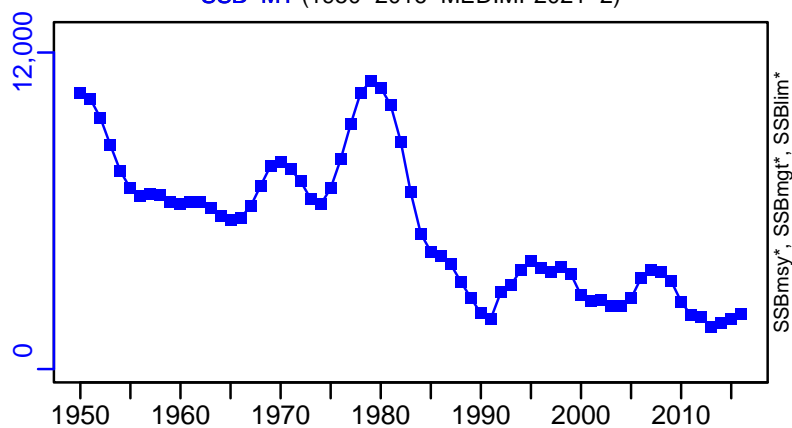
◆ Start Year ◆ End Year \* No Data

# Turbot Black Sea [TURBLKGS29]

TB\*



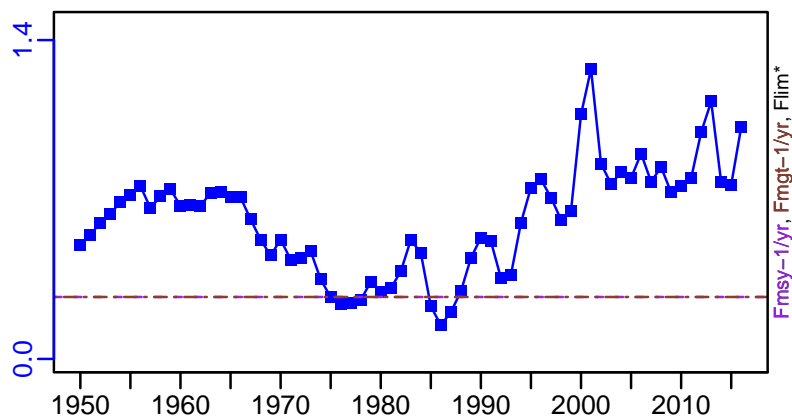
SSB-MT (1950-2016-MEDIMP2021-2)



TN \*



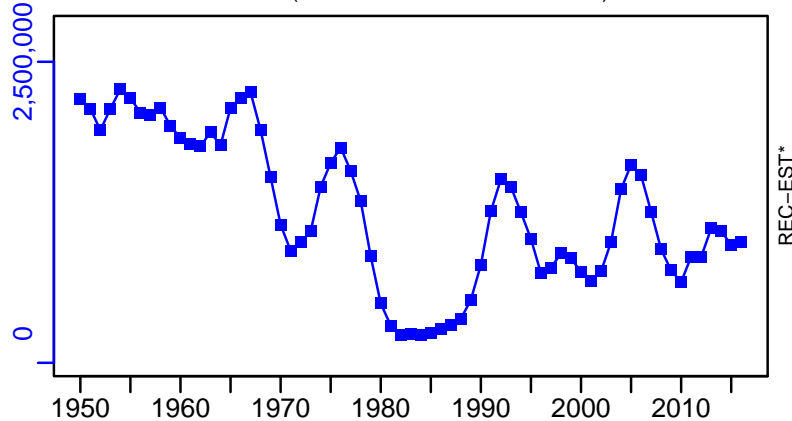
F-1/yr (1950-2016-MEDIMP2021-2)



ER\*

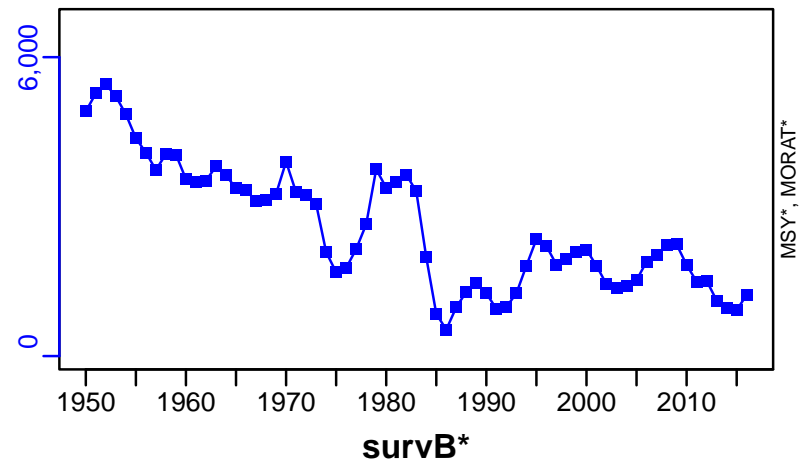


R-E00 (1950-2016-MEDIMP2021-2)

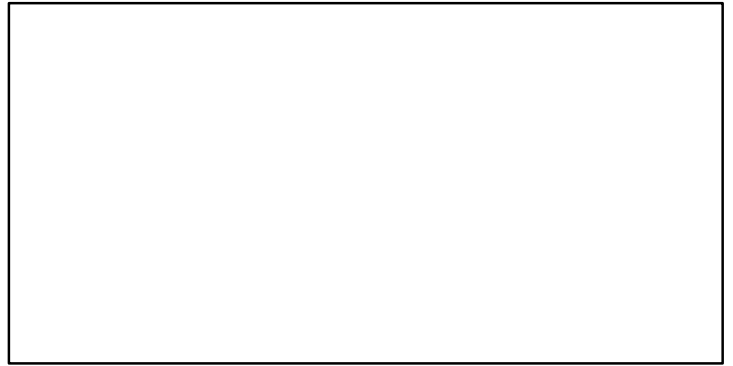


Turbot Black Sea [TURBLKGSA29]

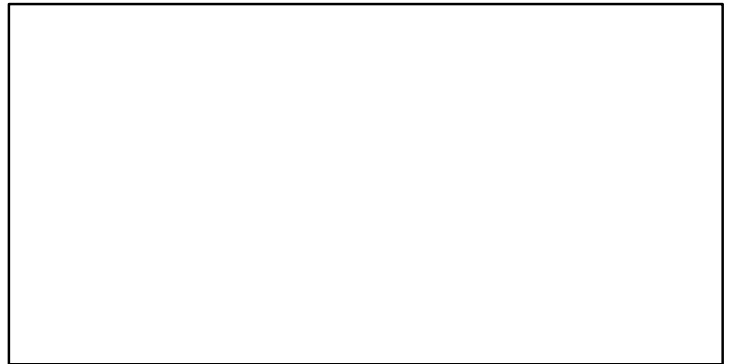
TC-MT, TL\*, RecC\* (1950-2016-MEDIMP2021-2)



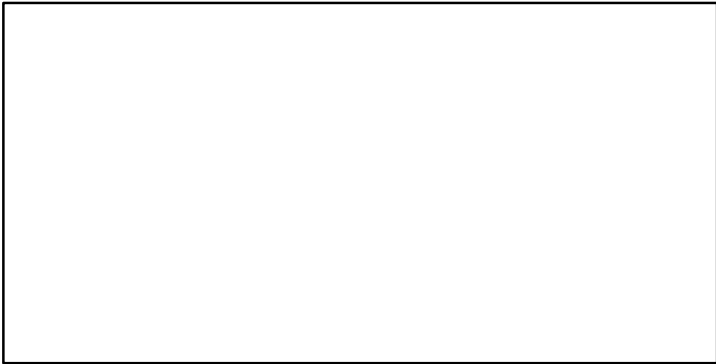
TAC\*, Cpair\*, Cadv\*



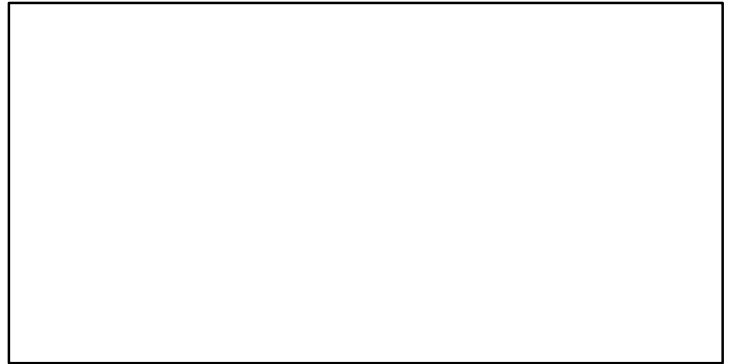
CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series ▲ 3rd listed time series — MORAT  
● 2nd listed time series - - MSY \* No Data

## White anglerfish Geographical Sub-Areas 1-7 [WANGLGSA1-7]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Lophius piscatorius   |
| <b>Current Assess ID</b>    | STECF-WANGLGSA1-7-2013-2015-OSIO  |
| <b>Area</b>                 | Geographical Sub-Areas 1-7  |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Scientific, Technical and Economic Committee for Fisheries                    |
| <b>Asmts in RAM</b>         | 2015  |

| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | -         | -         | -     |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2015      | 0.22  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | -         | -         | -     |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |            |     |     |
|-------------------|------------------|-----------|------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value | Sex | Age |
| <b>TB</b>         | -                | -         | -          | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2015      | 391        | -   | -   |
| <b>TN</b>         | -                | -         | -          | -   | -   |
| <b>R</b>          | R-E00            | 2015      | 1,270,000  | -   | -   |
| <b>F</b>          | F-1/yr           | 2015      | 0.45       | -   | -   |
| <b>ER</b>         | -                | -         | -          | -   | -   |
| <b>TC</b>         | -                | -         | -          |     |     |
| <b>TL</b>         | TL-MT            | 2015      | 3520       |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -          |     |     |
| <b>F/Fmsy</b>     | -                | -         | -          |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -          |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -          |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -          |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2015      | 2.045      |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -          |     |     |



White anglerfish Geographical Sub-Areas 1–7 [WANGLGSA1–7]

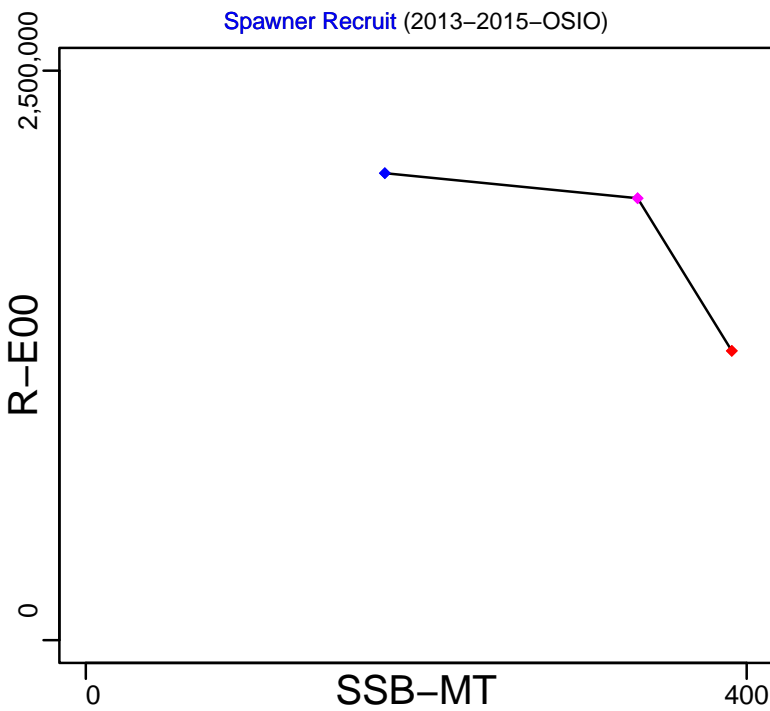
Kobe MSY\*



Kobe MGT\*



Spawner Recruit (2013–2015–OSIO)



Production\*



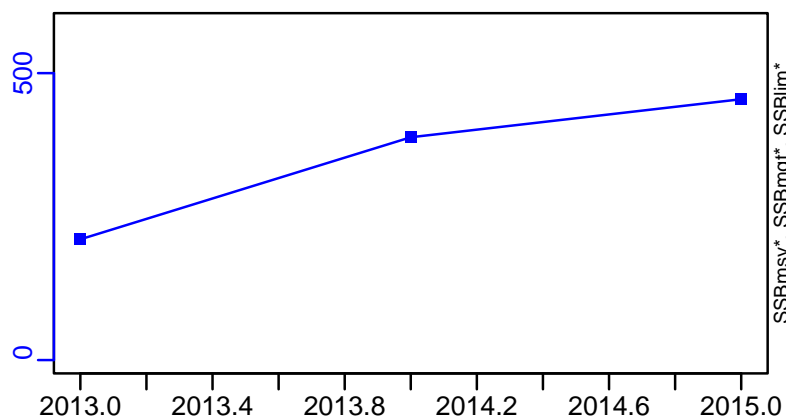
◆ Start Year ◆ End Year \* No Data

# White anglerfish Geographical Sub-Areas 1–7 [WANGLSA1–7]

TB\*



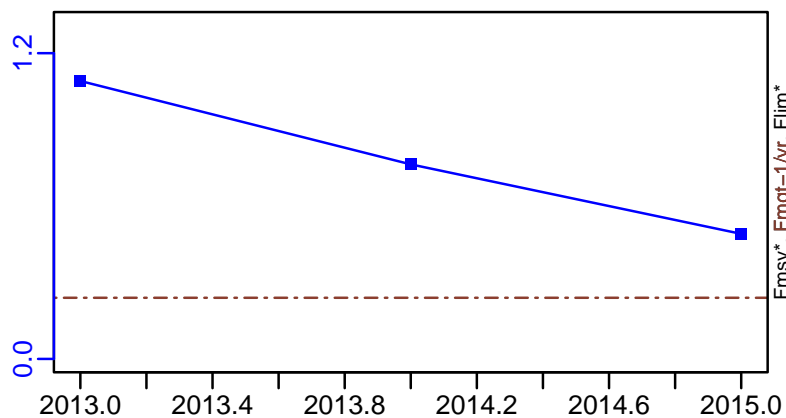
SSB-MT (2013–2015–OSIO)



TN \*



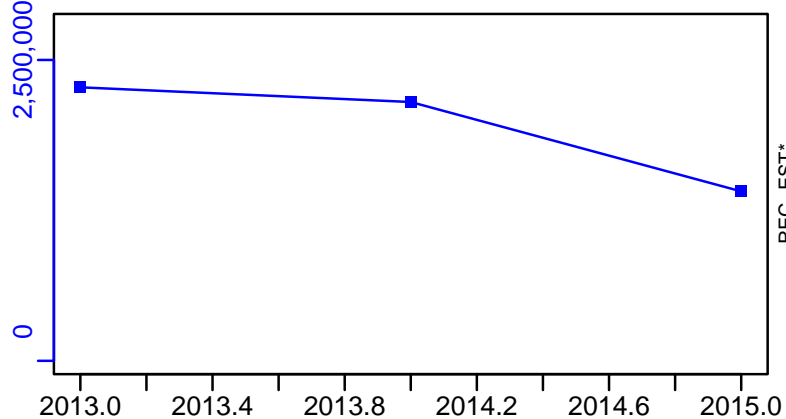
F-1/yr (2013–2015–OSIO)



ER\*



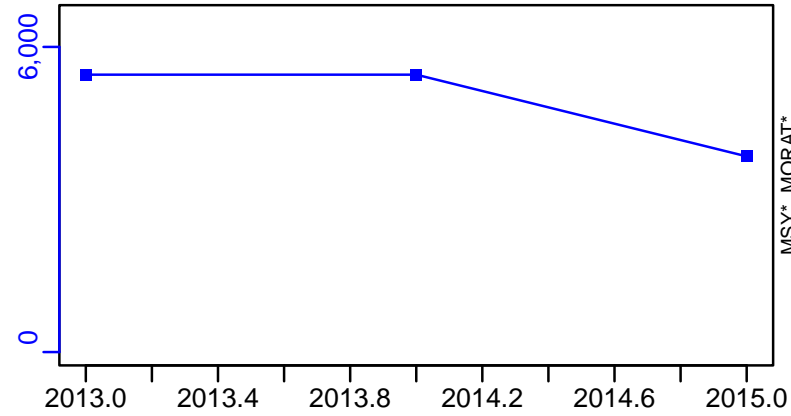
R-E00 (2013–2015–OSIO)



# White anglerfish Geographical Sub-Areas 1–7 [WANGLGSA1–7]

TL–MT, TC\*, RecC\* (2013–2015–OSIO)

TAC\*, Cpair\*, Cadv\*



survB\*

CPUE\*

EFFORT\*

CdivMSY\*

■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Whiting Black Sea [WHITMEDGSA29]

| Metadata                    |   |
|-----------------------------|---|
| <b>Scientific Name</b>      | Merlangius merlangus  |
| <b>Current Assess ID</b>    | SGSABS-WHITMEDGSA29-1994-2021-HIVELY  |
| <b>Area</b>                 | Black Sea   |
| <b>Management Authority</b> | General Fisheries Council for the Mediterranean, DG MARE, and national states |
| <b>Assessor</b>             | Subregional Group on Stock Assessment for the Black Sea                       |
| <b>Asmts in RAM</b>         | 2021, 2011, 2014, 2016  |

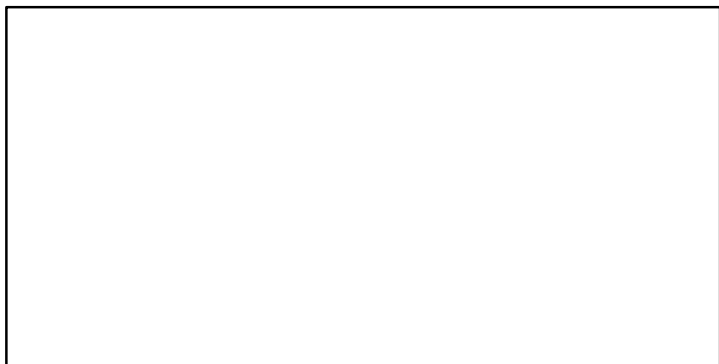
| Reference Points |           |           |       |
|------------------|-----------|-----------|-------|
| Type             | ID        | Asmt Year | Value |
| <b>TBmsy</b>     | -         | -         | -     |
| <b>SSBmsy</b>    | -         | -         | -     |
| <b>Fmsy</b>      | Fmsy-1/yr | 2016      | 0.63  |
| <b>ERmsy</b>     | -         | -         | -     |
| <b>TBmgt</b>     | -         | -         | -     |
| <b>SSBmgt</b>    | -         | -         | -     |
| <b>Fmgt</b>      | Fmgt-1/yr | 2021      | 0.15  |
| <b>ERmgt</b>     | -         | -         | -     |
| <b>TB0</b>       | -         | -         | -     |
| <b>SSB0</b>      | -         | -         | -     |
| <b>MSY</b>       | -         | -         | -     |
| <b>M</b>         | M-1/yr    | 2011      | 0.46  |
| <b>TBlim</b>     | -         | -         | -     |
| <b>SSBlim</b>    | -         | -         | -     |
| <b>Flim</b>      | -         | -         | -     |
| <b>ERlim</b>     | -         | -         | -     |

| Time Series       |                  |           |               |     |     |
|-------------------|------------------|-----------|---------------|-----|-----|
| Type              | ID               | Asmt Year | Curr Value    | Sex | Age |
| <b>TB</b>         | -                | -         | -             | -   | -   |
| <b>SSB</b>        | SSB-MT           | 2021      | 16,497        | -   | -   |
| <b>TN</b>         | -                | -         | -             | -   | -   |
| <b>R</b>          | R-E00            | 2021      | 1,020,114,000 | -   | 0   |
| <b>F</b>          | F-1/yr           | 2021      | 1.685         | -   | -   |
| <b>ER</b>         | ER-ratio         | 2011      | 0.146         | -   | -   |
| <b>TC</b>         | TC-MT            | 2016      | 11,078        |     |     |
| <b>TL</b>         | TL-MT            | 2021      | 10,039        |     |     |
| <b>TB/TBmsy</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmsy</b> | -                | -         | -             |     |     |
| <b>F/Fmsy</b>     | F-1/yr/Fmsy-1/yr | 2016      | 2.317         |     |     |
| <b>ER/ERmsy</b>   | -                | -         | -             |     |     |
| <b>TB/TBmgt</b>   | -                | -         | -             |     |     |
| <b>SSB/SSBmgt</b> | -                | -         | -             |     |     |
| <b>F/Fmgt</b>     | F-1/yr/Fmgt-1/yr | 2021      | 11.234        |     |     |
| <b>ER/ERmgt</b>   | -                | -         | -             |     |     |

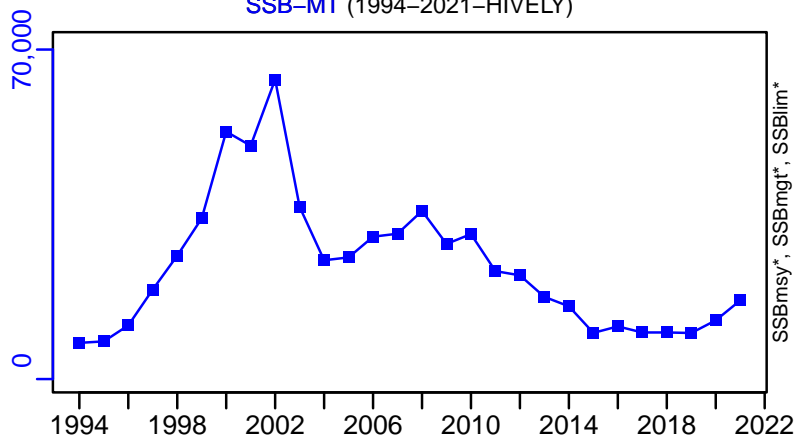


# Whiting Black Sea [WHITMEDGSA29]

TB\*



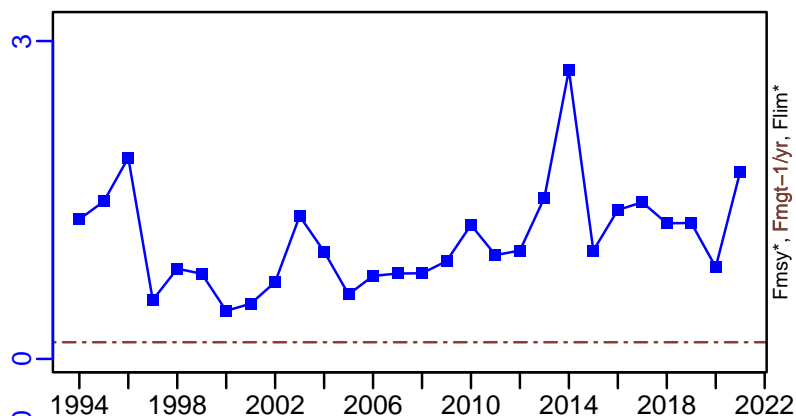
SSB-MT (1994–2021–HIVELY)



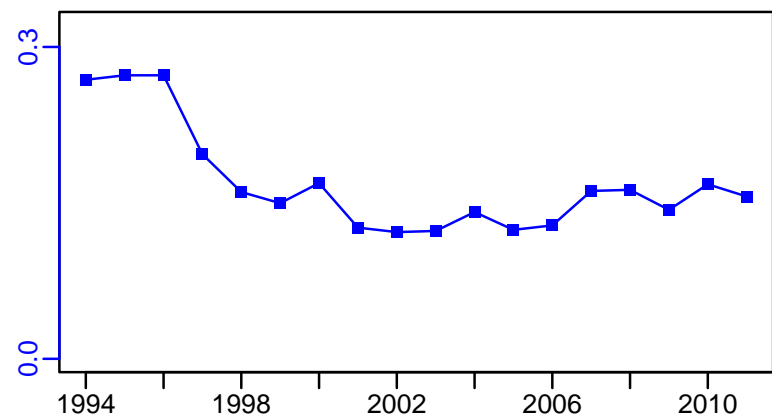
TN \*



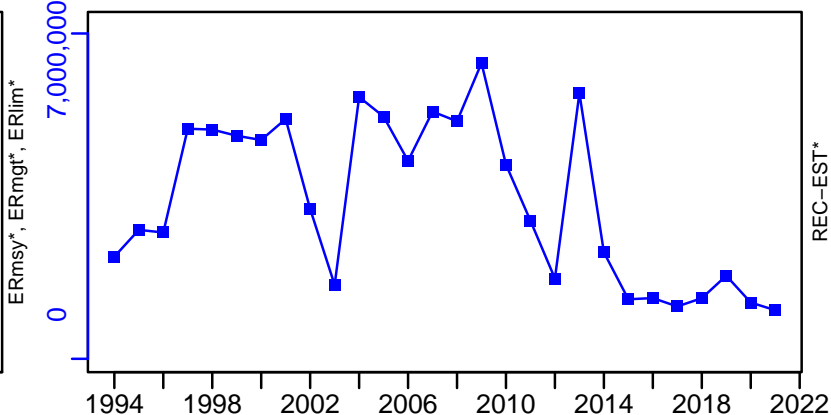
F-1/yr (1994–2021–HIVELY)



ER-ratio (1994–2011–HIVELY)

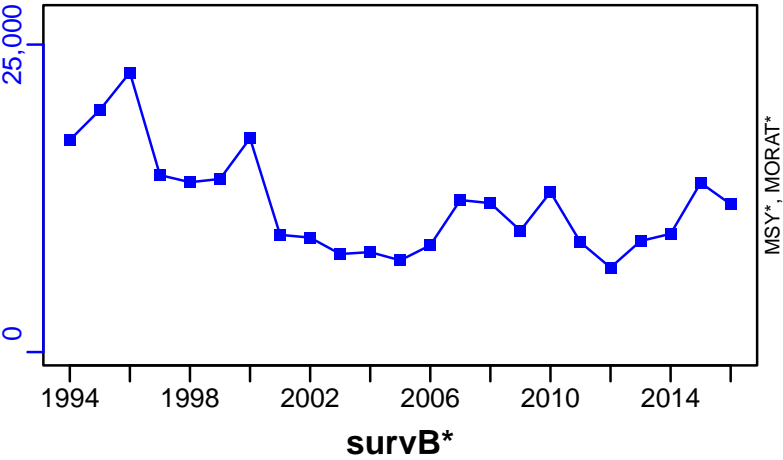


R-E00 (1994–2021–HIVELY)



Whiting Black Sea [WHITMEDGSA29]

TC-MT, TL\*, RecC\* (1994-2016-MEDIMP2021-2)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*

