**WGBIOP 2025 update of the female maturity scales of the ICES maturity staging Workshops since 2007 with conversion to the SMSF (Bold letters).**

| **WK** | **SPECIES** | **Codes** | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| WKMAT | General | 1. **A** | 1. Virgin | **Ba/Bb** | Developing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Spent/  Recovery | **E** | Omitted spawning |  |  |
| Standardized | 1. **A** | 1. Immature | **Ba** | Developing | **Cb** | Spawning capable | **Ca** | Actively Spawning |  |  | **Da/Db** | Regressing/  Regenerating |  |  |  |  |
| WKMSCWHS | Cod | 1. **A** | Immature | **Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSCWHS | Whiting | 1. **A** | Immature | **Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSCWHS | Haddock | 1. **A** | Immature | **Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Spent | **E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSCWHS | Saithe | 1. **A** | Immature | **Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Spent | **E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSHM | Hake | 1. **A/Db** | Immature/ Resting | **Ba/Bb** | Developing/ Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Post-spawning |  |  |  |  |
| WKMSHM | Monk | 1. **A** | Immature | **Ba/Db/E** | Developing/ Resting | **Bb** | Pre-Spawning | **Ca/Cb** | Spawning |  |  | **Da** | Post-spawning |  |  |  |  |
| WKMSHMAC | Mackerel | 1. **A** | Immature | **Ba/Bb** | Developing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Regressing/  Regenerating |  |  |  |  |
| WKMSHMAC | Horse mackerel | 1. **A** | Immature | **Ba/Bb** | Developing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Regressing/  Regenerating |  |  |  |  |
| WKSPMAT | Sardine | 1. **A/Db** | Immature/ Resting | **Ba/Bb** | Developing | **Cb** | Imminent spawning | **Ca** | Spawning | **Cb** | Partial post-spawning | **Da** | Spent |  |  |  |  |
| WKSPMAT | Anchovy | 1. **A/Db** | Immature/ Resting | **Ba/Bb** | Developing | **Cb** | Imminent spawning | **Ca** | Spawning | **Cb** | Partial post-spawning | **Da** | Spent |  |  |  |  |
| WKMSSPDF | Sole | 1. **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSSPDF | Plaice | 1. **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSSPDF | Dab | 1. **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSSPDF | Flounder | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSHS | Herring | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSHS | Sprat | **A** | Immature | **Ba/Bb** | Maturing | **Cb** | Spawning inactive | **Ca** | Spawning active | **Da?** | Cessation | **Db** | Recovering | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSTB | Turbot | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Spent | **E** | Skip spawning | **F** | Abnormal |
| WKMSTB | Brill | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Spent | **E** | Skip spawning | **F** | Abnormal |
| WKMSREGH | Greenland halibut | **A** | Immature | **Ba** | Mature, functionally immature | **Bb** | Mature | **Bb** | Mature late | **Ca/Cb** | Spawning |  |  | **Da/Db** | Regressing/  Regenerating |  |  |
| WKMSREGH | Redfish | **A** | Immature | **E** | Skip spawning | **Ba/Bb** | Maturing | **Bb** | Mature/ Fertilized | **Ca/Cb** | Parturition |  |  | **Da/Db** | Regressing/  Regenerating |  |  |
|  | Blue whiting | **A** | Immature | **B** | First maturation/Resting | **B** | Maturing |  |  | **C** | Spawning | **D** | Post-spawning |  |  |  |  |

**WGBIOP 2025 update of the male maturity scales of the ICES maturity staging Workshops since 2007 with conversion to the SMSF (Bold letters).**

| **WK** | **SPECIES** | **Codes** | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| WKMAT | General | **A** | 1. Virgin | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Spent/  Recovery | **E** | Omitted spawning |  |  |
| Standardized | **A** | 1. Immature | **Ba/Bb** | Developing | **Cb** | Spawning capable | **Ca** | Actively Spawning |  |  | **Da/Db** | Regressing/ Regenerating |  |  |  |  |
| WKMSCWHS | Cod | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSCWHS | Whiting | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSCWHS | Haddock | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSCWHS | Saithe | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSHM | Hake | **A/Db** | Immature/ Resting | **Ba/Bb** | Developing/ Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Post-spawning |  |  |  |  |
| WKMSHM | Monk | **A** | Immature | **Ba/Bb/Db** | Developing/ Resting | **Cb** | Pre-Spawning | **Ca** | Spawning |  |  | **Da** | Post-spawning |  |  |  |  |
| WKMSHMAC | Mackerel | **A** | Immature | **Ba/Bb** | Developing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Regressing/  Regenerating |  |  |  |  |
| WKMSHMAC | Horse mackerel | **A** | Immature | **Ba/Bb** | Developing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Regressing/  Regenerating |  |  |  |  |
| WKSPMAT | Sardine | **A/Db** | Immature/ Resting | **Ba/Bb** | Developing | **Cb** | Imminent spawning | **Ca** | Spawning | **Cb** | Partial post-spawning | **Da** | Spent |  |  |  |  |
| WKSPMAT | Anchovy | **A/Db** | Immature/ Resting | **Ba/Bb** | Developing | **Cb** | Imminent spawning | **Ca** | Spawning | **Cb** | Partial post-spawning | **Da** | Spent |  |  |  |  |
| WKMSSPDF | Sole | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSSPDF | Plaice | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSSPDF | Dab | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSSPDF | Flounder | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSHS | Herring | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da** | Spent |  |  |  |  |
| WKMSHS | Sprat | **A** | Immature | **Ba/Bb** | Maturing | **Cb** | Spawning inactive | **Ca** | Spawning active | **Da** | Cessation | **Da** | Recovering | **Db/E** | Resting/  Skip spawning | **F** | Abnormal |
| WKMSTB | Turbot | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Spent | **E** |  | **F** | Abnormal |
| WKMSTB | Brill | **A** | Immature | **Ba/Bb** | Maturing |  |  | **Ca/Cb** | Spawning |  |  | **Da/Db** | Spent | **E** |  | **F** | Abnormal |
| WKMSREGH | Greenland halibut | Not defined | | | | | | | | | | | | | | | |
| WKMSREGH | Redfish | Not defined | | | | | | | | | | | | | | | |

**Herring maturity scale conversions from national, from ICES, 2011a (modified), to SMSF**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **WKMSHS maturity scale** | **Denmark** | **England** | **Estonia** | **Finland** | **Faroe Islands** | **Germany (Baltic)** | **Germany (North Sea / NE Atlantic)** | **Iceland** | **Ireland** | **Latvia** | **Netherlands** | **Norway** | **Polen** | **Scotland** | **Sweden** | **SMSF** |
| Ia | I | I | I | I | I | I | 1 | I | I | I | I | I | I | I | I | **A** |
| Ib | I | I | I | I | II | II | 1 | II | II | II | I | II | II | II | I | **A** |
| IIa | II | II | III | II | III | III | 2 | III | III | III | II | III-V | III | III | II | **B** (Ba) |
| IIb | III&IV | III | III | II, III & IV | IV | IV | 2 | IV | IV | IV | II | III-V | IV | IV | III & IV | **B** (Bb) |
| IIIa | VI | IV-V | V | VI | V | V | 3 | V | V | V | III | VI | V | V | VI | **C** (Ca) |
| IIIb | V | VI | V | V | VI | VI-VII | 3 | VI | VI | V | III | VI | VI | VI | V | **C** (Cb) |
| IV | VII | VII.I-VII.II | VI | VII | VII | VIII | 4 | VII | VII | VI | IV | VII | VII | VII | VII | **D** (Da) |
| Va | VII | VIII | II | VII | VIII | II | 4 | VIII | VIII | II | V | VIII | VIII | VIII | VIIIa | **D** (Da) |
| Vb Resting | VII | VIII | II | VII (&II) | VIII | II | 4 | VIII | VIII | II | V | VIII | VIII | VIII | VIIIb | **D** (Db) |
| Vb Skipped spawning | - | VIII | II | - | VIII | II | 5 | VIII | VIII | II | V | VIII | VIII | VIII |  | **E** |
| VI | VIII | A | - | VIII | - | IX | | 6 | - | - | VI | - | IX | - | IX | **F** |

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**Sprat maturity scale conversions from national, from ICES, 2011a to SMSF**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **WKMSHS maturity scale** | **Denmark** | **Germany (Baltic)** | **Germany (North Sea / NE Atlantic)** | **England** | **Finland** | **Lithuania** | **Latvia** | **Netherlands** | **Norway** | **Poland** | **Sweden** | **Portugal** | **SMSF** |
| I | I | I | 1 | I | I | I | I | I | I | I | I | **I** | **A** |
| II | II | II | 1 | II | II | II-III | II+VI.2 | II | II | II | II | **II** | **B** (Ba/Bb) |
| IIIa | III | III-V | 2 | III-V | III | IV+VI.3+VI.4 | III-IV+ VI.3-VI.4 | III | III-V | III-V | III-V | **III** | **C** (Cb) |
| IIIb | III | VI-VII | 2 | VI | III | V | V | III | VI | VI | VI | **IV** | **C** (Ca) |
| IVa | IV | VIII | 3 | VII.1 | IV | VI.2 | VI.2 | IV | VII | VII | VII | **V** | **D** (Da) |
| IVb | IV | - | 4 | VII.2-VIII | IV | VI.2 | VI.2 | IV | VII | VIII | VIII | **V** | **D** (Db) |
| V | - | II | 5 |  | V& II | - | VI.2 | V | VIII | - | VIII |  | **D** (Db) |
|  |  |  | |  |  |  |  |  |  |  |  |  | **E** |
| VI | - | IX | 6 | A | VI | - | - | VI | - | IX | IX |  | **F** |

**Walsh scale for mackerel and horse mackerel (Walsh *et al*. 1990) conversions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **State** | **Female** | **Male** | **SMSF** |
| Immature | Immature | Gonads small. Ovaries wine red and clear, torpedo shaped | Gonads small. Male pale, flattened and transparent | **A** |
| Mature | Maturing | Gonads occupying 1/4 to 3/4 body cavity. Opaque eggs visible in ovaries giving pale pink to yellowish coloration, largest | Gonads occupying 1/4 to 3/4 body cavity. Testes off-white, milt not running | **B** (Ba/Bb) |
| Mature | Maturing | Gonads occupying largest eggs may have oil globules. 3/4 to almost filing body cavity. Ovaries yellow to orange. | Gonads occupying 3/4 to almost filing body cavity. Testes creamy white. | **B** (Bb) |
| Mature | Spawning | Ovaries characterized by externally visible hyaline eggs no matter how early the stage of hydration. Ovary size variable | Testes filling body cavity, milt freely running | **C** (Ca) |
| Mature | Spawning | Gonads occupying 3/4 to <1/4 body cavity. Ovaries slacker than in stage 3 and often bloodshot. | Gonads occupying 3/4 to < 1/4 body cavity. Testes with free running milt and shrivelled at anus end. | **C** (Cb) |
| Mature | Spent/Recovery | Gonads occupying 1/4 or less of body cavity. Ovaries reddish and often murky in appearance, sometimes with a scattering or patch of opaque eggs | Gonads occupying 1/4 or less of body cavity. Testes opaque with brownish hit and no trace of milt. | **D** (Da/Db) |
|  |  |  |  | **E** |
|  |  |  |  | **F** |

***Scomber scombrus*** **maturity scale conversions from national to international scales from ICES, 2015**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **WKMSMAC2 maturity scale** | | **Walsh** | **Walsh *et al.* (IPMA,IMAR,IEO)** | **Walsh *et al*. (AZTI)** | **IMR** | **SMSF** |
| Immature | 1 | 1 | 1 | *1* | 1-2 | **A** |
| Developing | 2 | 2-3 | 2-3 | *2* | 3-4 | **B** (Ba/Bb) |
| Spawning | 3 | 4-5 | 4-5 | *3-4-5* | 5-6 | **C** (Ca/Cb) |
| Regressing Regenerating | 4 | 6 | 6 | *6* | 7-8 | **D** (Da/Db) |
| Omitted spawning | 5 |  |  |  |  | **E** |
| Abnormal | 6 |  |  |  | 9 | **F** |

***Scomber colias* maturity scale conversions from national to international scales from ICES, 2015**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **WKMSMAC2 maturity scale** | | **Walsh** | ***Walsh et al.* (IPMA,IMAR,IEO)** | ***Walsh et al.* (AZTI)** | **IMR** | **SMSF** |
| Immature | 1 | 1 | *1* | 1-2 | 1-2a | **A** |
| Developing | 2 | 2-3 | *2* | 3-4 | 2c | **B** (Ba/Bb) |
| Spawning | 3 | 4-5 | *3-4-5* | 5-6 | 3 | **C** (Ca/Cb) |
| Regressing  Regenerating | 4 | 6 | *6* | 7-8 | 4a-4b-2b | **D** (Da/Db) |
| Omitted spawning | 5 |  |  |  |  | **E** |
| Abnormal | 6 |  |  | 9 |  | **F** |

***Trachurus trachurus* maturity scale conversions from national to international scales from ICES, 2015**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **WKMSMAC2 maturity scale** | | **Walsh** | **Walsh *et al.***  **(IPMA,IMAR,IEO)** | **Walsh *et al*. (AZTI)** | **IMR** | **SMSF** |
| Immature | 1 | 1 | 1-2a | *1* | 1-2a | **A** |
| Developing | 2 | 2 | 3 | *2* | 2c | **B** (Ba/Bb) |
| Spawning | 3 | 3-4-5 | 4 | *3-4-5* | 3 | **C** (Ca/Cb) |
| Regressing Regenerating | 4 | 6 | 5-6 | *6* | 4a-4b-2b | **D** (Da/Db) |
| Omitted spawning | 5 |  |  |  |  | **E** |
| Abnormal | 6 |  |  |  |  | **F** |

***Trachurus mediterraneus* maturity scale conversions from national to international scales from ICES, 2015**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **WKMSMAC2 maturity scale** | | **Walsh** | **WKSPMAT maturity scale** | **Walsh *et al.*** (AZTI) | **SMSF** |
| Immature | 1 | 1 | 1-2a | *1* | **A** |
| Developing | 2 | 2 | 3 | *2* | **B** (Ba/Bb) |
| Spawning | 3 | 3-4-5 | 4 | *3-4-5* | **C** (Ca/Cb) |
| Regressing Regenerating | 4 | 6 | 5-6 | *6* | **D** (Da/Db) |
| Omitted spawning | 5 |  |  |  | **E** |
| Abnormal | 6 |  |  |  | **F** |

**Maturity scale conversions from national to international scales for the females of CRUSTACEANS species in ICES area (WKMSC, 2009)**

|  |  |  |  |
| --- | --- | --- | --- |
| **WKMSC 2009 maturity scale** | **Maturity stage description** | **Maturity** | **SMSF scale** |
| 1 | Immature | *Immature* | **A** |
| 2 | Developing/Resting\*/Recovery | *Immature* | **Ba/Da/Db** |
| 3 | Maturing | *Mature* | **Bb** |
| 4 | Mature | *Mature* | **C** |
| 5 | Spent | *Mature* | **Da** |

\*Identified only in a few species (*Aristaeomorpha foliacea, Parapenaeus longirostris*)

Stages E and F of SMFS scale has no correspondence in Crustraceans.

The scale applies only to females. WKMSC 2009 has not adopted a scale for males.

ICES. 2010. Report of the Workshop on crustaceans (*Aristeus antennatus, Aristaeo morpha foliacea, Parapenaeus longirostris, Nephrops norvegicus*) maturity stages (WKMSC), 19-23 October 2009, Messina, Italy. ICES CM 2009/ACOM:46, 77 pp.

**Maturity scale conversions from national to international scales for the females of OVIPAROUS ELASMOBRANCHS species in ICES area (WKMSEL, 2012)**

|  |  |  |  |
| --- | --- | --- | --- |
| **WKMSEL 2012 maturity scale** | **Maturity stage description** | **Maturity** | **SMSF scale** |
| 1 | Immature | *Immature* | **A** |
| 2 | Developing | *Immature* | **Ba** |
| 3a | Capable to reproduce | *Mature* | **Bb** |
| 3b | Egg-laying | *Mature* | **C** |
| 4a | Post-laying | *Mature* | **Da** |
| 4b | Regenerating | *Mature* | **Db** |

**Maturity scale conversions from national to international scales for the males of OVIPAROUS ELASMOBRANCHS species in ICES area (WKMSEL, 2012)**

|  |  |  |  |
| --- | --- | --- | --- |
| **WKMSEL 2012 maturity scale** | **Maturity stage description** | **Maturity** | **SMSF scale** |
| 1 | Immature | *Immature* | **A** |
| 2 | Developing | *Immature* | **Ba** |
| 3a | Capable to reproduce | *Mature* | **Bb** |
| 3b | Active | *Mature* | **C** |
| 4 | Regressing | *Mature* | **Da** |

Stages E and F of SMFS scale has no correspondence in Oviparous Elasmobranchs.

ICES. 2013. Report of the workshop on Sexual Maturity Staging of Elasmobranchs (WKMSEL) , 11-14 December 2012, Lisbon, Portugal. ICES CM 2012/ACOM:59. 66 pp.

**Maturity scale conversions from national to international scales for the females of VIVIPAROUS ELASMOBRANCHS species in ICES area (WKMSEL, 2012)**

|  |  |  |  |
| --- | --- | --- | --- |
| **WKMSEL 2012 maturity scale** | **Maturity stage description** | **Maturity** | **SMSF scale** |
| 1 | Immature | *Immature* | **A** |
| 2 | Developing | *Immature* | **Ba** |
| 3 | Capable to reproduce | *Mature* | **Bb** |
| 4a | Early pregnancy | *Mature* | **C** |
| 4b | Mid pregnancy | *Mature* | **C** |
| 4c | Late pregnancy | *Mature* | **C** |
| 5 | Post-partum | *Mature* | **Da** |
| 6 | Regenerating | *Mature* | **Db** |

**Maturity scale conversions from national to international scales for the males of VIVIPAROUS ELASMOBRANCHS species in ICES area (WKMSEL, 2012)**

|  |  |  |  |
| --- | --- | --- | --- |
| **WKMSEL 2012 maturity scale** | **Maturity stage description** | **Maturity** | **SMSF scale** |
| 1 | Immature | *Immature* | **A** |
| 2 | Developing | *Immature* | **Ba** |
| 3a | Capable to reproduce | *Mature* | **Bb** |
| 3b | Active | *Mature* | **C** |
| 4 | Regressing | *Mature* | **Da** |

Stages E and F of SMFS scale has no correspondence in Viviparous Elasmobranchs.

Stage C does not apply to Elasmobranch species, as “Spawning” is not what occurs in Elasmobranchs, as they have internal fertilization, and for that reason, we use “Egg-Laying/Pregnant” for females and “Active” for males.

# Annex 7: Conversion tables for the GFCM areas

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***CONVERSION OF MATURITY SCALES - BONY FISH*** | | | | |
| **ICCAT (big pelagics)** | **NIKOLSKY** | **MEDITS 1994-2006** | **MEDITS 2007-2018 /**  **GFCM SCALE** | **SMSF SCALE** |
| 1. IMMATURE | 1. IMMATURE | 1. IMMATURE | 1. IMMATURE / VIRGIN | A. IMMATURE |
| 2. EARLY MATURING | 3. DEVELOPING | 2. MATURING | 2a. VIRGIN DEVELOPING | Ba. DEVELOPING BUT  FUNCTIONALLY IMMATURE |
| 2b. RECOVERING | Bb. DEVELOPING AND  FUNCTIONALLY MATURE |
| 3. MATURING | 4. MATURING | 3. SPAWNING | 2c. MATURING | Ca/Cb. SPAWNING |
| 4. RIPE | 5. MATURE | 3.MATURE / SPAWNER |
| 5. SPENT | 6. SPENT | 4. POST-SPAWNNG | 4a. SPENT | Da. REGRESSING |
| 2. RESTING |  | 4b. RESTING | Db. REGENERATING |
|  |  |  |  | E. OMITTED SPAWNING |
|  |  |  |  | F. ABNORMAL |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***CONVERSION OF MATURITY SCALES - CRUSTACEANS*** | | | | |
| **GFCM**  **CRUSTACEANS STOMATOPODS** | **GFCM**  **CRUSTACEANS DECAPODS** | **MEDITS 1994-2006** | **MEDITS 2007-2018** | **SMSF SCALE** |
| 0. IMMATURE | 1. IMMATURE | 1. IMMATURE | 1. IMMATURE VIRGIN | A. IMMATURE |
| 2. EARLY MATURATION | 2. DEVELOPING-RESTING-RECOVERING | 2. MATURING | 2a. VIRGIN DEVELOPING | Ba. DEVELOPING BUT  FUNCTIONALLY IMMATURE |
| 1. QUIESCENT | 2b. RECOVERING | Bb. DEVELOPING AND  FUNCTIONALLY MATURE |
| 3. MATURATION | 3. MATURING | 2c. MATURING OR  ALMOST MATURE | Ca/Cb. SPAWNING |
| 4. RIPE | 4. MATURE | 2d. MATURE |
| 5. SPENT | 5. SPENT |  | 2e. RESTING ADULT | Da. REGRESSING |
|  | 2. DEVELOPING-RESTING-RECOVERING |  | Db. REGENERATING |
|  |  |  | E. OMITTED SPAWNING |
|  |  |  |  | F. ABNORMAL |
|  |  |  |  |  |
|  |  | 3.External eggs | 3. BERRIED |  |

|  |  |  |
| --- | --- | --- |
| ***CONVERSION OF MATURITY SCALE – CEPHALOPODS*** | | |
| **MEDITS 1994-2006** | **MEDITS 2007-2018 and GFCM** | **SMSF SCALE** |
| 1. IMMATURE | 1. IMMATURE VIRGIN | A. IMMATURE |
| 2a. DEVELOPING | Ba. DEVELOPING BUT  FUNCTIONALLY IMMATURE |
| 2. MATURING | 2b. MATURING | Bb. DEVELOPING AND  FUNCTIONALLY MATURE |
| 3. MATURE | 3a. MATURE | Ca/Cb. SPAWNING |
|  |
|  | 3b. SPENT | Da. REGRESSING |  |
|  |  | Db. REGENERATING |  |
|  |  | E. OMITTED SPAWNING |  |
|  |  | F. ABNORMAL |  |

|  |  |  |  |
| --- | --- | --- | --- |
| ***CONVERSION OF MATURITY SCALE - OVIPAROUS ELASMOBRANCHS*** | | | |
| **MEDITS 2008-2018 and GFCM** | **MEDITS 2007** | **MEDITS 1994-2006** | **SMSF SCALE** |
| 1. IMMATURE-VIRGIN | 1. IMMATURE VIRGIN | 1. IMMATURE | A. IMMATURE |
| 2. MATURING | 2. MATURING | 2. MATURING | Ba. DEVELOPING BUT  FUNCTIONALLY IMMATURE |
| Bb. DEVELOPING AND  FUNCTIONALLY MATURE |
| 3a. MATURE | 3a. MATURE | 3. SPAWNING | Ca/Cb. SPAWNING |
| 3b. MATURE/EXTRUDING-ACTIVE | 3b. MATURE/  EXTRUDING-ACTIVE |
| 4a. RESTING | 4. RESTING | 4. POST-SPAWNNG | Da. REGRESSING |
| 4b. REGENERATING\* | Db. REGENERATING |
| \* only for female |  |  | E. OMITTED SPAWNING |
|  |  |  | F. ABNORMAL |

|  |  |  |  |
| --- | --- | --- | --- |
| **CONVERSION OF MATURITY SCALES *VIVIPAROUS ELASMOBRANCHS*** | | | |
| **GFCM** | **MEDITS 2007-2018** | **MEDITS 1994-2006** | **SMSF SCALE** |
| 1. IMMATURE | 1. IMMATURE | 1. IMMATURE | A. IMMATURE |
| 2. DEVELOPING | 2. DEVELOPING | 2. MATURING | Ba. DEVELOPING BUT  FUNCTIONALLY IMMATURE |
| 3A. SPAWNING CAPABLE +  CAPABLE TO REPRODUCE \* | Bb. DEVELOPING AND  FUNCTIONALLY MATURE |
| 3.CAPABLE OF REPRODUCTION \*  3A. CAPABLE OF REPRODUCTION + | 3B. ACTIVELY SPAWNING + / EARLY PREGRNANCY \*  3C. MID PREGRNANCY;  3D. LATE PREGNANCY \* | 3. SPAWNING | Ca/Cb. SPAWNING |
|  |
| 5. POST PARTUM\* /  4. REGRESSING + | 4. REGRESSING + /  4A. REGRESSING \* | 4. POST-SPAWNNG | Da. REGRESSING |  |
| 6. REGENERATING\* /  4. REGRESSING + | 4B. REGENERATING \* | Db. REGENERATING |  |
|  |  |  | E. OMITTED SPAWNING |  |
|  |  |  | F. ABNORMAL |  |
| \* only for female | \* only for female |  |  |  |
| + only for males | + only for males |  |  |  |