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| --- | --- | --- | --- | --- | --- |
| **Model** | **data** | **Response** | **Formula** | **Weights** | **Distribution** |
| A | SBEST uncounted | Lond | lond ~ yy + s(mm, k = 3, bs ="cc") + flag + set\_type + oniF + s(latd, k=5) | Mn\_cpue (catch/stdeff) | Gamma(link = "log") |
| 2 | SBEST uncounted (FS/DW subset) | Lond | lond ~ yy + s(mm, k = 3, bs ="cc") + flag + oniF + s(latd, k=5) | Mn\_cpue (catch/stdeff) | Gamma(link = "log") |
| ~~3~~ | ~~SBEST counted~~ | ~~Lond~~ | ~~lond ~ yy + s(mm, k = 3, bs ="cc") + flag + set\_type + oniF + s(latd, k=5)~~ | ~~Mn\_cpue (catch/stdeff)~~ | ~~Gamma(link = "log")~~ |
| ~~4~~ | ~~SBEST counted (FS/DW subset)~~ | ~~Lond~~ | ~~lond ~ yy + s(mm, k = 3, bs ="cc") + flag + set\_type + oniF + s(latd, k=5)~~ | ~~Mn\_cpue (catch/ stdeff)~~ | ~~Gamma(link = "log")~~ |
| 3 | SBEST counted (sets >= 1) | Cpue | cpue\_log ~ yy + s(mm, k = 4, bs ="cc") + flag + set\_type + oniF + s(latd, k=4) + s(lond, by = yy) | Log(stdeff+1) | gaussian(link = "identity") |
| 4 | SBEST counted (FS/DW subset) | Cpue | cpue\_log ~ yy + s(mm, k = 4, bs ="cc") + flag + oniF + s(latd, k=4) + s(lond, by = yy) | Effort (stdeff) | gaussian(link = "identity") |
| 5 | Logbook data | Lond | lond ~ yy + s(mm, k = 3, bs ="cc") + flag + set\_type + oniF + s(latd, k=5) | Cpue (catch/stdeff) | Gamma(link = "log") |
| 6 | Logbook data (FS/DW subset) | Lond | lond ~ yy + s(mm, k = 3, bs ="cc") + flag + oniF + s(latd, k=5) | Cpue (catch/stdeff) | Gamma(link = "log") |
| 7 | Logbook data | Catch/set | SKJcatch\_log ~ yy + s(mm, k = 4, bs ="cc") + flag + set\_type + oniF + s(latd, k=4) + s(lond, by = yy) | ? | gaussian(link = "identity") |
| 8 | Logbook data (FS/DW subset) | Catch/set | SKJcatch ~ yy + s(mm, k = 4, bs ="cc") + flag + oniF + s(latd, k=4) + s(lond, by = yy) | ? | gaussian(link = "identity") |
|  |  |  |  |  |  |

\*Positive catch SKJ sets only