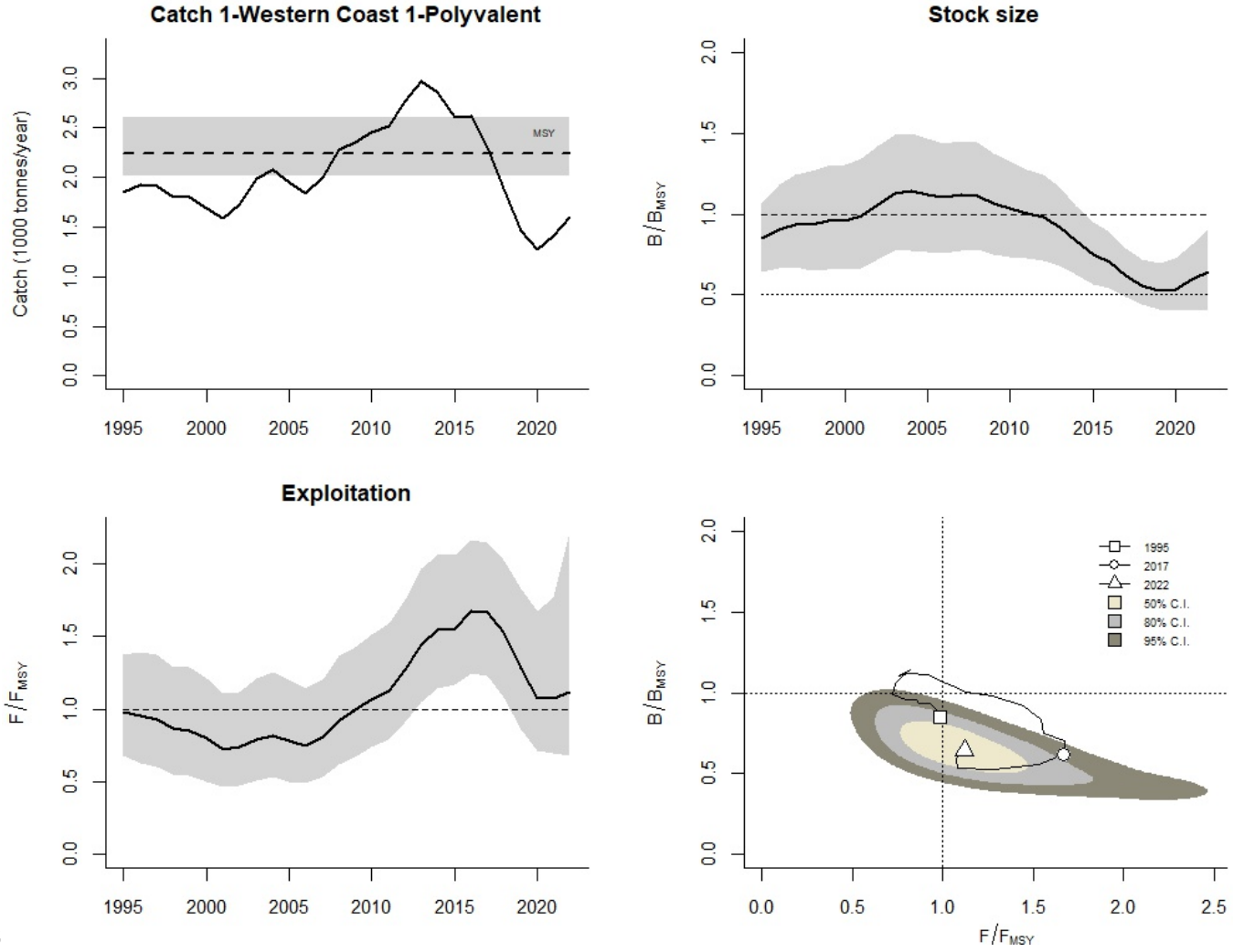
Octopus

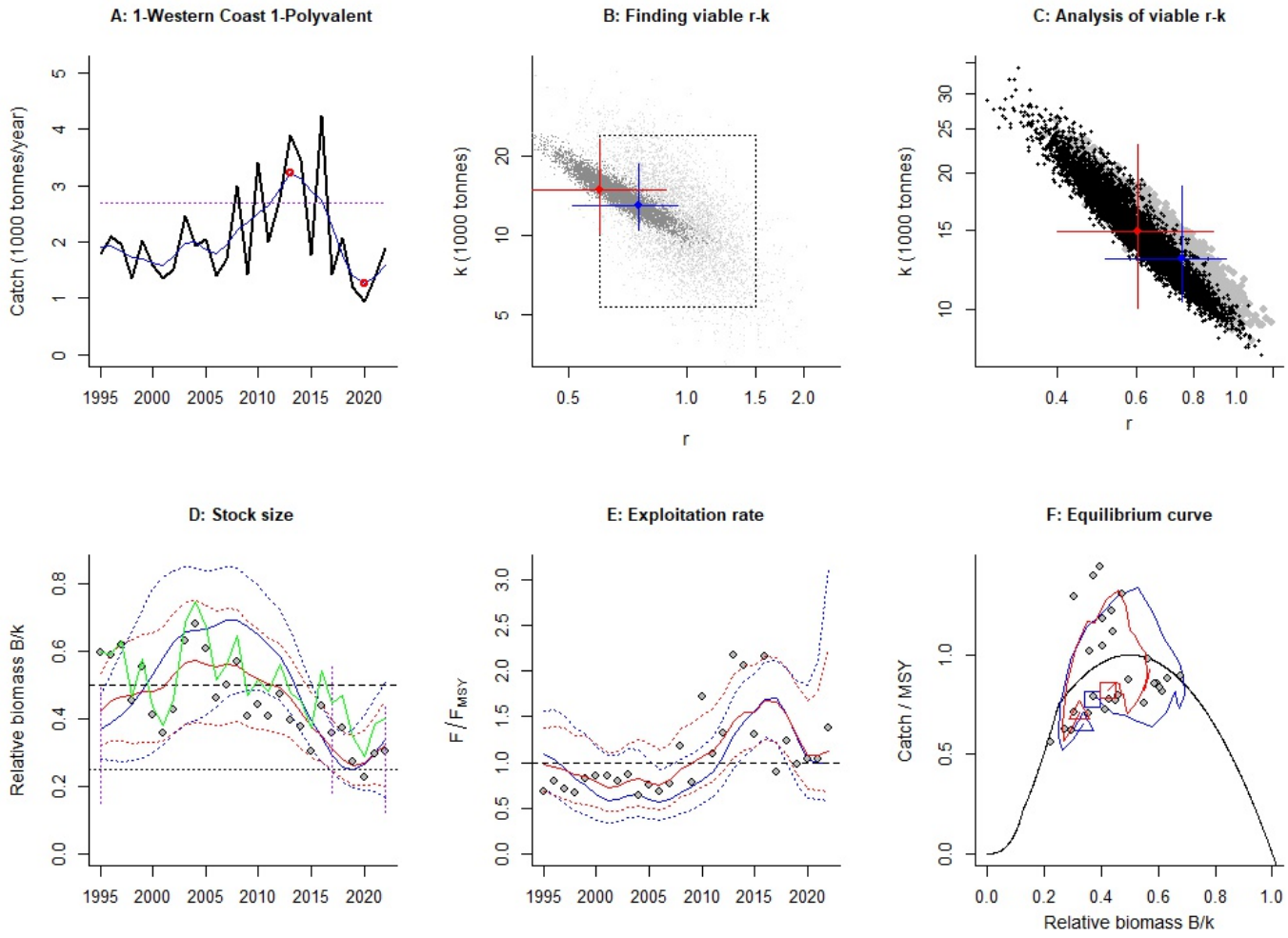
Species: *Octopus vulgaris*, Stock code: 1-Western Coast 1-Polyvalent
Region: Iberia
Marine Ecoregion: Portugal
Reconstructed catch data used from years 1995 - 2022
For figure captions and method see http://www.seaaroundus.org/cmsy-method



extext

Results for management (based on BSM analysis)

Fmsy = 0.3, 95% CL = 0.2 - 0.443 (if B > 1/2 Bmsy then Fmsy = 0.5 r)
Fmsy = 0.3, 95% CL = 0.2 - 0.443 (r and Fmsy are linearly reduced if B < 1/2 Bmsy)
MSY = 2.24, 95% CL = 2.02 - 2.6; Bmsy = 7.46, 95% CL = 5.06 - 11.6 (1000 tonnes)
Biomass in last year = 4.72, 95% CL = 2.98 - 7.47 (1000 tonnes)
B/Bmsy in last year = 0.642, 95% CL = 0.4 - 0.902
Fishing mortality in last year = 0.337, 95% CL =0.194 - 0.591
F/Fmsy = 1.12, 95% CL = 0.683 - 2.23
Comment:



extext

Results of CMSY analysis conducted in JAGS

r = 0.756, 95% CL = 0.51 - 0.946; k = 12.9, 95% CL = 10.4 - 18.7 (1000 tonnes)
MSY = 2.44, 95% CL = 2.14 - 2.74 (1000 tonnes/year)
Relative biomass last year = 0.336 k, 95% CL = 0.164 - 0.505
Exploitation F/(r/2) in last year = 0.998

Results from Bayesian Schaefer model using catch and CPUE

r = 0.601, 95% CL = 0.4 - 0.887; k = 14.9, 95% CL = 10.1 - 23.2
r-k log correlation = -0.956
MSY = 2.24, 95% CL = 2.02 - 2.6 (1000 tonnes/year)
Relative biomass in last year = 0.336 k, 95% CL = 0.164 - 0.505
Exploitation F/(r/2) in last year = 1.24
q = 0.425, 95% CL = 0.285 - 0.607
Prior range of q = 0.169 - 3.03
Relative abundance data type = CPUE
Prior initial relative biomass = 0.149 - 0.495 default
Prior intermediate relative biomass = 0.182 - 0.565 in year 2017 default
Prior final relative biomass = 0.122 - 0.438, default
Prior range for r = 0.6 - 1.5 default, prior range for k = 5.38 - 24.1 (1000 tonnes) default
Source for relative biomass:
DGRM