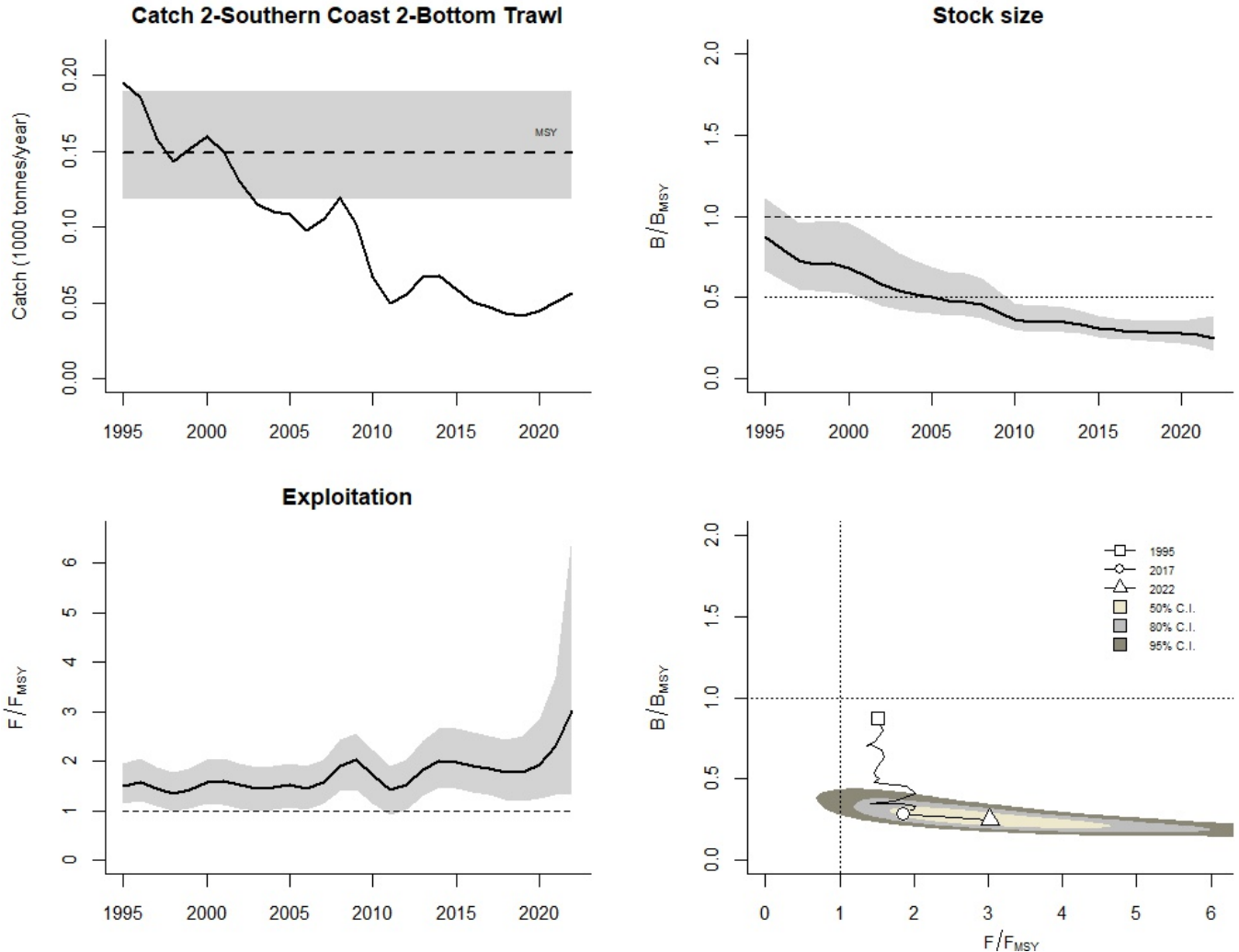# Octopus

Species: *Octopus vulgaris*, Stock code: 2-Southern Coast 2-Bottom Trawl
Region: Iberia
Marine Ecoregion: Portugal
Reconstructed catch data used from years 1995 - 2021
For figure captions and method see http://www.seaaroundus.org/cmsy-method

extext

Results for management (based on BSM analysis)

Fmsy = 0.281, 95% CL = 0.189 - 0.402 (if B > 1/2 Bmsy then Fmsy = 0.5 r)
Fmsy = 0.141, 95% CL = 0.0946 - 0.201 (r and Fmsy are linearly reduced if B < 1/2 Bmsy)
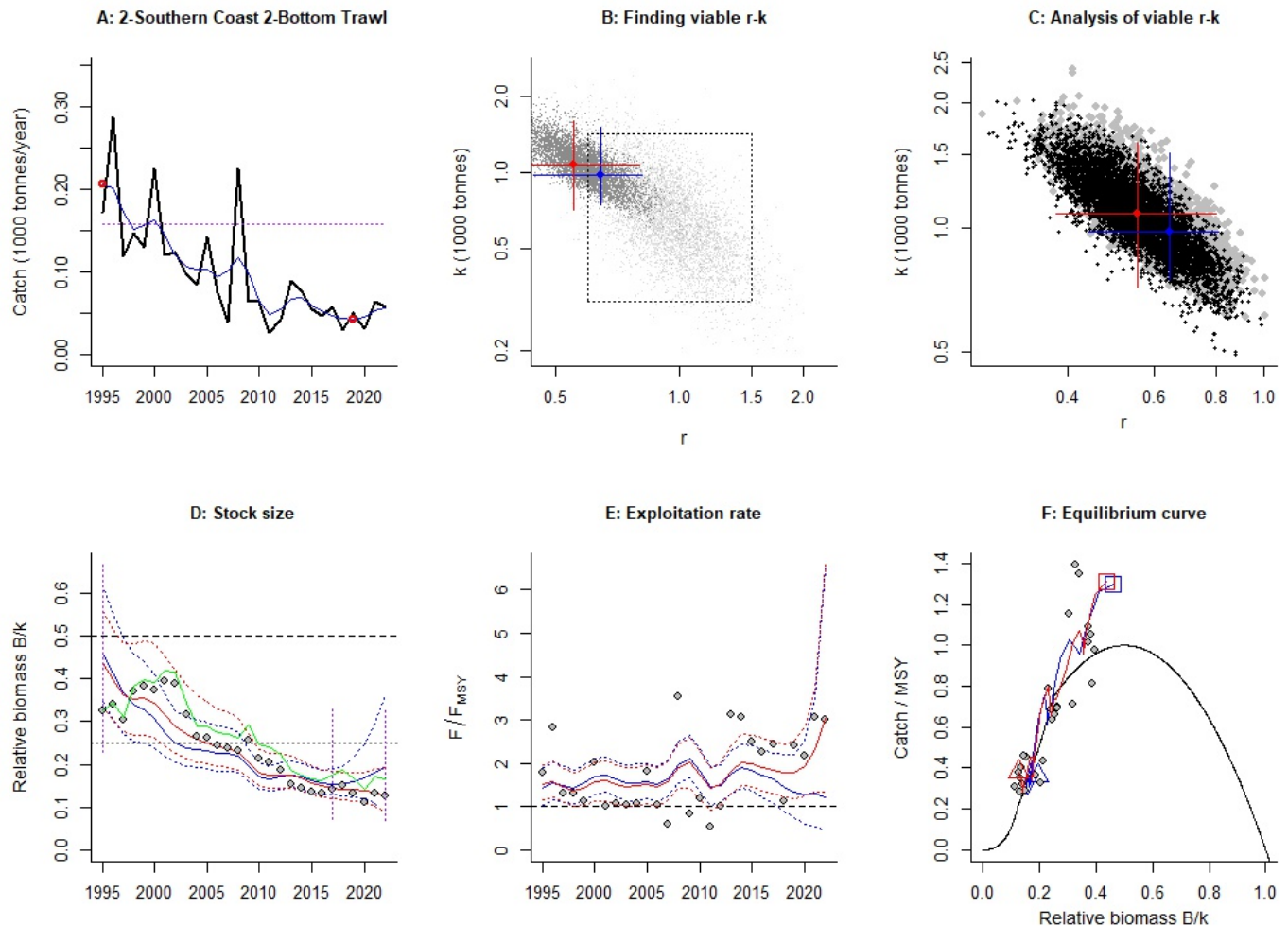MSY = 0.147, 95% CL = 0.12 - 0.189; Bmsy = 0.528, 95% CL = 0.36 - 0.81 (1000 tonnes)
Biomass in last year = 0.131, 95% CL = 0.0828 - 0.217 (1000 tonnes)
B/Bmsy in last year = 0.25, 95% CL = 0.166 - 0.366
Fishing mortality in last year = 0.384, 95% CL =0.213 - 0.657
F/Fmsy = 2.76, 95% CL = 1.28 - 5.98
Comment:

extext

Results of CMSY analysis conducted in JAGS

r = 0.645, 95% CL = 0.451 - 0.805; k = 0.961, 95% CL = 0.754 - 1.44 (1000 tonnes)
MSY = 0.155, 95% CL = 0.126 - 0.195 (1000 tonnes/year)
Relative biomass last year = 0.189 k, 95% CL = 0.0729 - 0.355
Exploitation F/(r/2) in last year = 1.22

Results from Bayesian Schaefer model using catch and CPUE

r = 0.562, 95% CL = 0.378 - 0.804; k = 1.06, 95% CL = 0.719 - 1.62
r-k log correlation = -0.846
MSY = 0.147, 95% CL = 0.12 - 0.189 (1000 tonnes/year)
Relative biomass in last year = 0.189 k, 95% CL = 0.0729 - 0.355
Exploitation F/(r/2) in last year = 1.14
q = 13.1, 95% CL = 9.02 - 18.5
Prior range of q = 3.78 - 67.1
Relative abundance data type = CPUE
Prior initial relative biomass = 0.229 - 0.665 default
Prior intermediate relative biomass = 0.0727 - 0.333 in year 2011 default
Prior final relative biomass = 0.0697 - 0.327, default
Prior range for r = 0.6 - 1.5 default, prior range for k = 0.318 - 1.41 (1000 tonnes) default
Source for relative biomass:
DGRM