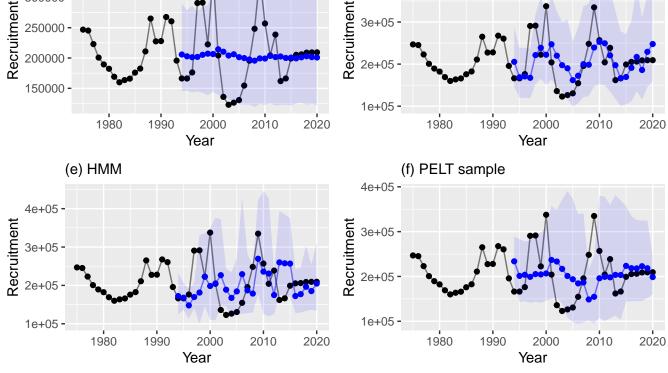
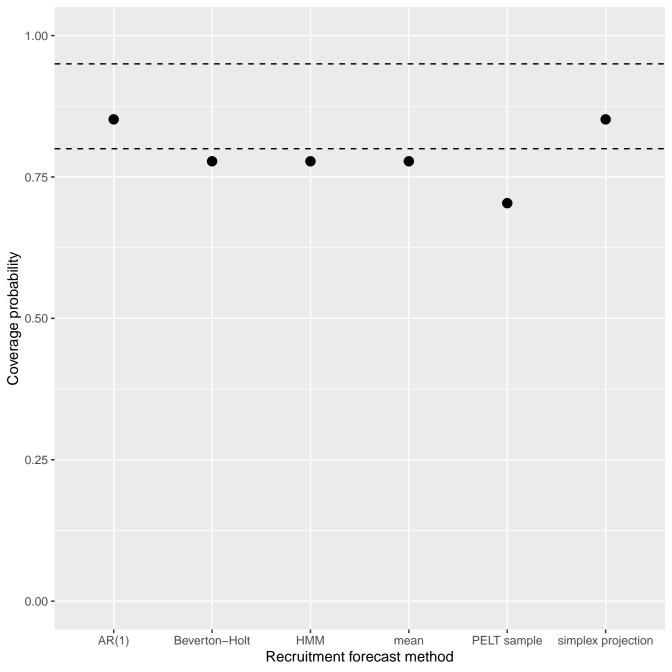
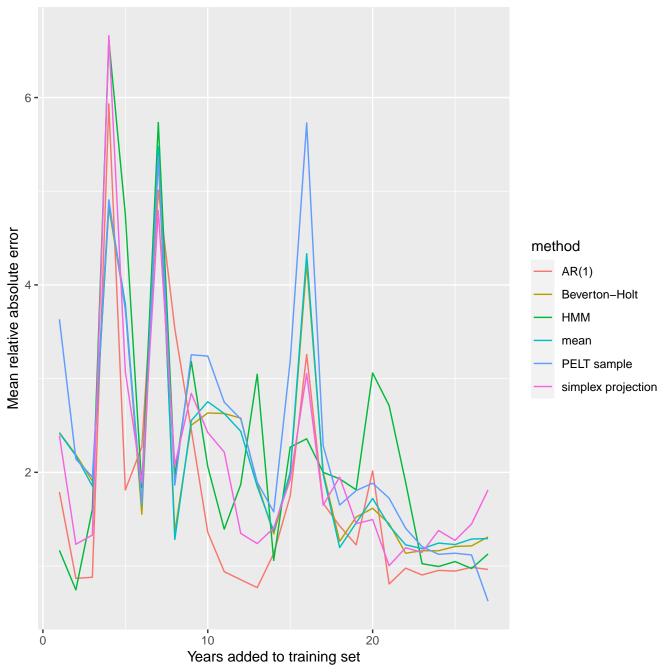
(a) Mean (b) AR(1) 350000 -4e+05 -300000 -Recruitment Recruitment 3e+05 -250000 -200000 -2e+05 150000 -1e+05 -2010 1990 2010 2020 2020 1980 1990 2000 1980 2000 Year Year (d) Simplex projection (c) Beverton-Holt 4e+05 **-**300000 -Recruitment Recruitment 3e+05 -250000 200000 -2e+05 -150000 -1e+05 -1990 2000 2010 1990 2000 2010 2020 2020 1980 1980 Year Year (e) HMM (f) PELT sample 4e+05 -

1-step Forecasts







(a) Mean (b) AR(1) 350000 -350000 -300000 -300000 -Recruitment Recruitment 250000 -250000 200000 -200000 -150000 -150000 -2010 2010 1980 1990 2020 1980 1990 2020 2000 2000 Year Year (c) Beverton-Holt (d) Simplex projection 350000 -4e+05 -300000 -Recruitment Recruitment 3e+05 -250000 200000 -2e+05 150000 -1e+05 -2000 2010 1990 2010 2020 1990 1980 2000 1980 2020

5-step Forecasts

