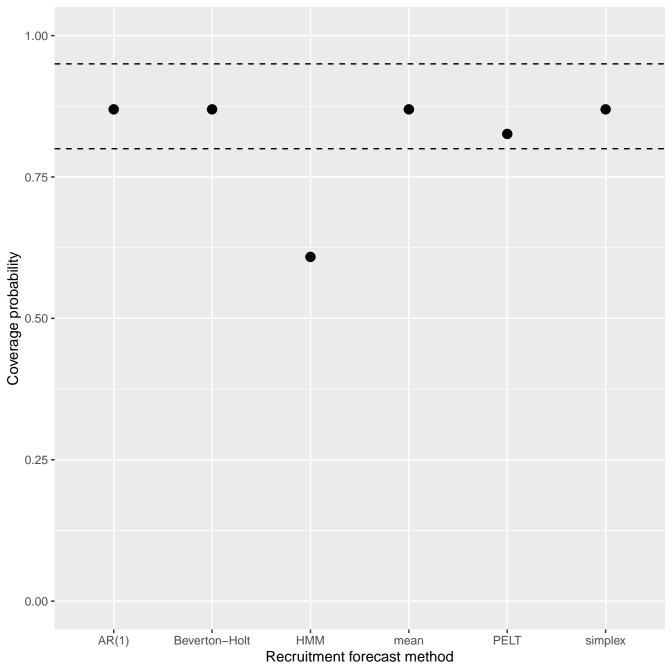
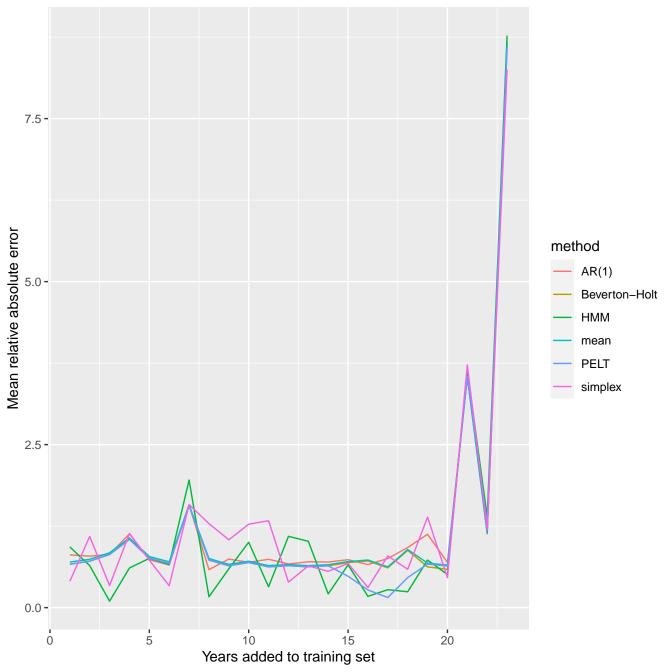
1-step Forecasts (a) mean (b) AR(1) 1.5e+08 1.5e+08 **Secretary** 1.0e+08 5.0e+07 Recruitment 1.0e+08 5.0e+07 0.0e+00 0.0e+00 1980 1990 2000 2010 1980 1990 2010 2020 2000 202 Year Year (c) Beverton-Holt (d) simplex 1.5e+08 1.5e+08 Recruitment Recruitment 1.0e+08 1.0e+08 5.0e+07 5.0e+07 0.0e+00 0.0e+00 1980 1990 2000 2010 1980 1990 2000 2010 2020 202 Year Year (e) PELT (f) HMM 1.5e+08 1.5e+08 Recruitment 1.0e+08 5.0e+07 Recruitment 1.0e+08 5.0e+07 0.0e+00 0.0e+00 1980 1990 2000 2010 2020 1980 1990 2000 2010 202 Year Year





1.5e+08 1.5e+08 **Secretary** 1.0e+08 5.0e+07 Recruitment 1.0e+08 5.0e+07 0.0e+00 0.0e+00 1980 1990 2000 2010 1980 1990 2000 2010 2020 202 Year Year (c) Beverton-Holt (d) simplex 1.5e+08 **Secretary** 1.5e+08 1.0e+08 5.0e+07 1.5e+08 Recruitment 1.0e+08 5.0e+07 0.0e+00 0.0e+00 1980 1990 2000 2010 1980 1990 2000 2010 2020 202 Year Year (e) PELT (f) HMM

5-step Forecasts

(a) mean

(b) AR(1)

