ASPIC: Biomass Dynamic Stock Assessment Model

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Abstract

The **aspic** package is an implenentation of the ASPIC biomass dynamic stock assessment model in R using the original **FORTRA** executable. The package provides tools for checking of diagnostics, projections, running Monte Carlo simulation and conducting Management Strategy Evaluation.

Keywords: R, aspic, stock assessment.

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1. Introduction

2. Data

3. Starting Values

The initial or starting values have to be chosen by the user, these should preferably be as close as possible to the final solution. Poor starting values can result in slow convergence, failure to converge, convergence to a local rather than a global solution or one that is physically impossible.

Using starting values from previous assessments is one solution but these should still be checked.

Population growth is the change in a population over time, and can be quantified as the change in the number of individuals of any species in a population using "per unit time" for measurement. In biology, the term population growth is likely to refer to any known organism, but this article deals mostly with the application of the term to human populations in demography.

4. Assessment

5. Reference Points

6. Monte Carlo Simulation

6.1. Bootstrapping

6.2. Jack knife

6.3. MCMC

7. Projection

8. MSE

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