3 Introductory material: Ecosim

Ecosim provides a dynamic simulation capability at the ecosystem level, with key initial parameters inherited from the base Ecopath model.

This chapter contains details of the theory underpinning the function of Ecosim:

i. An Overview of Ecosim
ii. Ecosim Basics
iii. Vulnerabilities in Ecosim
iv. Dealing with Dynamic Instability in Ecosim and Ecospace
v. Predicting Consumption
vi. Foraging Time and Predation Risk
vii. Time Series Fitting in Ecosim: Evaluating Fisheries and Environmental Effects
viii. Hints for Fitting Models to Time Series Reference Data
ix. Effects of P/B (Z) and Vulnerability for Time Series Fitting
x. Predator Satiation and Handling Time Effects
xi. Modelling Switching Behaviour in Ecosim
xii. Compensatory Mechanisms
xiii. Using Ecosim to Study Compensation in Recruitment Relationships
xiv. Compensatory Growth
xv. Compensatory Natural Mortality
xvi. Linking Mediation and Time Forcing Functions to Trophic Interaction Rates
xvii. Primary Production
xviii. Nutrient Cycling and Nutrient Limitation in Ecosim
xix. Density-dependent Changes in Catchability
xx. Modelling Effort Dynamics
xxi. Using Ecosim for Stock Reduction Analysis
xxii. Hatchery Populations in Ecosim
xxiii. Parameter Sensitivity

See Ecosim Inputs? and Ecosim Outputs? for links to instructions for using Ecosim.