Review of Ecosystem Models

A flowchart summarizing the classification of the various models listed in Table 1. The flowchart has been modified and updated from that presented in Hollowed et al. (2000). Boxes with models covered in this report are highlighted.
Ecosystem Model Trophic Web (Ecopath) – E Howell
Ecopath with Ecosim
www.ecopath.org

- Kitchell et al. 2002 – role of sharks in CNP
- Watters et al. 2003 – ENSO and climate change impacts on ETP
- Griffiths (2010) microneckton fish and squids regulate pelagic ecosystem
- Worm et al. 2011 – meta analysis mmsy
- Howell et al. in prep – climate impact on Hawaii longline
SEAPODYM

• Lehodey et al. 2010 – climate and bigeye

• Abecassis et al. – in prep Turtle and swordfish models
Size-based model

Assumes size-based predation, and size-specific growth and mortality are functions of food availability and SST.

Input: monthly plankton size spectrum and SST

Output: monthly population size spectrum

Size-based Model

The distribution of teleost biomass