Wikiprint Book

Title: EwEugDietComposition

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6.7 Diet composition

In Ecopath predation links together the different groups in the model and diet composition must be entered for all groups. Unfortunately, quantitative information on diet composition is sparse. Further, much of the available information on diet compositions is expressed on a 'percent occurrence' basis or as 'dominance', both of which are of little use for quantification of diets. Diet inputs should represent weight, volume or energy content of the preys, which are all equivalent (MacDonald and Green 1983).

The *Diet composition* form is accessed through the *Navigator window*. Enter diet composition, for all consumers, column by column (i.e., predators are represented by column and their prey by row). The diet compositions of each group should sum to 1. For guidance, the current sum of the fractions representing the food composition is summed at the second-last row (Sum). The last row (1 ? Sum) shows the proportion of prey still to be entered. You can use the *Sum to one* button at the top of the *Diet composition* screen to raise a diet to unity. If diets do not sum to unity when you start basic estimation (i.e., try to balance the model) you will be given the option of having the software do the raising for you, or to return to the diet to do it yourself.

In Ecopath 'import' to a system is the consumption of preys that are not a part of the system as it is defined (for example for species that spend fractions of the year feeding outside the area of the model). Note that import is different from migration Migration, which is a production term. Import is treated as a 'prey' in the diet composition, and should be entered as a fraction of the total diet. See Dealing with open system problems for more information on how to treat groups that moves in and out of the modelled area.

A warning about zero order cycles, i.e., groups that feed on themselves ('cannibalism'): avoid situations where the fraction of the food of a group taken from that same group exceeds 0.1. This may occur when adults feed on their own juveniles. In such cases, it is advised to split the box into groups representing predator and prey stanzas, i.e., adults and juveniles. This will not only reduce or eliminate a zero-order cycle, and the bothersome computational problems usually associated with such cycles, but also lead to groups with better-defined characteristics (because adults usually have P/B ratios lower than those of juveniles).