**biomass.plt.r**

**Purpose**  This generates the biomass time series plots for recruits and fully recruited + the projection boxplot for offshore.

**Version Control**  Likely several versions of this exist, clearly this is your favourite version.

**Required packages** None

**Locally Derived Functions** None

**Section 1**

Takes the results of a model run and plots the biomass time series of the recruits and fully recruited scallop. Options include the biomass projection for the next 1 or 2 years (you can set the TAC and it will adjust the biomass accordingly), the addition of reference points, the addition of the average biomass in the time series among numerous other little options.

***Argument(s)***

1. out.data The output from a model run. Missing by default so must be added
2. years The years of interest. Missing by default so must be added
3. graphic What to do if making a figure. Print to "screen" by default, optionally

save as a "pdf".

1. avg.line Add a line at to the figures. Default = NULL which does not add the line.

Only added if refs is set to NULL. Generally we set this as median (no quotes) but any R function is possible, mean (no quotes) is a reasonable option. The value of the current years biomass is excluded from this calculation.

1. ht The height of the figure. Default = 11
2. wd The width of the figure. Default = 6.5
3. Rymax The maximum value of the y axis for the recruit biomass panel Default =

missing and is calculated from data

1. Bymax The maximum value of the y axis for the fully recruited biomass panel

Default = missing and is calculated from data

1. TAC The TAC to use. Missing by default and the catch for the final year of

interest is used.

1. pred The number of prediction years to include. Default =1, the code only

supports 1 or 2.

1. kt Is the biomass plot in kilo-tonnes. T/F and default = T
2. refs The reference points of interest. Default = c("URP","LRP","zones") which

plots a line for the Upper and lower reference points and color codes the zones. If you don't want reference points set this to NULL. If URP2 or LRP2 is included this will draw secondary reference points at the value indicated by URP2 and LRP2.

1. index The years you want to use to specify LRP and URP Only used if either

URP or LRP is not specified. For example putting this as 4:15 will use years 4-15 to calculate the URP and LRP (if they are not otherwise specified)

1. URP The upper stock reference point.Missing by default which will set it to

80% of median biomass over the years specified by index.

1. LRP The lower stock reference point.Missing by default which will set it to

30% of median biomass over the years specified by index.

1. URP2 A secondary URP to specify. This will be added as a line to the plot if

"URP2" is included in "refs" above. Default = NULL

1. LRP2 A secondary LRP to specify. This will be added as a line to the plot if

"LRP2" is included in "refs" above. Default = NULL

1. out.data2 A secondary set of data. Missing by default and not sure it's purpose but

will plot instead of the recruits if specified.

1. lab A label to add to the figure name, only useful if making a pdf figure.
2. alpha The Credible intervals to use. Default = c(0.05,0.2). The first term is used

for the CI lines on the figure and creates 95% confidence intervals. The

second term defines the whiskers for the box plot, 0.2 gives an "80%"

boxplot.

1. path The path to save the figure if making a pdf. Default = blank and will plot

to the current R directory...