

# Custom Charts

# Custom charts

Custom charts allow you to examine and statistically analyse multiple results within and between runs, compare results to external data sources and automatically update with the latest results each time a model is run. Whenever you want to compare two or more results, you need to create a custom chart.

## Creating custom charts

A custom chart comparing Results A and B can be created using one of two methods:

1. Right click on Result A and choose **Add to Custom chart » New Custom chart** from the contextual menu. This will create a new custom chart in the panel below (named **Custom Chart #2** for example); and
2. Right click Result B and choose **Add to Custom chart » Custom chart #2**.

OR

1. Click on the result in the tree menu to display Result A in the chart tab; and
2. Then, Ctrl-click on Result B.

Additional results can be added to a custom chart by repeating the second step of either of these methods. There is no limit to the number of results that can be added to a custom chart, but only time series data can be added to custom charts. Note that if a custom chart is active when you Ctrl-click on a result, the result will be added to that custom chart. Otherwise, a new custom chart will be created. Ctrl-clicking on a result that is already in a custom chart will delete it.

**Note:** if you add a result from the **Latest Run** result set to a custom chart, the custom chart will update that result whenever you next run a scenario, including in a subsequent Source session.

## Custom chart features

The view tabs in a custom chart differ from those of a single result as summarised below.

- **Chart tab** - each result is displayed in the chart and listed in the legend next to its colour, along with a checkbox, which can be toggled off to hide the result. When a custom chart is created, additional chart types become available for comparing results to each other, e.g. difference, double mass, and scatter plots. Refer to [Charts](#) and [Chart Types](#).
- **Table tab** - each result is displayed in its own column relative to a date column that covers the date range for all of the data combined.
- **Transforms tab** - if you apply a transform to a custom chart it is applied to all results in the custom chart. Refer to [data manipulation](#).
- **Data tab** - this tab only exists in a custom chart. It displays the results that have been added to the custom chart in the tree menu in the panel on the left of the Results Manager window.
- **Statistics tab** - in addition to univariate statistics, bivariate statistics are displayed. By default the statistics are calculated for the overlapping date range between all results in the custom chart. Refer to [Chart Statistics](#).

Custom charts are automatically saved when you save your project. This will save which results are in your custom chart along with the transforms you have applied, the chart type, and any other options you have configured (eg. [short header](#) in Tables). However, results themselves are *not* saved unless you choose to [save the run\(s\)](#) that generated the results. When you next open your project, the custom chart will be empty until a result is generated that exactly matches the name of a result used in the custom chart, ie. the scenario name *and* run number have to match, so you need to run the scenarios in the same order. If results from Latest Run are used to generate a custom chart, it will be populated as soon as you run any scenario. Therefore, if you want to return to an analysis in a custom chart after closing a project, it is best to use either results from Latest Run or to save the run in the project.

**Note:** Results Manager settings (including custom charts) are saved with the Source project.