

09 What-if Scenario Display

Note: This legacy what-if functionality will be obsolete from 2023.01. It is replaced by the new [what-if templates](#) based functionality which is integrated in the IFD.

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What-if Scenario Display

The What-if Scenario display allows for the definition of What-if Scenarios. The What-if Scenarios can be used, when running forecasts via the Manual Forecast display. The latter allows for selection of What-if Scenarios defined in the What-if Scenario display.

In order to define a What-if Scenario, the button [Add New Scenario] should be pressed. Next a name or ID for the new what-if scenario must be entered in the "Scenario Name" field; it is advised to use a short name. When running a What-if Scenario, the name of this scenario will be added to the forecast name. The scenario can also have a description, this can be used to enter more information on the newly added scenario.

Four types of What-if Scenarios can be defined:

- a transformation of an input time series
- the use of a user defined typical profile
- the use of a complete alternative module dataset
- the use of an alternative subset of module parameters

What-if-Scenario Editor

Scenario Name : Scenario 2A Add New Scenario

Scenario description : Rainfall Input Scenarios (2A): No further rain Copy Selected Scenario As

Save Selected Scenario

1: Transformation 2: User Defined Profile 3: Module Data Set File/Version 4: Module Parameter File/Version

Select Input Variable Select Location Choose Operator Enter Change

Radar_Actuals All Locations add 0.0 Add to List

List of Transformations

InputVariable	Location	Operator	Change	Include in WhatifScenario
NVP_Forecast (Precipitation Forecast (NVP))	All Locations	equal to Missing	-9999.0	<input checked="" type="checkbox"/> included
Radar_Forecast (Precipitation Forecast (Radar))	All Locations	equal to Missing	-9999.0	<input checked="" type="checkbox"/> included

Edit Visibility Import All Export All Save All Close Help

Transformation

In the field *Select Input Variable* , an input time series can be selected from a drop-down list for transformation.

In the next step, the user has to choose whether to apply the transformation to a single location or all locations for which the selected transformation variable is available.

Finally, the transformation itself is defined by selecting a mathematical operator and a value in the *Choose Operator* and *Enter Change* fields. The following operators can be entered: add, subtract, divide, multiply. Also a constant value can be entered and a time shift.

By pressing [Add to list], the transformation is added to the What-if Scenario and appears in the table at the bottom of the tab. A number of transformations can be defined within a single What-if Scenario by repeating the sequence described above.

With [Save All], What-if Scenarios are stored in the database. In the Live System, What-if Scenarios are stored in the Central Database and may be used by others. After saving therefore, a What-if Scenario can not be edited or deleted by a regular user.

The buttons [Import All] and [Export All] allow saving and retrieving of sets of what-if scenarios when the local data store is renewed. The display can be left with [Close].

What-if Scenarios can be run via the Manual Forecast Display.

User Defined Profile

In the User Defined Profile Tab, the user can define a user defined profile that may be used that as an input time series for a workflow. To add a user defined profile the data should be entered in a table. First press the [Add New Scenario] button to start a new What-if scenario.

Scenario Id :

Typical Profile Allenheads

Scenario description :

Typical Profile Allenheads

Add New Scenario

Copy Selected Scenario As

Save Selected Scenario

Transformation

User Defined Profile

Module Data Set File/Version

Module Parameter File/Version

Select Input Variable

Precipitation_gauges

Select Location

Allenheads

Edit Table

Add to List ..

List of Transformations

InputVariable	Location	Profile	Include in WhatifSce...
Precipitation_gauges at Allenheads (Observe)	Allenheads	View ..	<input checked="" type="checkbox"/> included

Import All

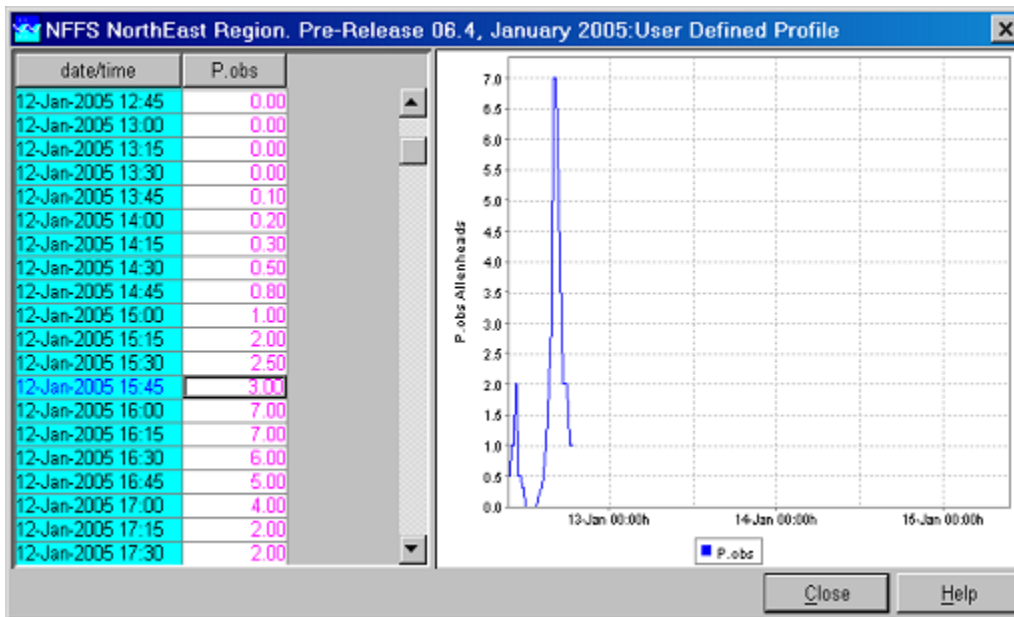
Export All

Save All

Close

Help

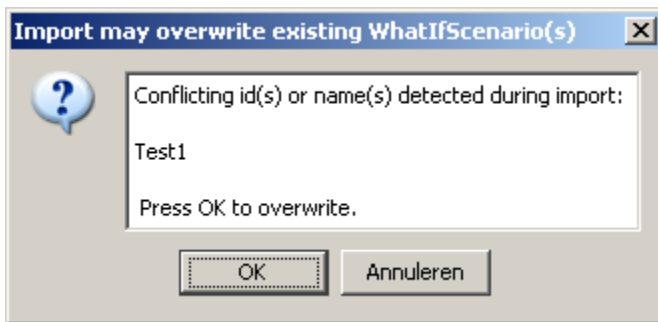
Select the "User Defined Profile" and select the input variable and location where the typical profile will be defined for. Now the values of the user defined profile must be entered in the data store through the special table editor, press the [Edit Table] button.



The table includes a spreadsheet and a graph showing the entered values. Values can also be copied from other programs like Microsoft Excel by using the [CTRL+C] keys. When all data is entered, press the [Close] button.

By pressing [Add to list], the user defined profile is added to the What-if Scenario and appears in the table at the bottom of the tab. A number of profiles can be defined within a single What-if Scenario by repeating the sequence described above.

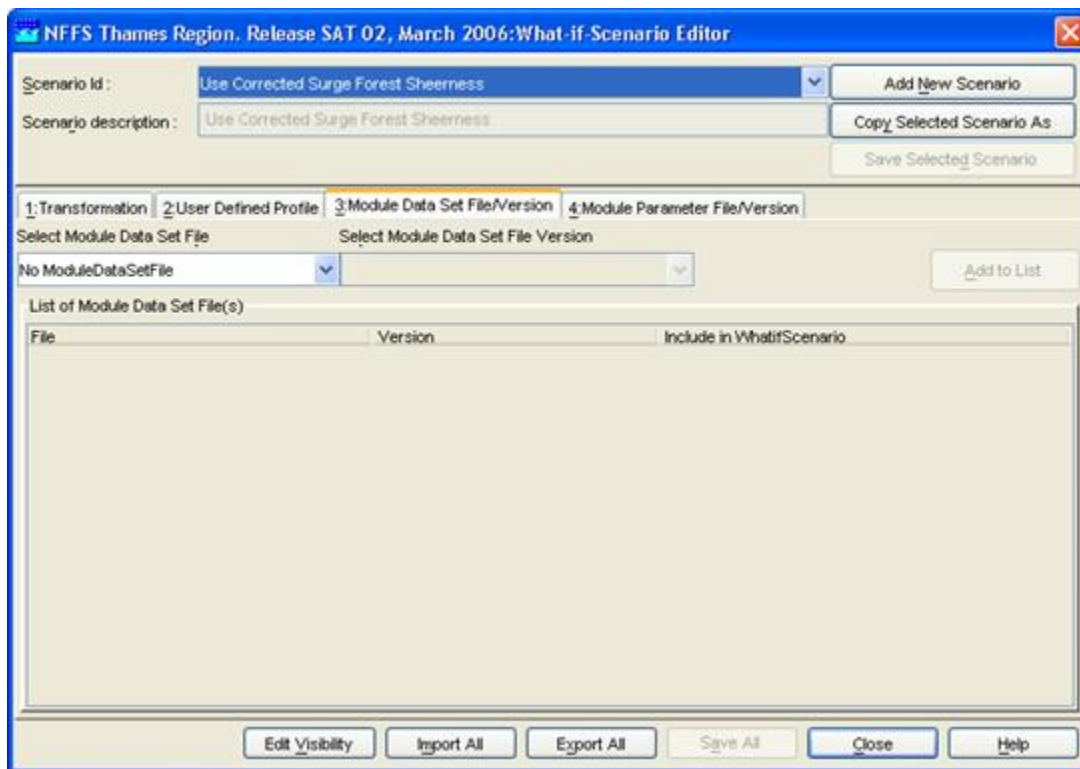
The buttons [Import All], [Export All], [Save All] and [Close] function similar as described in the section above. The import button is only enabled when all new scenarios have been saved. In case during the import a conflicting whatif scenario is encountered that has different settings a confirmation screen may be prompted to deal with this situation.



Module Data Sets and Module Parameters

This tab allows the user to select alternative module datasets. The general usage of this type of What-if scenario is similar to the previous types.

Via the fields *Select Module Data Set File* and *Select Module Data Set File Version* , an alternative module data set can be selected. When an Operator Client is used an alternative module data set should first be loaded in the FEWS data base through the Configuration Management. When a Stand Alone system is used an alternative module data set can also be located in the "\config\ModuleDataSetFiles" directory. The selected alternative module Data Set is actually added to the What-if Scenario by pressing [Add to List...]. This action can be repeated when required to add an additional alternative Module Data sets to the list.



Similarly, alternative Module Parameters can be selected via the Module Parameter tab. In this case the fields *Select Module Parameter File* and *Select Module Parameter File Version* must be used.

Buttons

The buttons [Import All], [Export All], [Save All] and [Close] apply in the same way as described above.

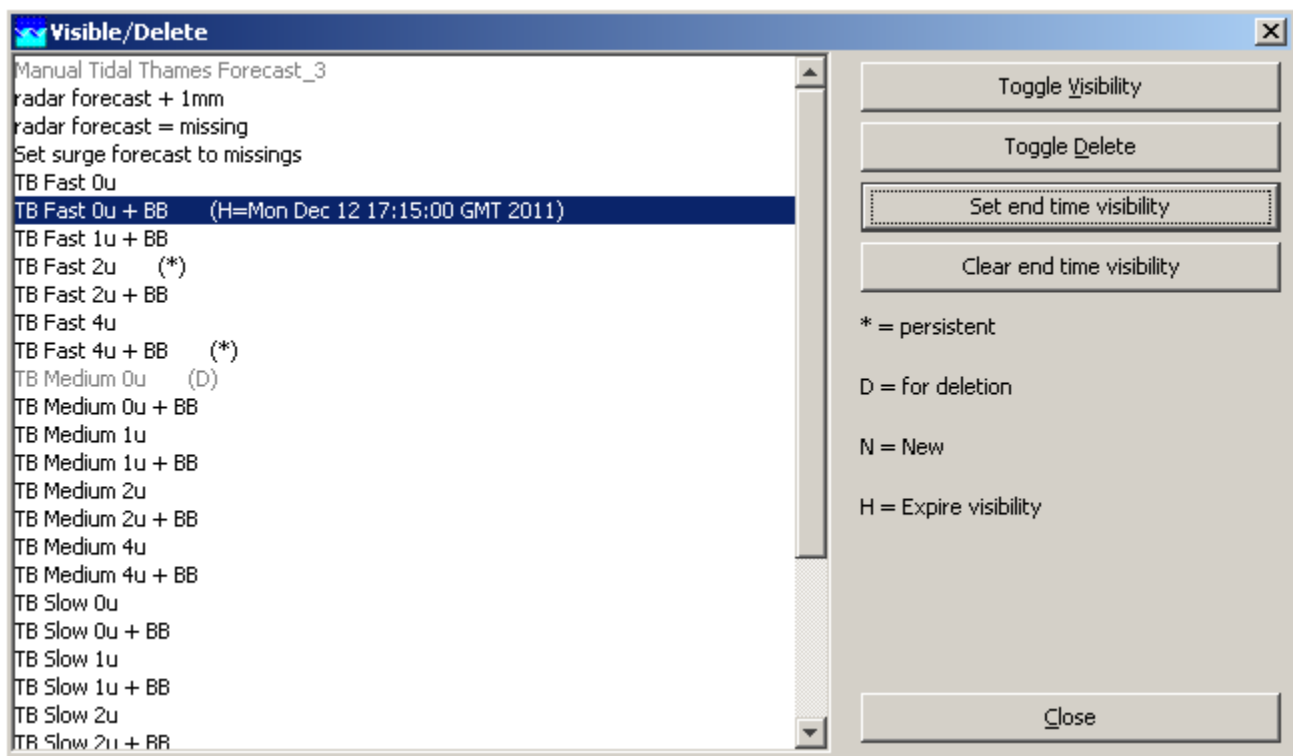
Edit Visibility button

The number of What-if Scenarios in the system can become quite large. To limit the number of visible What-if Scenarios each scenario may either be deleted or made invisible to all users.

Click the [Edit Visibility] button to edit the visibility of the What-if Scenarios in the system or delete them.

- [Toggle Visible] make the selected what-if scenario invisible to users and as it can not be used when running forecasts. Note that a what-if scenario, which has been made invisible, is invisible to *all* users. When made invisible, the what-if scenario name is greyed out.
- [Toggle Delete] permanent deletes what-if scenarios from the system. These scenario are marked with (D) when the display is still open.

What-if Scenarios marked with an asterix (*) are persistent, indicating that they both can not be deleted or made invisible. The visibility can be set to expiry by selecting a number of items and then selecting an expiry time.



Import All

With [Import All] you can import what-if scenarios from file.

Export All

With [Export All] you can export what-if scenarios to file.