

# 04 Static Configuration

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## Adding static data, configure the FEWS static configuration files

The first configuration steps will be to store your data in the correct configuration files. When adding data to the configuration files some order must be followed:

- Configure map layers,
- Configure parameters,
- Configure locations.

### Map layers

The FEWS explorer contains a component to show map layers. These map layers are loaded by the FEWS explorer when the FEWS application is started. The location of the map layers is the "vmap" directory of the application. As of the 2007-1 release the maplayers are now put in the Config/MapLayerFiles directory. As such they can now be uploaded with the Config manager and distributed to all the connected clients. When using map layers make sure the files are ArcView Shape files and that the co-ordinate system of the shape files are the same. For information on how to configure the MapLayers see the [FEWS Explorer component documentation](#).

### Parameters

Parameters are stored in the "Parameters" XML file, located in the regional configuration files. Make sure you keep the number of parameters limited to a basic set, the more parameters you use the more complicated the configuration will become. An important property of a parameter or parameter group is the unit. Use the same unit for a parameter group; this can minimise errors in configurations where conversions between time series may introduce errors. Remember that the FEWS can convert units when importing or exporting external time series. More on configuring parameters can be found in paragraph 5.4: "Parameters".

### Locations

The Locations configuration file contains the information on all locations of the FEWS application. In a normal FEWS you will have a set of meteorological stations and hydrological stations. You can also add basins as locations. In this case you must enter the same information as for a location, you just treat it as a basin.

When adding locations to the system a location ID must be entered. Try using known location ID's, for example the same ID's as used in the telemetry system. Configuration of locations is explained in chapter 5.2.

Location Sets are introduced in the FEWS to define logical groups of locations. During configuration of the FEWS locations file try to add the new locations also to the correct location sets. More on configuring location sets can be found in paragraph 5.3: "Location Sets".

Grids, Polygons and Longitudinal Profiles also require a location to be configured in the Locations XML file. Grids and Longitudinal Profiles require extra information, configured in the grids and branches configurations respectively.

Configuration of the location icons is done in the "LocationIcons" XML file located in the FEWS system configuration files, see chapter 4.5: "Location Icons".

### First Prototype

In principal all basic regional information has now been configured and we can start our first prototype. Three more files must be configured to start our first prototype:

- "Explorer" XML file, located in the FEWS system configuration files directory. Enter correct names, co-ordinate system selection, etc.. See chapter 4.2 for details about configuring the FEWS explorer configuration file.
- "global.properties" ASCII file, located in the FEWS application root directory. This file must contain some global properties like the regional directory.
- "LogConfig" XML file, located in the FEWS application root directory. The correct location of the 'log.txt' file (the FEWS debug log file) must be configured in this file.

We are now ready to launch our first prototype by running the NewFEWS executable located in the 'bin' directory.

DELFT FEWS so far only includes the following configuration files:

- RegionConfigFiles

- Locations 1.00 default.xml
- LocationSets 1.00 default.xml
- Parameters 1.00 default.xml
- SystemConfigFiles
- DisplayDescriptors 1.00 default.xml (not edited)
- DisplayInstanceDescriptors 1.00 default.xml (not edited)
- Explorer 1.00 default.xml
- LocationIcons 1.00 default.xml
- ModuleDescriptors 1.00 default.xml (not edited)

## Adding Workflows and Module Instances

The final task in setting up a basic forecasting system is configuring the workflows that perform the actual forecasting steps.

### Workflows

A detailed description of workflows is given in chapter 7. In our test we will add four workflows; an Import workflow, an Interpolation workflow, a Model workflow and a Report workflow. Each of these workflows will include one or several module instances. Workflow files are added in the workflows directory and a descriptor of the workflow must be added to the "WorkflowDescriptors" XML file located in the regional configuration directory.

### Module Instances

Module instances are the actual configured FEWS modules, included in a workflow that do the forecasting tasks. When adding Module Instance to the FEWS the XML configuration file must be added to the "ModuleConfigFiles" directory and the id of the Module Instance must be added to the "ModuleInstanceDescriptors" XML file located in the regional configuration files.

Some Modules require additional configuration files to be added to the system beside the standard Module Instance configuration file. The import module for example can include configuration files that;

- Convert units of time series to FEWS units
- Convert data flags from time series values to FEWS standard flags
- Change the ID's of locations and parameters to FEWS id's

## Configuring FEWS displays

After making the workflows the FEWS displays must be configured in order to see the data that is stored in the FEWS database.

The most important configuration file is the "filters" XML file located in the regional configuration directory. The filters configuration file defines the locations and parameters that are displayed on the main map and in the list boxes of the FEWS explorer. Filters preferably include the parameters and location sets; a good configuration of location sets can reduce the number of filters that need to be configured.

The FEWS displays that can be configured for making graphs are:

- DisplayGroups 1.00 default.xml
- TimeSeriesDisplayConfig 1.00 default.xml

These files are located in the FEWS System Configuration files.

There are two FEWS components not included in the workflows that can be configured to show additional information on the time series. These are the threshold and validation components of the FEWS. It is not required to use these files, they will however add additional information to the FEWS.