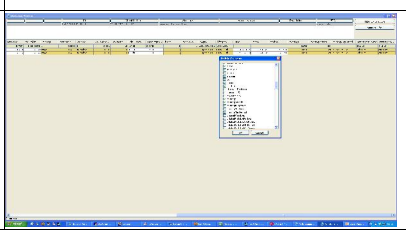
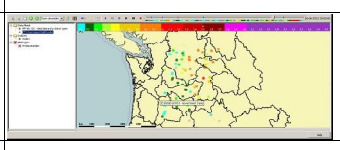
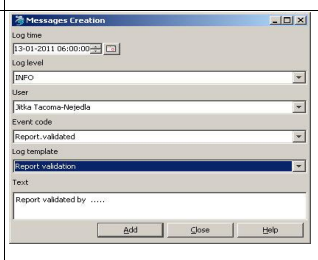
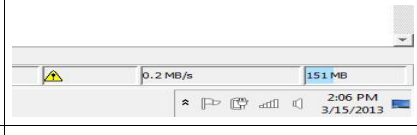
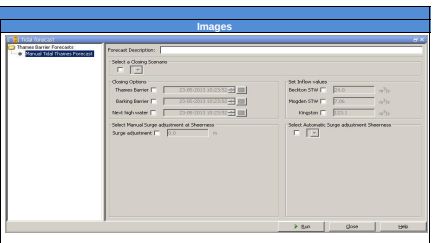
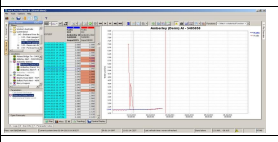
Component/s	Issue Type	Key	Summary	Release Note Text	Release Note Text Description	Config Example	Images
App - Admin Web User Interface	Improvement	FEWS-8237	Please extend the list of synchlevels to be synchronised between two MC by the MC-synchronisation task	Added custom synch levels for timeseries for MC_Synchronisation task (up to 35)	Added custom synch levels for timeseries for MC_Synchronisation task. properties in Admin Interface so 20-35 can all be selected. This will alow users to use higher synchlevel numbers in their configuration when they can't make use of the default synchlevels	Not applicable	
App - Admin Web User Interface, Database	New Feature	FEWS-8214	fb 908: analyzing db sizes catll rfc's and preparing queries and checks for them				
App - Data Import Module (DIM)	New Feature	FEWS-7972	FEWS DeltaModel : Import of NHI data in FEWS				
App - Launcher Gui	New Feature	FEWS-8106	Extension of the flexibility in customizing the fews launcher application	Extending customization of the fews launcher application	Added options to configure: -Skipping the launcher login window -Custom labels in the launcher window for all visible text		
App - Master Controller Server	Improvement	FEWS-7077	Automate MC Unit Tests so they can run on TeamCity				
App - Mobile (HTML5)	New Feature	FEWS-8458	FC2012: create Pumpstatus and TrackRecords apps	Three HTML5-based mobile apps for data entry in Delft-FEWS	Field information is of essential value for operational water management systems, be it flood early warning systems or water information systems. Three mobile apps have been developed that each have a specific way to add data and information to a Delft-FEWS based operational system: **Pump Status App** Especially in developing countries, control structures are not necessarily connected to a central SCADA system. With this app a pump operator can simply press a button on a GUI to notify that a pump has been switched on or off. The GUI shows the last know status for all pumps, per pumping station.		
App - Mobile (HTML5)	New Feature	FEWS-8458	FC2012: create Pumpstatus and TrackRecords apps	Three HTML5-based mobile apps for data entry in Delft-FEWS	**Flood Tracking App** During, but also in the aftermath of floods, information on the flood extent is essential. With this app, people in flooded areas can pass on their situation. Every notification contains the location, a depth value and additional comments. The total of notifications show the actual flood extent. **Data Entry App** This app is helpfull for manually adding simple time series, such as daily precipitation or hourly water levels, to an operational system. When opened, the user can select a location and parameter. The app then shows the latest know data in a table, which the user can edit or extent.		
	New Feature as subtask	FEWS-8802	FEWS-8709 Permissions/userGroups: add form to toggle active/passive membership of a user group (D39)	Switching the permission on/off in the GUI	The user can switch his or her permission on/off in the a popup dialog (see example in the attachment) The popup can be opened from the FewsExplorer, menu Options -> Permissions. Note that this Permissions menu is only available if there are any permissions configured. The dialog shows all configured permissions, but only the permissions allowed for the current user can be switched on/off.	In the example below we have configured the permissions for two functions, and we have configured the users that have these permissions. Presently the permissions have only id's and no descriptions, but we can use meaningfull id's. For example the user "hydrologist" can (temporary) switch off his permission to edit labels. However the user "millg1" cannot do that since he has no permission at all to edit labels.	
App - Operator Client Gui					When the user confirms the changes, the FewsEplorer is reloaded to activate the new settings. The permissions, that are switched off, are written in the User_settings.ini file, with "DisabledPermissions" as subject and the user name. If we want that Fews starts by default with some permission off for certain user, we can enter the section "DisabledPermissions" in User_settings.ini by hand, for example : [DisabledPermissions tacoma] import permission=false allow value edit=false	**Permissions.xml:** <permission id="Allow ManualForecast"> <userGroup id="Beheerder_alle_gegevens"/> <userGroup id="Meetnet_waterketen"/> </permission> <permission id="Allow editting labels"> <userGroup id="Beheerder_alle_gegevens"/> <userGroup id="Meetnet_waterkwaliteit"/> </permission> **UserGroups.xml:** <userGroup id="Beheerder_alle_gegevens"> <user id="hydrologist"/> <user id="kuijper_mn"/> <user id="valea1"/> <user id="metzr1"/> </userGroup> <userGroup id="Meetnet_waterketen"> <user id="millg1"/> <user id="valea1"/> <user id="metzr1"/> </userGroup> <userGroup id="Meetnet_waterkwaliteit"> <user id="luerf1"/> </userGroup>	
App - Operator Client Gui	New Feature as subtask	FEWS-8710	FEWS-8804 BoM: Add Australian time zones (D7)	Australian time zones	**Overview of implemented Australian time zones**. The list shows: time zone Id, winter/summer offset and the winter/summer display name, description and associated region ACT: winter GMT+9:30 ACST, summer GMT+10:30 ACDT, Australian Central Standard Time (South Australia) AET: winter GMT+10 AEST, summer GMT+11 AEDT, Australian Eastern Standard Time (New South Wales, Victoria, Tasmania) AWT: winter and summer GMT+8 AWST, Australian Western Standard Time (Western Australia) ACST: winter and summer GMT+9:30 ACST, Australian Central Standard Time (Northern Territory) AEST: winter and summer GMT+10 AEST, Australian Eastern Standard Time (Queensland) Time zone Id should be used in configuration files, and is also visible in the drop-down list with time zones in FewsExplorer Display name is used for formatting of the date/time string. For example, AET shows in winter 13.06.2013 AEST , and in summer 13.01.2013 AEDT (AEDT = Australian Eastern Daylight Time)		
App - Operator Client Gui	New Feature	FEWS-8680	Display permission-role in UI (i.e. Forecaster or Tribune for RWsOS)	Added display of first occurring usergroup after username in statusbar.			
App - Operator Client Gui, Plugin - Gui - Time Series	New Feature as subtask	FEWS-8625	FEWS-8617 Add DINO and UMAquo file format to list of export formats in TSD file export and explorer file export	Added DINO and UMAquo file format to export formats in Time Series Display and explorer file export			
App - Operator Client Gui, Plugin - Gui - Time Series	New Feature as subtask	FEWS-8624	FEWS-8617 Add flagSource to PI-XML and CSV export files (in export from TSD and File menu)				
App - Operator Client Gui	New Feature	FEWS-7292	Include patch creating mechanisme in build server				
App - TeamCity	New Feature	FEWS-8659	Automatically create a patch with each new stable build being produced on Team City				
Configuration	New Feature as subtask	FEWS-8152	FEWS-8475 Existing Xsd Schemas should be improved with constraints so that uniqueness is enforced and duplicate ids are no longer allowed in validation within XMLSpy.			<schema xmlns:fews="http://www.wldelft.nl/fews" xmlns="http://www.w3.org/2001/XMLSchema" targetNamespace="http://www.wldelft.nl/fews" elementFormDefault="qualified" attributeFormDefault="unqualified" version="1.0"> <include schemaLocation="sharedTypes.xsd"/> <element name="locations" type="fews:LocationsComplexType"> <key name="uniqueId"> <selector xpath="fews:location"/> <field xpath="@id"/> </key> </element> ... <location id="Nederland" name="Nederland"> <description>polygon dummy</description> <shortName>polygon dummy</shortName> <x>0</x> <y>0</y> <z>0.0000</z> </location> <location id="Nederland" name="Nederland"> <description>polygon dummy</description> <shortName>polygon dummy</shortName> <x>0</x> <y>0</y> <z>0.0000</z> </location>	
Configuration	Improvement	FEWS-8911	Dump file explosion when dump file destination is included in dump file source dirs				
Data Access Component, System - PI Service	New Feature	FEWS-8246	Implement FewsPiService that interacts with DataAccessComponent				
Data Access Component	New Feature as subtask	FEWS-7380	FEWS-7378 Possibility to write ImportStatus information to file				
Database	New Feature as subtask	FEWS-7381	FEWS-7378 Create a minimal FEWS bin/				
Database	Improvement	FEWS-8291	add some safeguard against Foreign Key constraints occuring when using a very old what-if scenario, which was previously not synched to FSS		When starting a task using the ManualForecastDialog with a WhatIfScenario, the whatIfScenario will be modified so that it will be uploaded to the Forecasting Shell.		
Database, Plugin - Gui - Grid Display, Plugin - Gui - Map	New Feature as subtask	FEWS-8728	FEWS-5586 DEM Layer				
Database, Plugin - Gui - Grid Display	New Feature as subtask	FEWS-8719	FEWS-5586 DEM Pre-Tiling tool				
Database	New Feature as subtask	FEWS-8714	FEWS-8709 Use CSV file with location attribute information instead of dbf file				
Database, Plugin - Gui - Time Series	Improvement as subtask	FEWS-8599	FEWS-7855 Thinning data when reading large amounts of data				
Database, Plugin - Gui - Map	Improvement	FEWS-8206	No longer auto generate missing shp/sll/dbz files. Allow dbf without shp/sll. Allow uploading shp file				
Database	New Feature	FEWS-8203	Something to store and visualize distributions (e.g. dropsize distributions of a disdro meter)				
Database, Plugin - Gui - Time Series	Improvement as subtask	FEWS-8138	FEWS-7855 voorkom java heapspaces met te grote timeseriesSets van scalars, samples etc				
Database	New Feature as subtask	FEWS-7379	FEWS-7378 On-the-fly creation of parameters/locations/timeseriessets				
Debug Tool - Database Viewer	New Feature as subtask	FEWS-8678	FEWS-8617 Option to use 'template' to store/open column settings in database viewer				
Debug Tool - Database Viewer	New Feature as subtask	FEWS-7758	FEWS-8617 Uitbreiding van statistiek info in database viewer.	Statistical Columns added to the Database Viewer	A new set of (on-the-fly calculated) columns have been added to the Database Viewer. This functionality enables the user for direct (on-the-fly) assessment of timeseries statistics. To maintain the overview, the user can dynamically store the columns which have been selected. The new columns focus on * basic statistics: sum, mean, median, percentiles, standard deviation * missings (number, number of periods, average period minimum period, maximum period) * original/reliables (number, number of periods, average period minimum period, maximum period) * corrected/reliables (number, number of periods, average period minimum period, maximum period) * completed/reliables (number, number of periods, average period minimum period, maximum period) * original/doubtfuls (number, number of periods, average period minimum period, maximum period)		

Component/s	Issue Type	Key	Summary	Release Note Text	Release Note Text Description	Config Example	Images
					* corrected/unreliables (number, number of periods, average period minimum period, maximum period) * completed/unreliables (number, number of periods, average period minimum period, maximum period) * soft minimums (number, number of periods, average period minimum period, maximum period) * soft maximums (number, number of periods, average period minimum period, maximum period) * hard minimums (number, number of periods, average period minimum period, maximum period) * hard maximums (number, number of periods, average period minimum period, maximum period) * same readings (number, number of periods, average period minimum period, maximum period) * rate of change (number, number of periods, average period minimum period, maximum period) * temporary shift (number, number of periods, average period minimum period, maximum period) * seriesComparison (number, number of periods, average period minimum period, maximum period) * flagComparison (number, number of periods, average period minimum period, maximum period) * spatialHomogenity (number, number of periods, average period		
Module - PRTF	Improvement	FEWS-8477	PRTF GUI currently reads 4 identical PRTF ini files when obtaining information from ModuleDataSetzip file				
Module Adapter - All	New Feature	FEWS-8636	Implementatie van Bretschneider model in FEWS	Brettschneider model	Brettschneider algorithm computes wave height and wave peak period, using wind speed, water depth and and fetch length. Brettschneider model is a Java module that uses input parameters, stored as scalar timeseries in PI file format, to compute the output parameters, delivered also as scalar timeseries in PI file format. The model requires the following parameters (names and units): Input parameters - WindDirection in degrees - WindSpeed in m/s Output parameters - WaveHeight in m - PeakPeriod in second The model uses WindDirection to find the corresponding water depth and fetch length in the lookup database. The lookup database is currently a csv file available, with water depth (m) and fetch length (m) per location and several wind directions. The lookup database is located in the Brettschneider model directory.	**Example pi-run.xml:** <?xml version="1.0" encoding="UTF-8"?> <Run xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.wldelft.nl/fews/PI" xsi:schemaLocation="http://www.wldelft.nl/fews/PI http://fews.wldelft.nl/schemas/version1.0/pi-schemas/pi_run.xsd" version="1.8"> <logLevel>debug</logLevel> <timeZone>0.0</timeZone> <startDateTime date="2013-01-21" time="00:00:00"/> <endDateTime date="2013-01-25" time="00:00:00"/> <time0 date="2013-01-21" time="00:00:00"/> <lastObservationDateTime date="2013-01-25" time="00:00:00"/> <workDir>D:\Fews\ConfigExample\Modules\brettschneider\work</workDir> <inputTimeSeriesFile>D:\Fews\ConfigExample\Modules\brettschneider\input\input.xml</inputTimeSeriesFile> <outputDiagnosticFile>D:\Fews\ConfigExample\Modules\brettschneider\output\diagnostics.xml</outputDiagnosticFile> <outputTimeSeriesFile>D:\Fews\ConfigExample\Modules\brettschneider\output\output.xml</outputTimeSeriesFile> </Run>	
					To run the Brettschneider model, use the class: nl.deltares.brettschneider.ApplicationBrettschneider and the argument: pi-run.xml In pi-run.xml are all PI input and output files specified, and some other information to run the model. Before running, the Brettschneider model requires that the PI output file is available and contains the headers of the output timeseries. In this way the model knows which timeseries should be computed. If we start the model from Fews GeneralAdapter, we should use the option <exportPlaceholderFile>true</exportPlaceholderFile> and the GeneralAdapter takes care for writing the headers of output timeseries to the output file. REMARKS: - the Brettschneider algorithm can be found in attached Bretschneider.f90. This fortran code has been ported to Java - English term 'fetch length' is 'strijklengte'	Example lookup database : omschrijving,x,y,windrichting,bodemniveau,strijklengte Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,22.5,-3,349 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,45,-0.5,383 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,67.5,-3,318 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,90,-3,143 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,112.5,-3,56 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,135,-3,66 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,157.5,-3,103 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,180,-3,208 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,202.5,-3,274 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,225,-3,270 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,247.5,-3,205 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,270,-3,90 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,292.5,-3,51 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,315,0,0 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,337.5,-3,58 Dkr 53 Zwolle_Ussel_kanaal Locatie 1,200944,503472,360,-3,210 Dkr 53 Zwolle_Ussel_kanaal Locatie 2,201082,503638,22.5,-1.52,381 Dkr 53 Zwolle_Ussel_kanaal Locatie 2,201082,503638,45,-0.08,478 Dkr 53 Zwolle_Ussel_kanaal Locatie 2,201082,503638,67.5,-2.99,441	
Module Adapter - All	New Feature as subtask	FEWS-8723	FEWS-5586 3Di - FEWS Adapter (Regular)				
Module Adapter - All	New Feature as subtask	FEWS-8584	FEWS-8583 Delft-FEWS Wanda Adapter				
Module Adapter - All	Improvement	FEWS-4536	Adapter Reference Implementation (FEWS_and_MyModel.zip)				
Plugin - Gui - Grid Display	Improvement as subtask	FEWS-8160	FEWS-6151 Bar legend and North Arrow are overlapping	Positioning of North Arrow and Scale Bar in the map	Choose from: topLeft, bottomLeft, topRight, bottomRight	Example of the positioning. Use in GridDisplay.xml and Explorer.xml <scaleBar position="bottomLeft"/> <northArrow position="topLeft"/>	
Plugin - Gui - Grid Display	New Feature as subtask	FEWS-8729	FEWS-5586 3Di: on the fly computation of velocity in spatial display	Added quadtreeSubgridVelocitiesLayer to GridDisplay to visualize velocities on subgrid level	To use this, need to configure a quadtreeWaterLevelsLayer, a quadtreeSubgridVelocitiesLayer and a corresponding local datum reference layer in the GridDisplay config. QuadtreeWaterLevelsLayer: Use this option to display water level data that is defined on a quadtree grid. The waterlevels will be shown using the colours configured in the classBreaks. This only works if a local datum reference layer (e.g. coverageTileArchiveLayer) has been defined in the corresponding geoMap with digital elevation model (DEM) data. QuadtreeSubgridVelocitiesLayer: Use this option to display flow velocity data that is defined on the flow links of a quadtree grid. The specified timeSeriesSet should contain speed values normal to the quadtree cell faces for each flowlink. A flowlink is the "connection" between two adjacent quadtree cells. This only works if the specified flow velocity data comes from the same quadtree grid as the corresponding quadtreeWaterLevelsLayer and if a local datum reference layer (e.g. coverageTileArchiveLayer) has been defined in the corresponding geoMap with digital elevation model (DEM) data. The velocities within the quadtree cells are computed from the velocities on the flowlinks using the subgrid method (see the paper "Quadtree flood simulations with sub-grid digital elevation models" by Guus S. Stelling that is available from http://www.3di.nu/wp-content/uploads/2013/02/Stelling_ice_2012.pdf). The velocities are shown using arrows that use the symbolSizes configured in the arrowClassBreaks.	<gridPlot id="testgebiedje WF Enkhuizen - test Subgrid Snelheden"> <quadtreeWaterLevelsLayer> <timeSeriesSet> <moduleInstanceId>3Di_Update</moduleInstanceId> <valueType>grid</valueType> <parameterId>H.sim.hist</parameterId> <locationId>3Di_test_wf</locationId> <timeSeriesType>simulated historical</timeSeriesType> <timeStep unit="minute" multiplier="1"/> <readWriteMode>read complete forecast</readWriteMode> </timeSeriesSet> </quadtreeWaterLevelsLayer> <quadtreeSubgridVelocitiesLayer> <timeSeriesSet> <moduleInstanceId>3Di_Update</moduleInstanceId> <valueType>grid</valueType> <parameterId>speed_normal.sim.hist</parameterId> <locationId>3Di_test_wf_flow_links</locationId> <timeSeriesType>simulated historical</timeSeriesType> <timeStep unit="minute" multiplier="1"/> <readWriteMode>read complete forecast</readWriteMode> </timeSeriesSet> </quadtreeSubgridVelocitiesLayer> <!-- classBreaks for colours --> <classBreaks> <break lowerValue="0" color="light blue" opaquenessPercentage="25"/> <break lowerValue="1" color="blue" opaquenessPercentage="75"/> <break lowerValue="2" color="purple" opaquenessPercentage="75"/> </classBreaks>	
						<!-- classBreaks for arrows --> <arrowClassBreaks> <!-- here the colours are not used --> <break lowerValue="0" color="black" symbolSize="1" opaquenessPercentage="75"/> <break lowerValue="0.1" color="black" symbolSize="1" opaquenessPercentage="75"/> <break lowerValue="0.2" color="black" symbolSize="2" opaquenessPercentage="75"/> <break lowerValue="0.3" color="black" symbolSize="3" opaquenessPercentage="75"/> <break lowerValue="0.4" color="black" symbolSize="4" opaquenessPercentage="75"/> <break lowerValue="0.5" color="black" symbolSize="5" opaquenessPercentage="75"/> <break lowerValue="0.6" color="black" symbolSize="6"	
Plugin - Gui - Grid Display, Plugin - Gui - Time Series	New Feature as subtask	FEWS-8618	FEWS-8617 Save user settings in time series display (TSD) and grid display (spatial display)				
Plugin - Gui - Grid Display	New Feature as subtask	FEWS-8081	FEWS-5586 3Di: on the fly computation of water depths in spatial display				
Plugin - Gui - Grid Display	New Feature as subtask	FEWS-5370	FEWS-5586 3Di: nieuw datatype: grid++				
Plugin - Gui - Map	New Feature	FEWS-8692	Add tooltip containing MC Name/Description to MCid identifier in Explorer Statusbar	Added tooltip containing MC Name/Description to MCid identifier in Explorer and Config Manager Statusbar			
Plugin - Gui - System Monitor	Improvement as subtask	FEWS-8620	FEWS-7855 Hide/Unhide timeseries in TimeSeriesDialog				
Plugin - Gui - System Monitor	New Feature as subtask	FEWS-8588	FEWS-7855 Conditionele aggregatie example implementation spatial transformations				
Plugin - Gui - System Monitor	New Feature as subtask	FEWS-8586	FEWS-7855 Conditionele aggregatie voorbeeld implementatie temporele aggregatie				
Plugin - Gui - System Monitor	Improvement as subtask	FEWS-9024	FEWS-8769 System Monitor - when changing end time for creation log time it should not revert back to T0				
Plugin - Gui - System Monitor	New Feature as subtask	FEWS-8806	FEWS-6151 Extension BulletinBoardPlus: Add template details (predefined texts) to Bulletin Message	BulletinBoardPlus in SystemMonitor extended with template text and eventCode	The user can optionally configure default text for each message template. When the user selects a template in the popup, the template text appears in the message body. This default text can be changed or extended . The config element "msgTemplate " should be used to configure template text. Note that there is still een element "messageTemplate". It is deprecated, and in use only for backward compatibility of the existing configurations. The user can also configure one or more event codes, that can be selectedwhile creating a manual message. By default the message created in BulletinBoardPlus gets event code "Manual"	<bulletinBoardPlus> <tabName>Bulletin Board Plus</tabName> <msgTemplate id="Analysed by operator"/> <msgTemplate id="Phone line went dead"/> <msgTemplate id="Emergency advice requested"> <message>Call 123456789 for advice</message> </msgTemplate> <msgTemplate id="Report validation"> <message>Report validated by .....</message> </msgTemplate> <eventCode id="Report.validated"/> <eventCode id="Validation.confirmed"/> </bulletinBoardPlus>	
Plugin - Gui - System Monitor	New Feature as subtask	FEWS-8792	FEWS-6151 Extension BulletinBoardPlus: Using a TAG to add the content of a logMessage (based on event code) to a report	Report function LOGENTRY(<eventCode>)	This function provides the text of the most recent log message with the given event code. Any event code can be configured.	An example of usage in a HTML template: Index time: $LOGENTRY(Session.Created)$ An example of usage in a table that supports functions: <rowPerLocationHtmlTable id="tableA" tableStyle="tableStyle3" > <column> <header>test</header> <function>LOGENTRY(Session.Created)</function> </column> </rowPerLocationHtmlTable>	
Plugin - Gui - System Monitor	New Feature as subtask	FEWS-8597	FEWS-7855 Memory usage indicator in status bar		Added memory usage display in status bar		
Plugin - Gui - System Monitor	New Feature as subtask	FEWS-8589	FEWS-7855 Conditionele aggregatie implementatie voor spatial transformations adhv voorbeeld implementatie				
Plugin - Gui - System Monitor	New Feature as subtask	FEWS-8587	FEWS-7855 Conditionele aggregatie implementeren voor temporele aggregaties adhv voorbeeldimplementatie				
Plugin - Gui - System Monitor	Improvement as subtask	FEWS-8598	FEWS-7855 Progress bar data loading (read from database)				

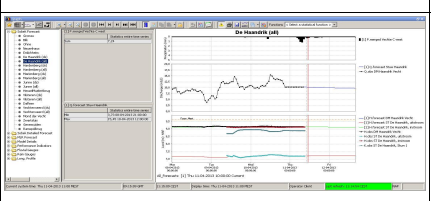
Component/s	Issue Type	Key	Summary	Release Note Text	Release Note Text Description	Config Example	Images

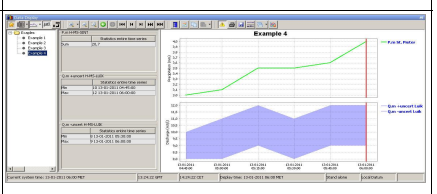
Plugin - Gui - TaskRunDialog	Improvement	FEWS-8128	Location of panels on Taskrundialog should be configurable	TaskRunDialog : positions of the panels on the OperatorTask page are configurable	By default, all panels on the OperatorTask page are aligned vertically.
					
					We can change the default position by specifying the row and the column for each panel.
					Row and column element are optional, however if we decide to change the default position,
					we must specify the row and the column for all panels on the specific OperatorTask page.
						This example creates a layout as shown in the picture LayoutWithRowColumnConfigured.jpg
						
						`<taskGroup name="Thames Barrier Forecasts">`
						`<operatorTask name="Manual Tidal Thames Forecast" workflowId="ISIS_TThames_Forecast">`
						
						`<panel name="Select a Closing Scenario" row="1" column="1">`
						`...`
						`</panel>`
						
						`<panel name="Closing Options" row="2" column="1">`
						`...`
						`</panel>`
						
						`<panel name="Select Manual Surge adjustment at Sheerness" row="3" column="1">`
						`...`
						`</panel>`
						
						`<panel name="Select Automatic Surge adjustment Sheerness" row="3" column="2">`
						`...`
						`</panel>`
						
						`<panel name="Set Inflow values" row="2" column="2">`
						`...`
						`</panel>`
						`</operatorTask>`
						`</taskGroup>`
							

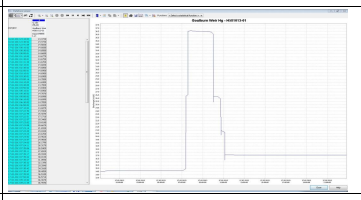
Plugin - Gui - Time Series	New Feature as subtask	FEWS-8876	FEWS-8709 Rating Curve schema: add comment field				
Plugin - Gui - Time Series	Improvement as subtask	FEWS-8799	FEWS-8709 TSDisplay: make unreliables invisible by hiding values based on quality flags (D5)		Within the TimeSeriesdisplay, a new choice has been added under the 'Chart' dropdown button to 'Hide unreliable' time series values in a graph. When selecting this setting (also available via shortcut Ctrl+Sht+H), the unreliable data points will be removed from the chart but remain available in the table.		

Plugin - Gui - Time Series	Improvement as subtask	FEWS-7538	FEWS-7508 Add time of peak to tooltip	Tooltip text shows time of peak/low	Dateformat in tool tip is equal to date format of FEWS unless format is overruled in configuration.	`<statisticalFunction function="showPeaksAbove">`
						`<!-- DateFormat optional. Defaults to FEWS environment dateformat-->`
						`<dateFormat>HH:mm:ss yyyy/MM/DD</dateFormat>`
						`</statisticalFunction>`	

Plugin - Gui - Time Series	Improvement	FEWS-8530	Lock in TimeSeriesDisplay should not by default always be closed				
Plugin - Gui - Time Series	Improvement as subtask	FEWS-8800	FEWS-8709 Flags: enable use of 'void' flag instead of 'unreliable'	English variant of GUI texts for BOM project, Australia	Fews contains, in addition to english texts, also an english variant of the texts, that has been added for BOM project, Australia. Presently, the only diffemce is the usage of 'void' instead of 'unreliable' . All other texts are the same, however any of texts can be modified acoording to the requirements of the client. To use the BOM variant of English, configure in global.properties (not case sensitive): LANGUAGE=EN COUNTRY=AU VARIANT=BOM How can I change BOM texts ? Seach in Fews source code the files "messages_en_au_bom.properties" In these files you can enter your custom texts. Currently there are 4 BOM properties files in 4 java packages. You can easily add additional properties file by copying any "messages_en.properties" file to "messages_en_au_bom.properties"		

Plugin - Gui - Time Series	New Feature as subtask	FEWS-8603	FEWS-6858 E7801 - Display Total Amount of Rainfall on Plots	TimeSeriesDisplay and descriptive statistics in DisplayGroups	In addition to the descriptive statistics in TimeSeriesDisplay configuration file,
					the user can specify descriptive statistics functions for any timeseries (TimeSeriesSet) in DisplayGroups.
					Every timeseries can have its own statistics functions
					
					When the user opens a preconfigured display that includes statistics function(s),
					the statisics are visible directly. These preconfigured statistics stay always in the picture,
					unless the user switches to a display without statistics functions, or unless the general descriptive statistics are switched on with the toolbar button "Statistics (F10)"
						A part of DisplayGroups.xml configuration that creates descriptive statistics as shown in the attached picture DescStatisticsinDisplayGroups.jpg
						
						`<plot id="Overview-Sobek">`
						`<subplot>`
						`<inverted>true</inverted>`
						`<plotWeight>1</plotWeight>`
						`<descriptiveFunction function="sum"/>`
						`<timeSeriesSet>`
						`<moduleInstanceId>Vecht_NA_Prep_Forecast</moduleInstanceId>`
						`<valueType>scalar</valueType>`
						`<parameterId>P.merged</parameterId>`
						`<locationRelationId>CATCHMENT</locationRelationId>`
						`<locationSetId>All_Hoofdloc_Catchments</locationSetId>`
						`<timeSeriesType>simulated forecasting</timeSeriesType>`
						`<timeStep unit="hour"/>`
						`<relativeViewPeriod unit="day" start="-10" end="5"/>`
						`<readWriteMode>read only</readWriteMode>`
						`</timeSeriesSet>`
						`</subplot>`
						`<subplot>`
						`<plotWeight>2</plotWeight>`
						
						`<descriptiveFunction function="min"/>`
							

						`<timeSeriesSet>`
						`<moduleInstanceId>Vecht_Hydr_Sobek_Forecast</moduleInstanceId>`
						`<valueType>scalar</valueType>`
						`<parameterId>Q.updated.voorsp</parameterId>`
						`<locationSetId>Vecht_Hydr_model_Qobs</locationSetId>`
						`<timeSeriesType>simulated forecasting</timeSeriesType>`
						`<timeStep unit="hour"/>`
						`<relativeViewPeriod unit="hour" start="-96" end="36"/>`
						`<readWriteMode>read complete forecast</readWriteMode>`
						`</timeSeriesSet>`
						`<timeSeriesSet>`
						`<moduleInstanceId>ImportSalland</moduleInstanceId>`
						`<valueType>scalar</valueType>`
						`<parameterId>Q.meting</parameterId>`
						`<locationSetId>Salland_Q.meting_stuwen_hoofdlocaties</locationSetId>`
						`<timeSeriesType>external historical</timeSeriesType>`
						`<timeStep unit="hour"/>`
						`<relativeViewPeriod unit="hour" start="-96" end="36"/>`
						`<readWriteMode>add originals</readWriteMode>`
						`<synchLevel>1</synchLevel>`
						`</timeSeriesSet>`
						`<timeSeriesSet>`
						`<moduleInstanceSetId>Import</moduleInstanceSetId>`
						`<valueType>scalar</valueType>`
						`<parameterId>Q.meting</parameterId>`
						`<locationSetId>All_Q.meting</locationSetId>`
						`<timeSeriesType>external historical</timeSeriesType>`
						`<timeStep unit="hour"/>`
						`<relativeViewPeriod unit="hour" start="-96" end="36"/>`
						`<readWriteMode>add originals</readWriteMode>`
						`<synchLevel>1</synchLevel>`
						`</timeSeriesSet>`
							

Plugin - Gui - Time Series	Improvement as subtask	FEWS-8698	FEWS-8709 BoM-HyFS: Toggle displayunit in TSD/TSE			`<explorer version="1.1" xmlns="http://www.wldelft.nl/fews"`
						`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"`
						`xsi:schemaLocation="http://www.wldelft.nl/fews`
						`http://fews.wldelft.nl/schemas/version1.0/explorer.xsd">`
						`<description>desc</description>`
						`<systemInformation>`
						`<systemCaption>CHPS - Alaska-Pacific River Forecast Center</systemCaption>`
						`</systemInformation>`
						`<globalDatum>Elevation</globalDatum>`
						`<displayUnitsLabel>US</displayUnitsLabel>`
						`<systemUnitsLabel>Metric</systemUnitsLabel>`
						`<units>system</units>`
						`</explorer>`
							

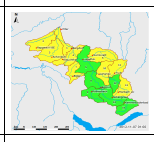
Plugin - Gui - Time Series	New Feature as subtask	FEWS-8622	FEWS-8617 Excel-like filter in columns of TSD table on comments, users, flag				
Plugin - Gui - Time Series Modifier	Improvement as subtask	FEWS-9002	FEWS-8769 Attribute Modifiers scherm heeft default een Export button op het modifer scherm, die moet je ook uit kunnen zetten				
Plugin - Gui - Time Series Modifier	Improvement as subtask	FEWS-8779	FEWS-6151 Grafische Aanpas Module - alle vaste punten in 1x aan of uit				
Plugin - Gui - Time Series Modifier	Improvement as subtask	FEWS-8778	FEWS-6151 Grafische Aanpas Module - manipulatie middels (pijltjes)toetsen				

Plugin - Module - (Primary) Validation	New Feature as subtask	FEWS-8621	FEWS-8617 Add optional configurable comments to values in validationRules	Labels and comments in ValidationRuleSets	Every validation criterium can be provided with label and comment.
					If a criterium is violated, the configured label and/or comment is added to relevant time series element.
					
					In case of labels we can choose from the values "dried","inundated", "ice", "above detection range","below detection range" and "varying".
					Comment can be any non empty string accepted by the xml schema
						Example 1:
						`<extremeValuesFunctions>`
						`<hardMax constantLimit="@HMAX_H@" comment="meetwaarde boven meetbereik" label="inundated"/>`
						`<hardMin constantLimit="@HMIN_H@" comment="sensor drooggevallen" label="dried"/>`
						`</extremeValuesFunctions>`
						`<rateOfChangeFunctions>`
						`<rateOfRiseFallSame comment="afkeur vanwege te snelle verandering" constantLimit="@ROC_H@ / 100 / 900"/>`
						`</rateOfChangeFunctions>`
						
						Example 2:
						`<extremeValues>`
						`<hardMin constantLimit="0.001" label="above detection range"/>`
						`<softMin constantLimit="0.02"/>`
						`</extremeValues>`
						
						Example 3:
						`<sameReading>`
						`<label>dried</label>`
						`<comment>afkeur vanwege geen verandering</comment>`
						`<sameReadingDeviaton constantLimit="0.01"/>`
						`<sameReadingPeriod constantLimit="3600"/>`
						`</sameReading>`
						`<temporaryShift>`
						`<label>dried</label>`
						`<comment>afkeur vanwege ongewone verandering</comment>`
						`<rateOfTemporaryShift constantLimit="0.01"/>`
						`<temporaryShiftPeriod constantLimit="1296000"/>`
						`</temporaryShift>`	

Plugin - Module - Data Export	New Feature as subtask	FEWS-8722	FEWS-5586 Improve/Adjust NetCDF-CF export		According to Onno the netcdf files exported from FEWS work already ok in combination with the 3Di model, so no changes are needed for this issue.		
Plugin - Module - Data Export	Improvement	FEWS-8490	Export van missing dat naar LMW moet een flag 1 hebben, moet hard in de code staan	fixed quality characteristic for LMW export in case of missing values			

Plugin - Module - Data Export	New Feature as subtask	FEWS-8766	FEWS-8709 Add HHRR Export function	HHRR timeseries export, BOM Australia	The HHRR file format is a special ASCII format for hydrological event data interchange, used by Australian Bureau of Meteorology.
					
					This file format has the following rows:
					HHRR 1.7
					<number of rows in the file>
					<event row>
					<event row>
					.....
					HHNN
					
					Each timeseries event is written as a separate row in the file. Only non-missing values are written.
					The fields are separated by spaces.
					The number of fields and the meaning of some fields are slightly different per parameter.
					
					The HHRR export currently supports parameters P, H and Q.
					These parameter Id's should be used in export Id mapping
					Exporting of P accumulated is not supported yet, P values are put in the <translated> field.
					Also the export of <raw> field is not supported yet.
					
					This export type requires unit and flag conversions, otherwise the hhrr format cannot be written correctly
						Example (part of) TimeSeriesImportRun.xml:
						`<general>`
						`<exportType>hhrr</exportType>`
						`<folder>../Hhrr</folder>`
						`<exportFileName>`
						`<name>hhrr</name>`
						`</exportFileName>`
						`<idMapId>Hhrr</idMapId>`
						`<unitConversionsId>Hhrr</unitConversionsId>`
						`<flagConversionsId>Hhrr</flagConversionsId>`
						`</general>`
						
						`<metadata>`
						`<comment>HyFS</comment>`
						`</metadata>`
						
						`<timeSeriesSet>`
						`<moduleInstanceId>ExportHHRR</moduleInstanceId>`
						`<valueType>scalar</valueType>`
						`<parameterId>P.m</parameterId>`
						`<qualifierId>Q1</qualifierId>`
						`<locationId>H-2001</locationId>`
						`<timeSeriesType>external historical</timeSeriesType>`
						`<timeStep unit="nonequidistant"/>`
						`<relativeViewPeriod unit="hour" start="0" end="1"/>`
						`<readWriteMode>add originals</readWriteMode>`
						`</timeSeriesSet>`
						
						Example (part of) flag mapping file
						`<flagConversion>`
						`<inputFlag>`
						`<flagConversion>`
						`<inputFlag>`
						`<name>SET_FLAG_ONLY_TO_ORIGINAL_UNRELIABLE</name>`
						`<value>12</value>`
						`</inputFlag>`
						`<outputFlag>`
						`<name>SUS</name>`
						`<value>12</value>`
						`</outputFlag>`
						`</flagConversion>`
						
						`<defaultOuputFlag>`
						`<name>SUS</name>`
						`<value>999</value>`
						`</defaultOuputFlag>`
						
						`<missingValueFlag>`
						`<name>MISSING</name>`
						`<value>99</value>`
						`</missingValueFlag>`	

					Information per field(s): Field <SensorNo> The Hhrr export expects that the series has exactly one qualifier. This qualifier is written in the field <SensorNo> If the series has no qualifier, number 0 is put in this field and a debug message is written. If the series has more qualifiers, only the first one is used and a debug messages is written Fields <Event Mode> and <Quality Code> The flag conversions must be used to write these HHRR fields correctly. Each Fews flag, used in the export timeseries, should be mapped to one of the HHRR flags. Also flag names must be specified. Flag name is used to write <Event Mode> field, flag value is used to write <Quality Code>. See config example of the flag mapping file. Field ["comment"] If there is a user name attached to the timeseries event, for example when the value has been editted, this user name is put in the comment field. Also, default comment can be configured in TimeseriesExportRun.xml, with element <comment> from Metadata section.	

Component/s	Issue Type	Key	Summary	Release Note Text	Release Note Text Description	Config Example	Images
					Field <ref> (only relevant for H parameter) Code LGH (local datum) or AHD (Australian datum) can be used as measurement reference. The unit conversions must be used to write these codes correctly. OutputUnitTypes should be configured as LGH or AHD. For example, to convert mm to m, we use unit type LGH and not m : <unitConversion> <inputUnitType>mm</inputUnitType> <outputUnitType>LGH</outputUnitType> <multiplier>0.001</multiplier> <incrementer>0</incrementer> </unitConversion> If the same converions (from mm to m) is applicable also to another parameter, it can be still used, since the LGH or AHD code is written only in case of H parameter. If Fews internal unit is already m, the unit conversion must be still added, to be able write LGH or AHD. For example: <unitConversion> <inputUnitType>m</inputUnitType> <outputUnitType>LGH</outputUnitType> <multiplier>1</multiplier> <incrementer>0</incrementer> </unitConversion> Precision of the values H values are always written with 3 decimal	**Example (part of) unit mapping file:** <unitConversion> <inputUnitType>mm</inputUnitType> <outputUnitType>AHD</outputUnitType> <multiplier>0.001</multiplier> <incrementer>0</incrementer> <convertDatum>true</convertDatum> </unitConversion> <unitConversion> <inputUnitType>m</inputUnitType> <outputUnitType>AHD</outputUnitType> <multiplier>1</multiplier> <incrementer>0</incrementer> <convertDatum>true</convertDatum> </unitConversion>	
Plugin - Module - Data Export	New Feature	FEWS-8922	FOEN: GIN Export for update run / measured data (PQT-datascheme)	Added an additional GIN Timeseries Export	Added a TimeseriesExport that is similar to the GIN Export, but exports each location in a different file.		
Plugin - Module - Data Export	New Feature as subtask	FEWS-8798	FEWS-8709 TSExport: enable export of manualy entered/corrected data only	added possibility of exporting only manually changed timeserie events	Within the Time Series Editor, time series events can be changed manually. The value or the flag can be changed (i.e. reliable, unreliable) or an altogether new event (time stamp) can be added. When exporting a time series it is now possible to filter on any or all of these manual changes. The ViewPeriod filters based on the time of change as written to the database and not the date in the event itself. Note that this viewPeriod is relative to dispatch time of the task. Please do not specify a relativeViewPeriod in the timeSeriesSet. This functionality can only be used in combination with an event based output file format.	<timeSeriesExportRun xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/timeSeriesExportRun.xsd"> <export> <general> <exportType>PI</exportType> <folder>../testExportManualValuesAndFlags/export</folder> <exportFileName> <name>manualValuesAndFlags</name> </exportFileName> <idMapId>Telemetry</idMapId> <unitConversionsId>UnitConversions</unitConversionsId> <flagConversionsId>FlagConversions</flagConversionsId> <exportMissingValue>-999</exportMissingValue> <exportManualChanges> <manualDbChangeViewPeriod unit="week" multiplier="7" /> <exportNewManualEntries>true</exportNewManualEntries> <exportManualFlagChanges>true</exportManualFlagChanges> <exportManualValueChanges>true</exportManualValueChanges> </exportManualChanges> </general> <timeSeriesSet> <moduleInstanceId>ExportRunMultipleTimeSeries</moduleInstanceId> <valueType>scalar</valueType> <parameterId>P.m</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="minute" divider="1" multiplier="15" /> <readWriteMode>read only</readWriteMode> </timeSeriesSet>	
Plugin - Module - Data Export, Plugin - Module - Data Import	New Feature as subtask	FEWS-6177	FEWS-6175 Import / Export NetCDF				
Plugin - Module - Data Import	New Feature	FEWS-8758	Data import from Aquarius to FEWS (OMS)				
Plugin - Module - Data Import	New Feature as subtask	FEWS-8227	FEWS-8230 SCADAConnect import routine		As part of the Goulburn-Murray Water project (Victoriia, Australia) we need to create three new import routines. This is 3 of 3. Example of the data to be imported and a description of the format will be provided on or before the 05/11/12. Project number is 1207257. The budget for this activity is 3 days including testing and documentation. Please let me know if it will be more.		
Plugin - Module - Data Import	New Feature as subtask	FEWS-7382	FEWS-7378 Add the possibility to loop over each importfile				
Plugin - Module - Data Import	New Feature as subtask	FEWS-8721	FEWS-5586 Improve/Adjust NetCDF-CF import	Adjust NetCDF import/export routines to be able to read 3Di NetCDF files	3Di NetCDF outputfiles can already be read by Delft-FEWS. No adjustments made.		
Plugin - Module - Data Import	Improvement	FEWS-8704	For import files from the Environment Agency containing both 15 min and hourly data for the same location with the external qualifier will need to be interpreted			**importRun.xml to import two timeseries with different timesteps :** <?xml version="1.0" encoding="UTF-8"?> <importRun xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/ImportRun.xsd"> <import> <folder>../import</folder> <idMapId>IdMap</idMapId> <timeSeriesSet> <moduleInstanceId>ImportTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>P.m</parameterId> <locationId>H-2004</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="minute" multiplier="15"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> <timeSeriesSet> <moduleInstanceId>ImportTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>P.m</parameterId> <locationId>H-2004</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="hour" multiplier="1"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </import>	
						idMap.xml with qualifiers: <?xml version="1.0" encoding="UTF-8"?> <idMap version="1.1" xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews http://chps1/schemas/idMap.xsd"> <map internalLocation="H-2004" externalParameter="Rainfall" internalParameter="P.m" externalLocation="1339" externalQualifier="1HOUR" /> <map internalLocation="H-2004" externalParameter="Rainfall" internalParameter="P.m" externalLocation="1339" externalQualifier="15MIN" /> <enableOneToOneMapping/> </idMap>	
Plugin - Module - Data Import	New Feature	FEWS-8260	Import of tab delimited data	Import type GeneralCsv imports also TAB separated files	To import Colombian 'climatologica' and 'hidrologica' files, import type GeneralCsv can be used. Since this is a general import type, you should enter some information about your file in TimeSeriesImportRun.xml, element <table>. The documenation can be found on http://publicwiki.deltares.nl/display/FEWSDOC/generalCsv. In addition to this documentation, the strings as ///// are handled also as missing values.	**Simple example to import all parameters from 'climatologica' file.** <general> <importType>generalCSV</importType> <folder>$IMPORT_FOLDER$/climat</folder> <table> <dateTimeColumn name="TIME" pattern="yyyy-MM-dd HH:mm:ss"/> <valueColumn name="WS" unit="m" parameterId="WS.meas"/> <valueColumn name="WD" unit="m" parameterId="WD.meas"/> <valueColumn name="PA" unit="m" parameterId="PA.meas"/> <valueColumn name="TA" unit="m" parameterId="TA.meas"/> <valueColumn name="RH" unit="m" parameterId="RH.meas"/> <valueColumn name="DP" unit="m" parameterId="DP.meas"/> <valueColumn name="SR" unit="m" parameterId="SR.meas"/> <valueColumn name="PR" unit="m" parameterId="PR.meas"/> <valueColumn name="VB" unit="m" parameterId="VB.meas"/> </table> </general> <timeSeriesSet> <moduleInstanceId>TestMe</moduleInstanceId> <valueType>scalar</valueType> <parameterId>WS.meas</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> <timeSeriesSet> <moduleInstanceId>TestMe</moduleInstanceId> <valueType>scalar</valueType> <parameterId>WD.meas</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType>	
						Simple example to import selected parameters from 'climatologica' file. <general> <importType>generalCSV</importType> <folder>../junit_test_output/nl/wldelft/fews/system/plugin/dataImport/TimeSeriesImportTestData/import/testMe</folder> <table> <dateTimeColumn name="TIME" pattern="yyyy-MM-dd HH:mm:ss"/> <valueColumn name="WS" unit="m" parameterId="WS.meas"/> <skippedColumn name="WD"/> <skippedColumn name="PA"/> <valueColumn name="TA" unit="m" parameterId="TA.meas"/> </table> </general> <timeSeriesSet> <moduleInstanceId>TestMe</moduleInstanceId> <valueType>scalar</valueType> <parameterId>WS.meas</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"/> <relativeViewPeriod unit="day" start="-2" end="2"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> <timeSeriesSet> <moduleInstanceId>TestMe</moduleInstanceId> <valueType>scalar</valueType> <parameterId>TA.meas</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"/> <relativeViewPeriod unit="day" start="-2" end="2"/> <readWriteMode>add originals</readWriteMode>	
Plugin - Module - Data Import	New Feature as subtask	FEWS-8226	FEWS-8230 Theiss CSV format import routine	TheisCsv import type for Goulburn-Murray Water project (Victoria, Australia)	TheisCsv import type --- This is a reader for Theiss CSV file format, created for Goulburn-Murray Water project (Victoria, Australia) File example: "TOA5","5701","CR800","5701","CR800.Std.21","CPU:405214A_2012-05-23_GMWSC.CR8","5121","PushData" "TIMESTAMP","RECORD","BV","LT1","FR1","FR1_TAB","RT_mm" "TS","RN","405214A_300.09_BV1_S","405214A_100.09_LT1_S","405214A_141.09_FR1_S","405214A_223.09_TBL_S","405214A_010.09_RT1_SD" "","","Smp","Smp","Smp","Smp","Smp" "2012-09-06 11:15:00",9686,13.62,0.941,455.6962,19,29.60003 "2012-09-06 11:30:00",9687,14.21,0.941,455.6962,19,29.60003 TheissCsv reads location Id, parameter Id's and events from the file. Location Id is parsed from the first line, sixth field. The format of this field should be : CPU:<location Id>_<other info> Parameter Id's are parsed from the second line, field 3 and higher. From each event line is read: date and time (first field) and parameter values from the field 3 and higher. There should be a value in each event line for each parameter Id. The second field in the event line is skipped.	<import> <general> <importType>TheissCsv</importType> <folder>$IMPORT_FOLDER$/nino</folder>	
Plugin - Module - Data Import	New Feature as subtask	FEWS-8225	FEWS-8230 Water Data Transfer Format (WDTF) import routine	WdtfXml import type for Goulburn-Murray Water project (Victoria, Australia)	This import type reads scalar time series from Water Data Transfer Format (WDTF). WDTF is an XML format designed by Bureau of Meteorology, Australia. More information can be found on this site: http://www.bom.gov.au/water/regulations/wdtf WDTF format supports large variety of data. This parser reads only scalar timeseries that are stored in the element TimeSeriesObservation. The header values are read from the following elements: - parameter is read from the obligatorily element observedProperty - qualifier is read from the obligatorily element procedure - location is read from the obligatorily element featureOfInterest - unit is read from the optional element defaultUnitsOfMeasure The rules for parsing of parameter, qualifier and location from the elements are: use value of the element. If not specified, use attribute title. If no title specified, use attribute href. Attribute href may contain a simple string or path, for instance: "#level" or "#P-6827-01899-1" or "http://www.bom.gov.au/std/water/xml/wio0.2/property/observedProperty/bom/StorageLevel_m" If a path is specified, only the last component (i.e. StorageLevel_m in the example) will be used.	<import> <general> <importType>WdtfXml</importType> <folder>$IMPORT_FOLDER$/nino</folder>	

Component/s	Issue Type	Key	Summary	Release Note Text	Release Note Text Description	Config Example	Images
					The events are read from the elements timeValuePair: - value is obtained from the element value. The value of timeValuePair can be omitted and then it will be imported as missing value (NaN), - time is read from the obligatory attribute time , - flag is read from the optional attribute quality. If omitted, a flag stored in defaultQuality is used. - comment is read from the optional attribute comment		
Plugin - Module - Data Import	New Feature	FEWS-9100	New Import for WRF data from Colombia	Added WRF Grads grid import	Added WRF Grads grid import	http://publicwiki.deltares.nl/display/FEWSDOC/WRFGrads	
Plugin - Module - Data Import	New Feature	FEWS-8734	Singapore OMS: new data import, largely similar to existing ArcInfoAsciiGrid import	Added DHILAWRArcInfoAsciiGrid TimeSeries import			
Plugin - Module - Data Import	New Feature	FEWS-8526	New Data Import Format (IDEAM)	IDEAM import type	IDEAM import type added		
Plugin - Module - Data Import	New Feature as subtask	FEWS-8720	FEWS-5586 Create shp file based on Quad-Tree grid (netCDF)				
Plugin - Module - Data Import	Improvement	FEWS-8902	ImportOpenDAP gives error when URL is not alive, request for implementation of several retries before exception is thrown	New option to retry importing netcdf data from a server if connecting to the server fails.	Added option to configure integer properties "connection_retry_count" (default is 0) and "connection_retry_interval_in_milliseconds" (default is 0) in properties in import module configuration. These are currently only used when importing netcdf data using a serverUrl. If the connection to the server fails, then the import will retry after the configured connection retry interval has passed. This process is repeated until the configured connection retry count is reached.	<import> <general> <importType>NETCDF-CF_GRID</importType> <serverUrl>http://opendapserver/thredds/dodsC/opendap/test/test.nc</serverUrl> <startDateTime date="2090-01-01" time="00:00:00"/> <endDateTime date="2090-02-01" time="00:00:00"/> <idMapId>NetcdfGridImportFromUrlTest1IdMap</idMapId> <missingValue>-3.402823E38</missingValue> </general> <properties> <int key="connection_retry_count" value="10"/> <int key="connection_retry_interval_in_milliseconds" value="1000"/> </properties> <timeSeriesSet> <moduleInstanceId>NetcdfGridImportFromUrlTest1</moduleInstanceId> <valueType>grid</valueType> <parameterId>Q.sim</parameterId> <locationId>netcdfGridLocation1</locationId> <timeSeriesType>simulated forecasting</timeSeriesType> <timeStep unit="nonequidistant"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </import>	
Plugin - Module - Data Import	New Feature as subtask	FEWS-8691	FEWS-6151 Import of 2D wave spectra from ECMWF in netcdf format from Matroos	Added new import type "matroos_netcdfspectrumseries" to import 1D or 2D spectral data from MATROOS.	Added new import type "matroos_netcdfspectrumseries" that can be used to import 1D or 2D spectral data from MATROOS. The data can be either in the form of a regular grid with one spectrum for each grid cell or in the form of a list with separate locations with one spectrum for each location. In the timeSeriesImportRun config specify the base URL of the MATROOS system. Also need to specify the MATROOS map name as a String property with key "map" in the timeSeriesImportRun config.	<import> <general> <importType>matroos_netcdfspectrumseries</importType> <serverUrl>http://matroos.deltares.nl</serverUrl> <startDateTime date="2013-02-02" time="06:00:00"/> <endDateTime date="2013-02-02" time="12:00:00"/> <idMapId>testIdMap</idMapId> <missingValue>9.96921e36</missingValue> </general> <properties> <string key="map" value="knmi_ecmwf_waves"/> </properties> <timeSeriesSet> <moduleInstanceId>test</moduleInstanceId> <valueType>scalar</valueType> <parameterId>spectralDensity</parameterId> <locationId>testLocation</locationId> <timeSeriesType>simulated forecasting</timeSeriesType> <timeStep multiplier="6" unit="hour"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </import>	
Plugin - Module - General Adapter	New Feature as subtask	FEWS-7800	FEWS-8170 enable ensemble import to netCDF timeseries (scalars)	Import scalar ensembles using import type NETCDF-CF_TIMESERIES	This import type also supports importing ensembles from the Netcdf files that are written by the export type NETCDF-CF_TIMESERIES. The ensemble dimension should have the standard name "realization". If the file contains timeseries for multiple locations, the parameter variables should have a dimension named "stations".	<?xml version="1.0" encoding="UTF-8"?> <timeSeriesImportRun xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews /chps/share/schemas/timeSeriesImportRun.xsd"> <import> <general> <importType>NETCDF-CF_TIMESERIES</importType> <folder>$IMPORT_FOLDER_PIXML$</folder> <idMapId>IdImportPIXML</idMapId> <unitConversionsId>ImportEnglishUnits</unitConversionsId> <missingValue>-999.0</missingValue> <importTimeZone> <timeZoneOffset>+00:00</timeZoneOffset> </importTimeZone> </general> <timeSeriesSet> <moduleInstanceId>ImportSHEF</moduleInstanceId> <valueType>scalar</valueType> <parameterId>FMAT</parameterId> <locationSetId>Catchments</locationSetId> <timeSeriesType>external forecasting</timeSeriesType> <timeStep unit="nonequidistant"/> <readWriteMode>add originals</readWriteMode> <timeSeriesSet> <moduleInstanceId>ImportSHEF</moduleInstanceId> <valueType>scalar</valueType> <parameterId>FMAP</parameterId> <locationSetId>Catchments</locationSetId> <timeSeriesType>external forecasting</timeSeriesType> <timeStep unit="nonequidistant"/> <readWriteMode>add originals</readWriteMode> <synchLevel>1</synchLevel> <ensembleId>RES</ensembleId> </timeSeriesSet> </import>	
Plugin - Module - General Adapter	New Feature as subtask	FEWS-8774	FEWS-5586 3Di: online visualization: on-the-fly import of netcdf files while they are being written by the model	Added option to import and display netcdf data from a running forecast while the forecast is still running	For long model runs (with what-if scenarios) it is very useful if the output data of the model can be viewed as soon as it has been produced, instead of having to wait until the end of the run. This is now possible if the model writes its output data in a netcdf file after each timeStep of the run. This feature is currently only supported for FEWS systems that use direct database access. To use this, configure the new option startWhileRunningExecuteActivities for one or more importPiNetcdfActivities in the GeneralAdapter config. This way the importActivities will run continuously during the configured model run (execute activities) and will import new data as soon as it has been written to the netcdf file by the model. For now a running forecast can only be opened by selecting the new option "open most recent running forecast and adjust system time" from the F12 debug menu in the FEWS explorer window. The grid display updates its view and slider time when a running forecast is selected and new data is imported for that forecast.	<importPiNetcdfActivity> <importFile>%WORK_DIR%/subgrid_map.nc</importFile> <timeSeriesSets> <timeSeriesSet> <moduleInstanceId>3Di_Update</moduleInstanceId> <valueType>grid</valueType> <parameterId>speed_normal.sim.hist</parameterId> <locationId>3Di_test_wf_flow_links</locationId> <timeSeriesType>simulated historical</timeSeriesType> <timeStep unit="minute" multiplier="1"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> <timeSeriesSet> <moduleInstanceId>3Di_Update</moduleInstanceId> <valueType>grid</valueType> <parameterId>H.sim.hist</parameterId> <locationId>3Di_test_wf</locationId> <timeSeriesType>simulated historical</timeSeriesType> <timeStep unit="minute" multiplier="1"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </timeSeriesSets> <startWhileRunningExecuteActivities>true</startWhileRunningExecuteActivities> </importPiNetcdfActivity>	
Plugin - Module - General Adapter	Improvement	FEWS-8674	To run ensembles with different number of license per model, I need something like maxNumberOfSimultaniousRuns.	Some models only allow a limited number of runs simultaneously, sometimes limited by license server. Therefore the maxNumberOfSimultaneousRuns is introduced.	Some models only allow a limited number of runs simultaneously, sometimes limited by license server. By default the number of parallel runs is limited by the workflow and runInLoopParallelProcessorCount in the global properties. However, for performance and license reasons, you may want to have different amount of parallel running modules per simulation model. Therefore the maxNumberOfSimultaneousRuns is introduced. MaxNumberOfSimultaneousRuns = 1 is exactly the same as waitForOtherRun = true.	<executeActivity> <command> <className>nl.wldelft.fews.adapter.sobek.PreSobekModelAdapter</className> </command> <arguments> <argument>%ROOT_DIR%</argument> <argument>Config/sobekConfig.xml</argument> </arguments> <timeOut>60000</timeOut> <maxNumberOfSimultaneousRuns>2</maxNumberOfSimultaneousRuns> <overrulingDiagnosticFile>%ROOT_DIR%/diagnostics/presobekmodeladapter.xml</overrulingDiagnosticFile> </executeActivity>	
Plugin - Module - General Adapter	Improvement as subtask	FEWS-8468	FEWS-8475 General Adapter timeout should kill process tree instead of only the main process.		When a process has to be killed, now also remaining child processes are terminated, as well as under Windows as under linux. This functionality is now available for the General Adapter and the Forecasting Shell.		
Plugin - Module - General Adapter	New Feature	FEWS-8345	Export of scalar timeseries to NetCDF format in the GeneralAdapter exportActivities part			**Current method (outside GeneralAdapter):** <export> <general> <exportType>NETCDF-CF_TIMESERIES</exportType> <folder>%REGION_HOME%\Models\EFDC\han_dll_EnKF_16_RADnoise_1\stochModel\model\</folder> <exportFileName> <name>AirTemperature.nc</name> </exportFileName> <idMapId>IdExportEFDC_Han_netcdf</idMapId> <exportMissingValueString>-9999.0</exportMissingValueString> <exportTimeZone> <timeZoneName>GMT+0:00</timeZoneName> </exportTimeZone> </general> <timeSeriesSet> <moduleInstanceId>EFDC_Han_Preprocessing_Meteo_UpdateStates</moduleInstanceId> <valueType>scalar</valueType> <parameterId>T.m</parameterId> <locationSetId>EFDC_meteo_Han</locationSetId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="hour" multiplier="1"/> <relativeViewPeriod unit="day" start="-2" end="0"/> <readWriteMode>read only</readWriteMode> <synchLevel>1</synchLevel>	
Plugin - Module - Reports	New Feature as subtask	FEWS-8791	FEWS-6151 Add tags in report template to grab n-th value and n-th time from a timeSeries	Report functions INDEXVALUE and INDEXTIME	This functions provide a value resp. time at the required index in time series array . The required index should be specified relative to the index of timeZero. Index of the time zero is always 0. Configure negative index to get a value/time before time zero, and positive index to get value/time after time zero. In equidistant timeseries, the configured index is actually equal to the number of timesteps before or after time zero.	**An example of usage in a HTML template** Index value: $INDEXVALUE(-4; Qobserved;numberFormat1)$ Index time: $INDEXTIME(-4; Qobserved;dateFormat1)$ **An example of usage in a table that supports functions:** <rowPerLocationHtmlTable id="tableA" tableStyle="tableStyle3" > <column> <header>Index value</header> <format>_data</format> <function>INDEXVALUE(-4; Qobserved;numberFormat1)</function> </column> <column> <header>Index time</header> <format>_data</format> <function>INDEXTIME(-4; Qobserved;dateFormat1)</function> </column> </rowPerLocationHtmlTable>	
Plugin - Module - Reports	New Feature as subtask	FEWS-8229	FEWS-8230 Extend web report functionality to be able to list stations which have not reported in a customisable time window	Customised web report for Goulburn Murray Water Project, Australia	This new report should be still designed and implemented		
Plugin - Module - Reports	Improvement	FEWS-8646	SEPA: Select which thresholds from defined set are being displayed on web reports				
Plugin - Module - Reports, System	New Feature as subtask	FEWS-8612	FEWS-6858 E7812 - US data format on report module axis		Added warning when date format for report (on bottom or right axis) is not defined.		
Plugin - Module - Reports	Improvement	FEWS-8308	Export zipped module moet naast <dateTimeFormat>yyyyMMddHHmmss</dateTimeFormat> ook een timezone hebben	exportTimeZone can now be added for Report Zipped Export.		<reportExport xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/reportExport.xsd" version="1.0"> <reportExportRootDir>$REPORT_EXPORT_ZIP_ROOTDIR$</reportExportRootDir> <currentForecastReports> <currentForcastSubDir/> <zipReports>true</zipReports> <dateTimeFormat>yyyyMMddHHmmss</dateTimeFormat> <exportTimeZone> <timeZoneName>CET</timeZoneName> </exportTimeZone> <prefix>FEWSRiveren_Maas_</prefix> <numberCurrentForecasts>10</numberCurrentForecasts> <includeModuleInstanceId>Report_Maas_Limburg</includeModuleInstanceId> </currentForecastReports> </reportExport>	
Plugin - Module - Reports	New Feature as subtask	FEWS-8780	FEWS-6151 Extend report functionality to create html page with conditional colors and text field	Added new report tag functions IndexMaxWarningLevel and IndexMaxWarningLevelColor	IndexMaxWarningLevel: Template function to insert the name of the most severe warning level of all thresholds that have been crossed for a given timeIndex in a given timeSeries. The timeIndex should be specified relative to the index of timeZero. Index of the time zero is 0. Configure negative index to get a value before time zero, and positive index to get a value after time zero. Arguments: timeSeriesIndex; variableId; defaultThresholdGroupId (if only one thresholdGroup or no thresholdGroups configured, then can leave out the optional argument defaultThresholdGroupId) IndexMaxWarningLevelColor: Template function to insert the html color code (e.g. #FFFF00) of the most severe warning level of all thresholds that have been crossed for a given timeIndex in a given timeSeries. The timeIndex should be specified relative to the index of timeZero. Index of the time zero is 0. Configure negative index to get a value before time zero, and positive index to get a value after time zero. Arguments: timeSeriesIndex; variableId	**Example usage in report html template file:** <?"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd"> <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en"> <head> <meta http-equiv="content-type" content="text/html; charset=utf-8" /> <title>Subcatchment reports</title> <link href="tables.css" rel="styleSheet" type="text/css"> <link href="menu.css" rel="styleSheet" type="text/css"> <script language="JavaScript" src="menu.js" type="text/javascript"></script> </head> <body> <table id="tableStyle1"> <th> <td>$INDEXTIME(-5;Cowbeech;dateFormat1)$</td> <td>$INDEXTIME(0;Cowbeech;dateFormat1)$</td> <td>$INDEXTIME(1;Cowbeech;dateFormat1)$</td> <td>$INDEXTIME(2;Cowbeech;dateFormat1)$</td> <td>$INDEXTIME(3;Cowbeech;dateFormat1)$</td> <td>$INDEXTIME(4;Cowbeech;dateFormat1)$</td> <td>$INDEXTIME(5;Cowbeech;dateFormat1)$</td> <td>$INDEXTIME(105;Cowbeech;dateFormat1)$</td> </th> <tr> <td>$LOCATIONNAME(Cowbeech)$</td> <td>$INDEXVALUE(-5;Cowbeech;numberFormat1)$</td> <td>$INDEXVALUE(0;Cowbeech;numberFormat1)$</td> <td>$INDEXVALUE(1;Cowbeech;numberFormat1)$</td> <td>$INDEXVALUE(2;Cowbeech;numberFormat1)$</td> <td>$INDEXVALUE(3;Cowbeech;numberFormat1)$</td> <td>$INDEXVALUE(4;Cowbeech;numberFormat1)$</td> <td>$INDEXVALUE(5;Cowbeech;numberFormat1)$</td> <td>$INDEXVALUE(105;Cowbeech;numberFormat1)$</td>	

Component/s	Issue Type	Key	Summary	Release Note Text	Release Note Text Description	Config Example	Images
						<tr style="color:#000000;background-color:#AAAAAA;"> <td>$LOCATIONNAME(Cowbeech)$</td> <td style="background-color:$INDEXMAXWARNINGLEVELCOLOR(-5;Cowbeech)$;"> $INDEXMAXWARNINGLEVEL(-5;Cowbeech;thresholdGroup1)$ </td> <td style="background-color:$INDEXMAXWARNINGLEVELCOLOR(0;Cowbeech)$;"> $INDEXMAXWARNINGLEVEL(0;Cowbeech;thresholdGroup1)$ </td> <td style="background-color:$INDEXMAXWARNINGLEVELCOLOR(1;Cowbeech)$;"> $INDEXMAXWARNINGLEVEL(1;Cowbeech;thresholdGroup1)$ </td> <td style="background-color:$INDEXMAXWARNINGLEVELCOLOR(2;Cowbeech)$;"> $INDEXMAXWARNINGLEVEL(2;Cowbeech;thresholdGroup1)$ </td> <td style="background-color:$INDEXMAXWARNINGLEVELCOLOR(3;Cowbeech)$;"> $INDEXMAXWARNINGLEVEL(3;Cowbeech;thresholdGroup1)$ </td> <td style="background-color:$INDEXMAXWARNINGLEVELCOLOR(4;Cowbeech)$;"> $INDEXMAXWARNINGLEVEL(4;Cowbeech;thresholdGroup1)$ </td> <td style="background-color:$INDEXMAXWARNINGLEVELCOLOR(5;Cowbeech)$;"> $INDEXMAXWARNINGLEVEL(5;Cowbeech;thresholdGroup1)$ </td> <td style="background-color:$INDEXMAXWARNINGLEVELCOLOR(105;Cowbeech)$;"> $INDEXMAXWARNINGLEVEL(105;Cowbeech;thresholdGroup1)$ </td> </tr> </table> </body> </html>	
Plugin - Module - Reports	New Feature as subtask	FEWS-8681	FEWS-6151 Extend report functionality to create text page for distribution to LMW				
Plugin - Module - Transformation	New Feature as subtask	FEWS-8623	FEWS-8617 Possibility to copy the flags, comments and user information of unreliable values to the output timeseries in merge-simple transformation				
Plugin - Module - Transformation	New Feature	FEWS-8602	De-Accumulation Function				
Plugin - Module - Transformation	Improvement as subtask	FEWS-7808	FEWS-7855 Extend aggregations so that they can handle missing values better				
Plugin - Module - Transformation	New Feature as subtask	FEWS-8228	FEWS-8230 Creation of new transformation to calculate naturalised flow	Still to add	Still to add		
Plugin - Module - Transformation	New Feature as subtask	FEWS-8576	FEWS-8170 Develop a transformation function to convert a a timeseries of historical dates into meteo timeseries	New transformation function <sample> -> <julianDaySample>	Transformation function "julianDaySample" creates (ensemble) timeseries by resampling from an existing (historical) source timeseries. The resampling 'instruction' is provided as a series where the value refers to (historical) dates in JulianDay. These dates are used to extract the associated data from the (historical) source timeseries and place it in the output timeseries using the corresponding timestamp. <inputVariable> holds the (historical) source data which needs to be extracted. <julianDayVariable> holds the series where the value is the date in JulianDay. <outputVariable>: holds the sampled timeseries The time step of the julianDayVariable should correspond to the timestep of the outputVariable. julianDayVariable is usually provided for one 'placeholder' location, but it is also possible to provide this julianDayVariable for all locations as configured in historical input variable.	<?xml version="1.0" encoding="UTF-8"?> <transformationModule xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/transformationModule.xsd" version="1.0"> <variable> <variableId>MAT_Historic</variableId> <timeSeriesSet> <moduleInstanceId>ImportDATACARD</moduleInstanceId> <valueType>scalar</valueType> <parameterId>MAT</parameterId> <locationId>CFMM8X</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="hour" multiplier="6"/> <relativeViewPeriod unit="day" start="-36500" end="0"/> <readWriteMode>read only</readWriteMode> </timeSeriesSet> </variable> <variable> <variableId>JulianDay</variableId> <timeSeriesSet> <moduleInstanceId>JulianDay_StochResampleESP_Forecast</moduleInstanceId> <valueType>scalar</valueType> <parameterId>JulianDay</parameterId> <locationId>JulianDayPlaceholder</locationId> <timeSeriesType>simulated forecasting</timeSeriesType> <timeStep unit="hour" multiplier="6"/> <relativeViewPeriod unit="day" start="0" end="0" endOverrulable="true"/> <readWriteMode>add originals</readWriteMode> <ensembleId>Rsmp_ESP</ensembleId> </timeSeriesSet> </variable> <variable> <variableId>ResampledESP_MAT</variableId> <timeSeriesSet> <moduleInstanceId>flathead_ResampleESP_Forecast</moduleInstanceId> <valueType>scalar</valueType> <parameterId>MAT</parameterId> <locationId>CFMM8X</locationId> <timeSeriesType>simulated forecasting</timeSeriesType> <timeStep unit="hour" multiplier="6"/> <relativeViewPeriod unit="day" start="0" end="0" endOverrulable="true"/> <readWriteMode>add originals</readWriteMode> <ensembleId>Rsmp_ESP</ensembleId> </timeSeriesSet> </variable> <transformation id="MAT_ResampleESP"> <sample> <julianDaySample> <inputVariable> <variableId>MAT_Historic</variableId> </inputVariable> <julianDayVariable> <variableId>JulianDay</variableId> </julianDayVariable> <outputVariable> <variableId>ResampledESP_MAT</variableId> </outputVariable> </julianDaySample> </sample> </transformation>	
Plugin - Module - Transformation	Improvement as subtask	FEWS-8505	FEWS-6858 Transformation function to make a time lagged ensemble	Transformation "GenerationEnsemble", function "combineForecastMembers"	The function merges the members of several forecasts in one output ensemble forecast The input forecast can be ensemble or a deterministic forecast For instance, when each 15 minutes a ensemble forecast with 24 members is provided, we can merge the last 4 forecasts into one forecast with 96 members (4*24). If we merge 4 deterministic forecast, we get an output forecast with 4 ensemble members. The output ensemble member id's are composed using T0 cq external forecast time of the separate forecast and the original input member id. The used time format is "ddMMyyyyHHmmss". Some examples: 27012012001500_2, 31122013163000_X07. For identification of the output members the strings (id's) are always used. Input members can be identified using numbers (indices) or strings (id's). The overlapping time frame for all input forecast is the new time frame for the output forecast. The forecast time of the most recent external input forecast is used as external forecast time of the external output forecast The user configures the number of forecast to merge and optionally the period where the forecast should be searched.	<?xml version="1.0" encoding="UTF-8"?> <!-- edited with XMLSpy v2007 sp2 (http://www.altova.com) by WL | Delft Hydraulics (WL | Delft Hydraulics) --> <transformationModule version="1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.wldelft.nl/fews" xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/transformationModule.xsd"> <variable> <variableId>input</variableId> <timeSeriesSet> <moduleInstanceId>InputModuleInstance</moduleInstanceId> <valueType>scalar</valueType> <parameterId>Q.m</parameterId> <locationId>H-2001</locationId> <locationId>H-2002</locationId> <locationId>H-2003</locationId> <timeSeriesType>external forecasting</timeSeriesType> <timeStep unit="day"/> <readWriteMode>read complete forecast</readWriteMode> <ensembleId>EnsembleA</ensembleId> </timeSeriesSet> </variable>	
						<variable> <variableId>output</variableId> <timeSeriesSet> <moduleInstanceId>InputModuleInstance</moduleInstanceId> <valueType>scalar</valueType> <parameterId>Q.m</parameterId> <locationId>H-2001</locationId> <locationId>H-2002</locationId> <locationId>H-2003</locationId> <timeSeriesType>external forecasting</timeSeriesType> <timeStep unit="day"/> <readWriteMode>add originals</readWriteMode> <ensembleId>EnsembleOut</ensembleId> </timeSeriesSet> </variable> <transformation id="test"> <generationEnsemble> <combineForecastMembers> <inputVariable> <variableId>input</variableId> </inputVariable> <numberOfForecasts>5</numberOfForecasts> <forecastSearchPeriod unit="day" start="-60" end="-4"/> <outputVariable> <variableId>output</variableId> </outputVariable> </combineForecastMembers> </generationEnsemble> </transformation>	
Plugin - Module - Transformation	New Feature as subtask	FEWS-8585	FEWS-8583 Filter Timeseries transformation	Added new transformation SelectionValuesAfterChangeWithTimeWindow	The new transformation SelectionValuesAfterChangeWithTimeWindow can be used e.g. to filter out measurement values during periods where the measured system is not in a (quasi) steady state due to changes happening in the system. This transformation creates a time window after each change in a configured condition variable. The length of each time window is determined by a custom expression in the configuration. Depending on the configured selection type the input values inside or outside the time windows are selected. All selected input values are then copied to the output variable. Missing output values are produced at times where there is not enough reliable or doubtful data available in the condition and/or expression variables to determine if there is a change or to determine the length of a time window. Any such missing output values are truncated from the start and end of the run period of the transformation, to avoid overwriting data from previous runs with overlapping run periods.	<?xml version="1.0" encoding="UTF-8"?> <transformationModule xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/transformationModule.xsd" version="1.0"> <transformation id="SelectionValuesAfterChangeWithTimeWindowSelectOutsideTest"> <selection> <valuesAfterChangeWithTimeWindow> <variableDefinition> <variableId>input</variableId> <timeSeriesSet> <moduleInstanceId>SelectionValuesAfterChangeWithTimeWindowSelectOutsideTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>HLobs</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"/> <relativeViewPeriod unit="minute" start="0" end="40"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </variableDefinition>	
						<variableDefinition> <variableId>condition</variableId> <timeSeriesSet> <moduleInstanceId>SelectionValuesAfterChangeWithTimeWindowSelectOutsideTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>Q.value.resolution</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"/> <relativeViewPeriod unit="minute" start="0" end="40"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </variableDefinition> <variableDefinition> <variableId>expression1</variableId> <timeSeriesSet> <moduleInstanceId>SelectionValuesAfterChangeWithTimeWindowSelectOutsideTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>Q.obs</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"/> <relativeViewPeriod unit="minute" start="0" end="40"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </variableDefinition>	
						<variableDefinition> <variableId>expression2</variableId> <timeSeriesSet> <moduleInstanceId>SelectionValuesAfterChangeWithTimeWindowSelectOutsideTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>Q.m</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"/> <relativeViewPeriod unit="minute" start="0" end="40"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </variableDefinition> <variableDefinition> <variableId>output</variableId> <timeSeriesSet> <moduleInstanceId>SelectionValuesAfterChangeWithTimeWindowSelectOutsideTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>P.m</parameterId> <locationId>H-2001</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"/> <relativeViewPeriod unit="minute" start="0" end="40"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </variableDefinition>	
						<inputVariable> <variableId>input</variableId> </inputVariable> <conditionVariable> <variableId>condition</variableId> </conditionVariable> <timeWindowLengthExpression>10*a*b*expression1 + expression2</timeWindowLengthExpression> <coefficientSet> <coefficient id="a" value="2"/> <coefficient id="b" value="5"/> </coefficientSet> <selectionType>select_outside_time_window</selectionType> <outputVariable> <variableId>output</variableId> </outputVariable> </valuesAfterChangeWithTimeWindow> </selection> </transformation> </transformationModule>	
Plugin - Module - Transformation	New Feature	FEWS-8238	Neerslagtekort			<transformation id="NeerslagTekort"> <accumulation> <sumInterval> <inputVariable> <variableId>POTNTLOC_TS</variableId> </inputVariable> <intervalTimeStep id="April-Nov"/> <outputVariable> <variableId>POTNT_A_N</variableId> </outputVariable> </sumInterval> </accumulation> </transformation>	

Component/s	Issue Type	Key	Summary	Release Note Text	Release Note Text Description	Config Example	Images
System	Improvement	FEWS-8856	Put FEWS Version and Build Number in the Title Bar.		Added build and patch number to main fews window title. Option to hide this in in global.properties	**in global.properties:** HIDE_VERSIONINFORMATION=true	
System	Improvement	FEWS-8496	Detecting config file changes on file system is very slow when having many config files				
System	Improvement	FEWS-8495	Upgrade to Java 7				
System	Improvement	FEWS-7940	Coordinate systems for Vietnam				
System - PI Service	New Feature	FEWS-8201	Add option to FewsPiService to retrieve timeseries using DisplayGroupId				
System - UM Aquo Service	New Feature	FEWS-9199	Add possibility to skip lines in Import Umaquo CSV	Add option to skip reading first lines	In some cases it is required that the first (header line) should be skipped. Define the property FIRST_LINE. This defines the line (zero based) from which the Umaquo parser must start reading data.	<properties> <!-- Optional: comment line prefix character. Default = # --> <string key="COMMENT_PREFIX" value="#"/> <!-- Optional: column separator character. Default = ; --> <string key="COLUMN_SEPARATOR" value=";"/> <!-- Optional: decimal character. Default = . --> <string key="DECIMAL_SEPARATOR" value="."/> <!-- Optional: Regular expression for date value. Default = yyyy-MM-dd --> <string key="CSV_DATEPATTERN" value=";"/> <!-- Optional: Regular expression for time value. Default = HH:mm:ss --> <string key="CSV_TIMEPATTERN" value="HH:mm:ss"/> <!-- Optional: select UmAquo schema version 2009 or 2011. Default = 2009 --> <int key="SCHEMA_VERSION" value="2009"/> <!-- Optional: allow lenient validation. Default = false --> <bool key="LENIENT" value="true"/> <!-- Optional: allow import to skip the first number of lines --> <int key="FIRST_LINE" value="1"/> </properties>	
System - UM Aquo Service	Improvement	FEWS-7763	Umaquo service allow multiple filter selection and allow timestep selection				