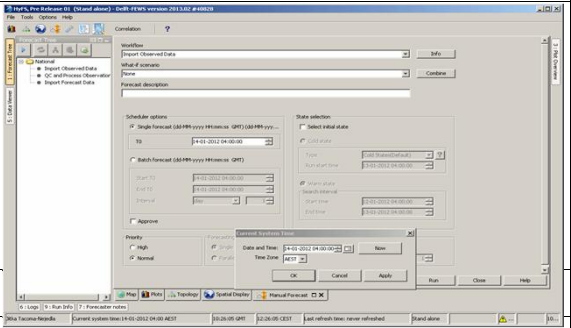# Delft-FEWS Release Notes 2013.02
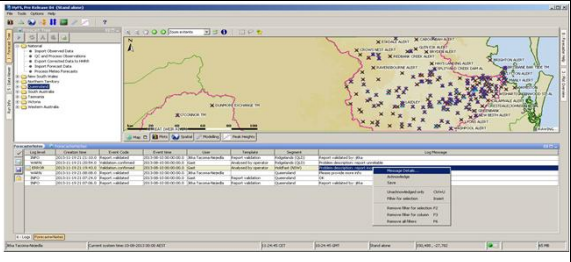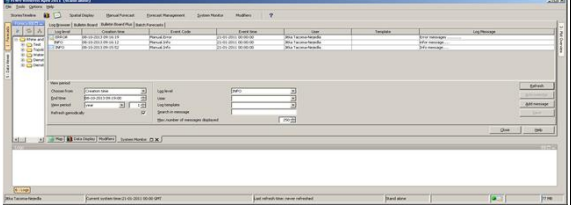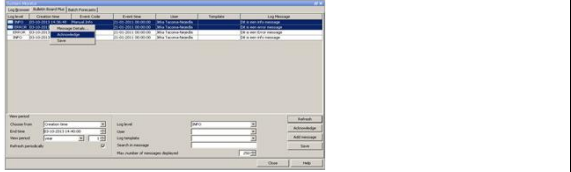
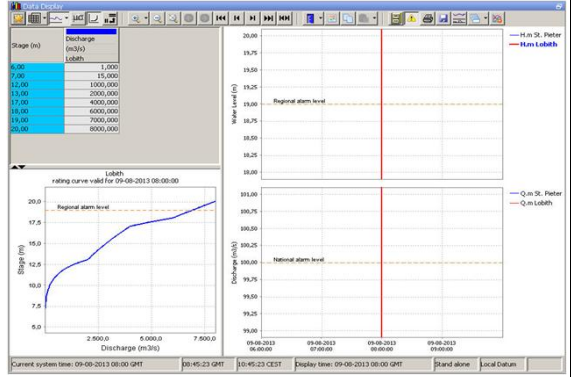| Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
App - Admin Web User Interface	FEWS-7610	FEWS-4830 Missing sort functionality in Admin interface, Forecast tasks.description, ScheduledTasks.description, Status.text, Workflow.description		Sorting functionality on several columns in the Admin interfaces that was missing has been added.		
App - Admin Web User Interface	FEWS-9207	SEPA: Admin Interface Improvements				
App - Archive	FEWS-8841	FEWS-8462 Archieve retrieval: full data snapshot in SA				
App - Archive	FEWS-8085	FEWS-8462 Archive Storage: Modifiers				
App - Archive, Plugin - Gui - Time Series	FEWS-8838	FEWS-8462 Archive discovery: timeseries and documents				
App - Archive, App - Operator Client Gui	FEWS-8842	FEWS-8462 Archive retrieval: document in OC				
App - Archive	FEWS-8836	FEWS-8462 Archive storage: data filtering method to identify data to be included in data snapshot for storage (D27)				
App - Archive	FEWS-8837	FEWS-8462 Archive storage: storage external documents				
App - Archive	FEWS-10406	ArchiveDataManagement tool				
App - Archive	FEWS-10093	FEWS-8462 Bug oplossen met dubbele headers in NetCDF voor simulated series				
App - Archive	FEWS-9849	add a check for overlapping events				
App - Archive	FEWS-10483	FEWS-8462 archive folder structure: reorganize from yyyy/area/mm/dd to yyyy/mm/area/dd				
App - Archive, Plugin - Gui - Archive Display	FEWS-10121	FEWS-8462 archive: enable file attachement to event	Details are available at ttps://publicwiki.deltares.nl/display/FEWSD OC/25.+The+Deltares+Open+Archive	The new archive allows the user to attach files to events.		
App - Archive	FEWS-10289	FEWS-8462 areas should be defined in the archive not at the client				
App - Archive	FEWS-10049	FEWS-8462 enable download of external forecasts				
App - Configuration Manager Gui	FEWS-5352	From method SessionMsgHandler.doHandleMessage remove the code that was added for backwards compatibility when using an MC version 2010.02 or above and an older version of the OC/ConfigManager	Legacy message handling for the ConfigManager version 2010_01 has been removed.			
App - Configuration Manager Gui	FEWS-9760	FEWS-8834 Update configManager config file in development branch				
App - Configuration Manager Gui	FEWS-19515	FEWS-8834 Validate of config in config manager must support all new features	The ConfigManager validation now follows up with new 2013.02 functionality and therefore now skips checking module descriptors (became optional) and module instance id elements with the $-tags (tags are resolved later and will not be checked).			
App - Configuration Manager Gui	FEWS-9995	FEWS-8462 add ArchiveModuleDisplay file to Config manager	The archiveModuleDisplay config file type has been added to the DisplayConfigFiles so that it is supported by the ConfigManager.			
App - Data Import Module (DIM), System - PI Service	FEWS-10013	FEWS-9814 Functionality to have in an external forecast a forecast ID that is supplied by the import (e.g. PI import) or PI webservice	Functionality to have in an external forecast a forecast ID that is supplied by the import (e.g. PI import) or PI webservice			
App - Data Import Module (DIM)	FEWS-9901	Import USGS TWIS data	Import type "UsgsTwis"			
App - Data Import Module (DIM)	FEWS-9645	LMW datafeeds: Import module voor Duits csv	Import bestaat al: PegelOnline. Test toegevoegd			
App - Data Import Module (DIM)	FEWS-9646	LMW datafeeds: Import module voor KNMI csv				
App - Data Import Module (DIM)	FEWS-9647	LMW datafeeds: Import module voor LIXHE				
App - Data Import Module (DIM)	FEWS-9648	LMW datafeeds: Import module voor UKMO XML				
App - Data Import Module (DIM)	FEWS-9649	LMW datafeeds: Import module voor Vlaanderen CSV				
App - Data Import Module (DIM)	FEWS-9644	LMW datafeeds: Import module voor WEATHERDATA		ImportType "LmwWeatherdata"		
App - Data Import Module (DIM)	FEWS-9650	LMW datafeeds: Import module voor Wallonie CSV				
App - Delft-FEWS, App - Operator Client Gui	FEWS-10365	FEWS-9915 Explorer: conflict concerning control of system time between watercoach and stand alone				
App - Delft-FEWS	FEWS-9107	Improvements to about box: info should be easier to send by making its text selectable. Also size of localdatastore is missing.	The about box now displays the size of the embedded datastore (if any). Also the text in the about box is made focusable so that it can be copied to the clipboard.			
App - Master Controller Server	FEWS-10438	Add log messages in MC Code and include Task id to see what causing the issue		The AdminInterface now also displays the taskid in error log when invalid xml is encountered in taskrun overview page.		
App - Master Controller Server	FEWS-8917	Create MC script/task: Shutdown FSS (service) after finishing current workflow				

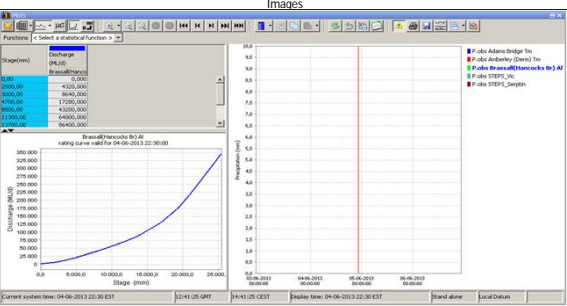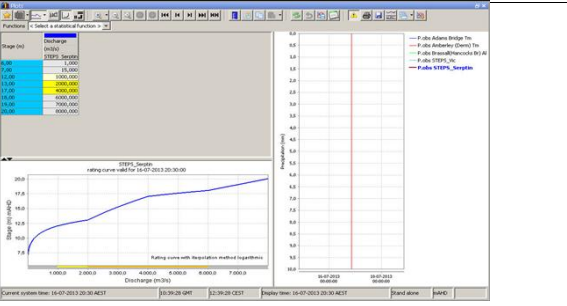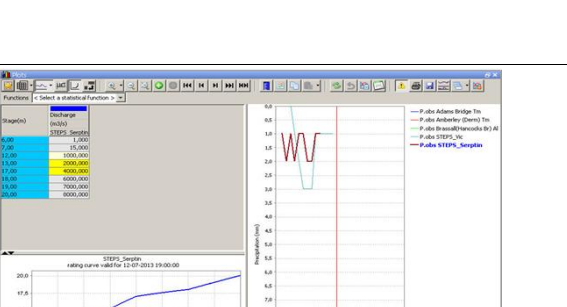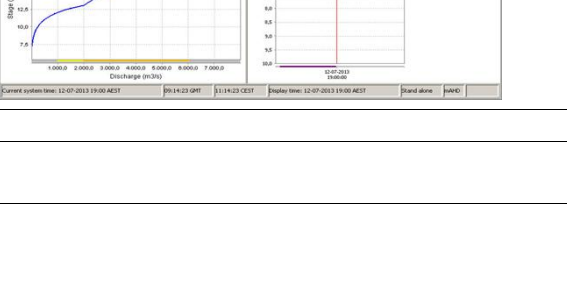| Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
App - Master Controller Server	FEWS-9389	Dynamic subject for emailalerts, use of tags in Tasklist			```xml\n<mcSystemAlerter>\n<alerts>\n<emailalert>\n<recipients>\n<recipient email="daniel.twigt@deltares.nl"/>\n</recipients>\n<configuration>\n<smtp host="smtp.deltares.nl" port="25" user="FEWS MC System Alerter" fromaddress="daniel.twigt@deltares.nl"/>\n</configuration>\n<subject>\n<subjectline content="Waarschuwingsberichten RWsOS Meren: DATE_TIME"/>\n<substitutions>\n<tag tagid="DATE_TIME"/>\n</substitutions>\n</subject>\n<body value="Dit is een detailuitwerking per beheerder / provincie van het waarschuwingsbericht van de WDIJ. U bent reeds door de WDIJ medewerker gebeld met de waarschuwing. Telefoon nummer waterkamer: 032 029888. E-mail adres waterkamer:Waterkamer@rws.nl."/>\n<attachments>\n<attachment maxsize="100000" xsi:type="reportsattachmentType">\n<filename prefix="Overzicht" includedatestamp="true"/>\n<reportcontents>\n<latestreportsselection includeselection="true">\n<includes>\n<moduleinstanceid>Report_Beheerders_Overzicht</moduleinstanceid>\n</includes>\n</latestreportsselection>\n<currentreportsselection includeselection="false">\n<excludes/>\n</currentreportsselection>\n</reportcontents>\n</attachment>\n</attachments>\n</emailalert>\n</alerts>\n</mcSystemAlerter>\n```	
App - Master Controller Server	FEWS-10220	FEWS-9915 Edit oracle / postgresql database script to allow probing the actual and max number of connections / sessions				
App - Master Controller Server	FEWS-7979	Install MC services on windows with delayed start	Updated installation guide: http://publicwiki.deltares.nl/display/FEWS DOC/Delft+FEWS+Installation+-+Configure+MasterController+application			
App - Master Controller Server	FEWS-9219	MC LogProcessor does not restart automatically in case there are too many log messages since logParserTimes.lastLogParseTime	The MC System Monitor will run smoother when it was offline for a while and there are lots of logmessages to process.	The performance of the MCLogEventHandler has been radically improved when there are many records to be processed, also no events are generated for log entries older than five days.		
App - Master Controller Server	FEWS-9314	FEWS-9305 MC: Review conditions when MC showing "FAILED"				
App - Master Controller Server, App - Operator Client Gui, Database	FEWS-9296	FEWS-9257 Pop-up message on starting OC in case the OC bin version does not match the MC version				
App - Operator Client Gui	FEWS-10324	FEWS-9915 Add grace time to Topology				
App - Operator Client Gui	FEWS-10636	Delft-FEWS Toolbar does not tell you the system is in failover mode		If OC is in failover mode the status bar shows an orange background, rechecked every 15 seconds.		
App - Operator Client Gui	FEWS-8831	FEWS-8834 ForecasterNotes: add tagging mechanism (selection from enumeration) to improve searching (D24)				
App - Operator Client Gui	FEWS-9979	FEWS-9915 Language file toevoegen aan topology				
App - Operator Client Gui	FEWS-8750	FEWS-8804 Make timeZone adjustable in fews gui (D7)	In Explorer.xml several time zones can be configured. These configured time zones are listed in the same date/time popup, where also the system time can be changed (see attached picture) The user is then able to change interactive the time zone. After confirmation of the selected time zone, the Fews GUI is reloaded to make the new time zone active in all displays.	FewsExplorer and changing time zone	Example from Explorer.xml ```xml\n.......\n<dateTime>\n\n<timeZoneName>GMT</timeZoneName>\n<timeZoneName>AWT</timeZoneName>\n<timeZoneName>ACST</timeZoneName>\n<timeZoneName>AEST</timeZoneName>\n<timeZoneName>ACT</timeZoneName>\n<timeZoneName>AET</timeZoneName>\n<dateTimeFormat>dd-MM-yyyy HH:mm:ss</dateTimeFormat>\n<cardinalTimeStep unit="minute" multiplier="15"/>\n<adjustSystemTimeAutomatically>false</adjustSystemTimeAutomatically>\n</dateTime>\n.....\n```	
App - Operator Client Gui	FEWS-9630	FEWS-8834 Water Coach - ForecasterHelp should ignore .partial files				
Configuration, Database, Plugin - Gui - Time Series	FEWS-10302	FEWS-10276 (#P3) Middernacht weergeven als 24:00:00 van de afgelopen dag				
Configuration, Plugin - Module - Data Import	FEWS-10245	FEWS-10306 Importing to related locations does not work				
Configuration	FEWS-4755	FEWS-8834 ModuleDescriptors.xml, DisplayInstanceDescriptors.xml and DisplayDescriptors.xml are redundant	Th configurator does not need to define ModuleDescriptors, DisplayDescriptors or DisplayInstanceDescriptors. The code now recognizes automatically what it module/display to use for a configuration file.\n\nModuleInstanceDescriptors are still needed, but do not need a moduleId anymore.	ModuleDescriptors, DisplayDescriptors and DisplayInstanceDescriptors are redundant.		

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Configuration, Database	FEWS-9819	FEWS-9915 ModuleInstanceSets must enable wildcard pattern for moduleinstanceIds				
Configuration	FEWS-10239	FEWS-9814 TimesOfDayDaylightSavingTimeStep. Times of day with time zone that supports daylight saving.	backport naar 2013.02 BPA			
Data Access Component	FEWS-10120	Create a Json webservice that interacts with DAC				
Data Access Component	FEWS-9343	Data Access Component: Add logging				
Data Access Component	FEWS-9680	Wabis: Install test system				
Database	FEWS-9853	FEWS-8462 Historic events: add HistoricEvents table to database				
Database	FEWS-9283	FEWS-8834 HyFS testen met direct data access by BOM over VPN, extra logging toevoegen over verbinding				
Database	FEWS-10197	Modifiers table in MC schema should also contain whatIfId.		The whatIfId column has been added to the modifiers table in the master controller database schema.		
Database	FEWS-19524	FEWS-8834 Use attribute together with relation in locationSets file to make locationSets				
Database	FEWS-9798	FEWS-9915 User mag maar 1 keer ingelogged zijn op Centrale Server bij Direct Database Access				
Debug Tool - Database Viewer	FEWS-10655	FEWS-8617 Improve and make calculation of duration (period) consistent				
Debug Tool - Database Viewer	FEWS-9665	FEWS-8617 Visible Columns List should be a Thematic Tree				
Module Adapter - All, Plugin - Module - Data Export	FEWS-8958	FEWS-8955 Create IDF Export Routine				
Module Adapter - All, Plugin - Module - Data Import	FEWS-8957	FEWS-8955 Create IDF Import Routine				
Module Adapter - All, Plugin - Module - Data Export	FEWS-8960	FEWS-8955 Create IPF Export Routine				
Module Adapter - All, Plugin - Module - Data Import	FEWS-8959	FEWS-8955 Create IPF Import Routine				
Module Adapter - All	FEWS-9545	FEWS-8828 Error in SWIFT Adapter when running on LINUX				
Module Adapter - All	FEWS-10885	FEWS-9916 Improve SWIFT adapter				
Module Adapter - All	FEWS-9156	FEWS-8804 RPP adapter				
Module Adapter - All, Plugin - GUI - IFD - Forecasts	FEWS-8829	FEWS-9915 Run Info tab: add more model run specific information to the run info tab (D8, D20, D32)				
Module Adapter - All	FEWS-8961	FEWS-8955 Run iMod for an extent / cut-out area only				
Module Adapter - All	FEWS-8819	FEWS-8804 SWIFT adapter improvement (D21)				
Module Adapter - All	FEWS-8818	FEWS-8828 URBS parameter adapter improvements				
Module Adapter - All	FEWS-9096	FEWS-9092 update EFDC model adapter	In General Adapter added new exportCustomFormatRunFileActivity to create a custom run info file. This activity replaces tags in a template file with actual (modified) values. The template file can contain location attribute tags between '@' signs, general adapter tags between '%' signs and global properties between '$' signs. The specified template file will be copied to the specified export file before the tags are replaced. So the template file itself is not changed. If the export file already exists, then it will be overwritten. Also added new tags %START_DATE_TIME% and %END_DATE_TIME% to general adapter.	Added new ExportCustomFormatRunFileActivity and new tags %START_DATE_TIME% and %END_DATE_TIME% to general adapter.	{code} <?xml version="1.0" encoding="UTF-8"?> <generalAdapterRun 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/generalAdapterRun.xsd"> <general> <rootDir>../junit_test_output/nl/wldelft/fews/system/plugin/generaladapter</rootDir> <workDir>%ROOT_DIR%/work</workDir> <exportDir>%ROOT_DIR%/exportDir</exportDir> <importDir>%ROOT_DIR%/exportDir</importDir> <dumpFileDir>%ROOT_DIR%/../dumpDir</dumpFileDir> <dumpDir>%ROOT_DIR%</dumpDir> <diagnosticFile>%WORK_DIR%/diag.xml</diagnosticFile> <timeZone> <timeZoneOffset>+09:00</timeZoneOffset> </timeZone> <startDateTimeFormat>yyyy MM dd HH mm</startDateTimeFormat> <endDateTimeFormat>yyyy MM dd HH mm</endDateTimeFormat> </general> <activities> <exportActivities> <exportCustomFormatRunFileActivity> <templateFile>../../../../../../src/test/nl/wldelft/fews/system/plugin/general adapter/testfiles/templatefiles/event_tox2_template.inp</templateFile> <exportFile>event_tox2.inp</exportFile> <locationId>locationWithAttributes</locationId>	
Module Adapter - Delft3D	FEWS-9739	Coupling of waterlevels, Delft3D FLOW and WAVE	Added option skipFirstTimeStep in Delft3DWavePreAdapter			
Module Adapter - Delft3D	FEWS-10596	Incorporate changes to Delft3D-PART Pavlo Zemskyy				
Module Adapter - HEC	FEWS-8888	FEWS-8858 Read the end time of the simulation from the last time step of the simulation				
Module Adapter - HEC-HMS	FEWS-9228	FEWS-8858 Datatype PER-AVER and INST-CUM not supported				
Module Adapter - HEC-HMS	FEWS-9230	FEWS-8858 Improve HEC-HMS adapter diagnostics				
Module Adapter - HEC-HMS	FEWS-9233	FEWS-8858 Improve use of PI run file				
Module Adapter - HEC-HMS	FEWS-9231	FEWS-8858 Option to choose between Event Model or Continuous Model Mode				

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Module Adapter - HEC-HMS	FEWS-8887	FEWS-8858 Warning/error when a time series is exported with a different time step than required by the model.				
Plugin - Gui - Archive Display	FEWS-10091	FEWS-8462 Add refresh button on Archive Display				
Plugin - Gui - Archive Display	FEWS-9736	FEWS-8462 De Archive export van ensembles gaat nog niet goed				
Plugin - Gui - Archive Display	FEWS-10092	FEWS-8462 Download model states from Archive display				
Plugin - Gui - Correlation	FEWS-9624	FEWS-8834 Correlation Display - add on-the-fly unit conversion functionality (toggle) in correlation display, similar as in TSD				

Plugin - Gui - Correlation	FEWS-8814	FEWS-8804 Correlation Display: Correlationdisplay should follow IFD node selection			`<?xml version="1.0" encoding="UTF-8"?>`
					`<topologyGroup 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/topologyGroup.xsd">`
					`<group id="VIC">`
					`<nodes id="Ovens_riverbasin" name="Ovens Basin">`
					`<node id="Ovens_Process_Observations" name="QC and Process observations">`
					`<workflowId>Process_Observations</workflowId>`
					`</node>`
					`<nodes id="Ovens_Correlation" name="Correlation">`
					`<node id="H583148-01" name="BRIGHT FLD">`
					`<locationId>H583148-01</locationId>`
					`</node>`
					`<node id="H083001-01" name="HARRIETVILLE FLD">`
					`<locationId>H083001-01</locationId>`
					`</node>`
					`<node id="H582033-01" name="WANGARATTA COMB">`
					`<locationId>H582033-01</locationId>`
					`</node>`
					`<node id="H082105-01" name="CHESHUNT">`
					`<locationId>H082105-01</locationId>`
					`</node>`
					`<node id="H582004-01" name="DOCKER RD BRIDGE">`
					`<locationId>H582004-01</locationId>`
					`</node>`
					`<node id="H582014-01" name="ROCKY POINT">`
					`<locationId>H582014-01</locationId>`	

Plugin - Gui - Correlation	FEWS-9093	FEWS-8828 Correlation Display: Plot the Travel time vs Height				
Plugin - Gui - Correlation, Plugin - Module - Correlation	FEWS-8813	FEWS-8804 Correlation Display: Remove correlation related descriptor files				
Plugin - Gui - Correlation	FEWS-8811	FEWS-8804 Correlation Display: accommodate multiple tags	Multiple tags allowed in CorrelationEventSetsFile: Up to five tags can be entered for each event.		`<event eventId="1966_8_1" value="19.9" date="1966-08-21Z" time="14:00:00Z" tag="dummy time" tag1="since 2000" tag2="" tag3="" tag4=""/>`	
Plugin - Gui - Correlation	FEWS-8812	FEWS-8804 Correlation Display: accommodate tag specific color in the scatterplot				
Plugin - Gui - Correlation	FEWS-8810	FEWS-8804 Correlation Display: add comment in scatter plot tooltip				
Plugin - Gui - Correlation	FEWS-8805	FEWS-8828 Correlation Display: add filter on travel time				

Plugin - Gui - Correlation	FEWS-8815	FEWS-8804 Correlation Display: allow configuration of user-defined relation to be plotted as separate line	Configure user define relations in the CorrelationDisplay configuration file. Here one can add the line points and style. Each relation can be referenced from the TravelTimes file using the userDefinedRelation id.
			
			It is important to configure the user defined relation in the correct CorrelationDisplay file. The CorrelationDisplay file that is used by a certain TravelTime element is defined by the downstream Location + Parameter. The paremter from the downstream location must match the parameter of the inputTimeSeriesInfo element in the CorrelationDisplay, secondly the downstream location id + parameter must be available in the CorrelationEventsSets file that is reference by the CorrelationDisplay.
					CorrelationDialog:
					
					`<?xml version="1.0" encoding="UTF-8"?>`
					`<correlationDisplay 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/correlationDisplay.xsd"`
					`version="1.1">`
					`<inputTimeSerieInfo>`
					`<moduleInstanceId>ImportHCS</moduleInstanceId>`
					`<parameterId>H.obs</parameterId>`
					`<timeSeriesType>external historical</timeSeriesType>`
					`<timeStep unit="minute" multiplier="15"/>`
					`<relativeViewPeriod unit="day" end="2" start="-4"/>`
					`<readWriteMode>add originals</readWriteMode>`
					`</inputTimeSerieInfo>`
					`<eventSetsDescriptorId>PeakHeightsEvents_VIC_Ovens</eventSetsDescriptorId>`
					`<travelTimesDescriptorId>PeakHeightsTravelTimes_VIC_Ovens</travelTimesDescriptorId>`
					`<eventSelectionType>combined</eventSelectionType>`
					`<outputTimeSerieInfo>`
					`<moduleInstanceId>PeakHeights_Correlation</moduleInstanceId>`
					`<parameterId>H.correlated</parameterId>`
					`<timeSeriesType>external historical</timeSeriesType>`
					`<timeStep unit="nonequidistant"/>`
					`<relativeViewPeriod unit="day" start="-4" end="2"/>`
					`<readWriteMode>add originals</readWriteMode>`
					`</outputTimeSerieInfo>`	
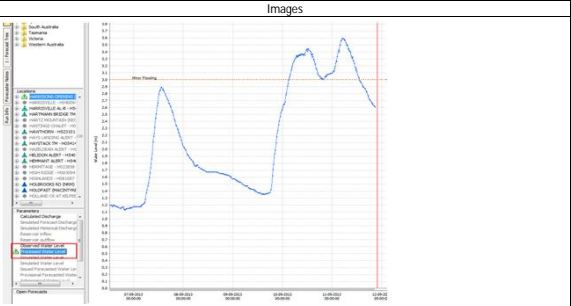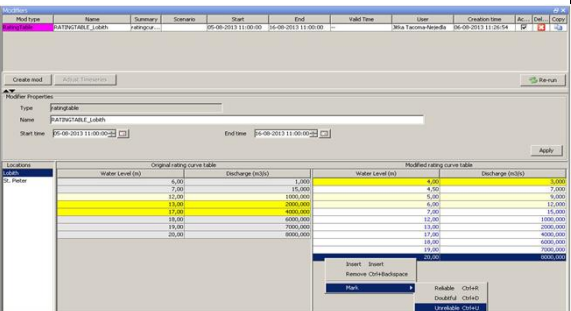
Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Gui - Forecast Dialog	FEWS-8830	FEWS-8834 IFD: set by run start time by default using the start time of the latest current run	For event based models, the start time of a run should be fixed to the start time of the event. When a new event starts, the start time is set. The next run in the IFD can now derive its (cold state) start time from the start time of the Current run. This functionality is defined in the node of the Topology.xml by referencing the Current workflow from which the start time should be derived.		{code:xml} <node id="allinitial_bellinger" name="Bellinger All Initial"> <workflowId>Bellinger_URBS_IFD_Forecast</workflowId> <coldStateFromCurrentRun> <workflowId>Bellinger_URBS_Official_Forecast</workflowId> </coldStateFromCurrentRun> <defaultModifierId>URBS</defaultModifierId> {code}	
Plugin - Gui - Forecast Dialog	FEWS-9278	FEWS-8769 Reports can't run as local task in the IFD				
Plugin - Gui - Grid Display, Plugin - Module - Transformation	FEWS-9253	FEWS-8834 Add Itensity Frequency Duration analysis capability to the grid display	In ThresholdValueSet added option to configure levelThresholdValues with different values for different aggregationTimeSpans. A typical use of this feature is to visualize return periods for rainfall events of a certain period, e.g. in combination with the time step aggregation slider in the Spatial Display. If for a certain timeSeries there is no aggregationPeriod in the timeSeriesSet, levelThresholdValues with different values for different aggregationTimeSpans are ignored. In that case only the normal levelThresholdValues are applicable and used for that timeSeries.	In ThresholdValueSet added option to configure levelThresholdValues with different values for different aggregationTimeSpans.	{code} <thresholdValueSet id="thresholdValueSetWithAggregationTimeSpans"> <aggregationLevelThresholdValues> <levelThresholdId>1YRP</levelThresholdId> <timeSpanValue unit="hour" multiplier="1" value="1.0"/> <timeSpanValue unit="hour" multiplier="3" value="0.9"/> <timeSpanValue unit="hour" multiplier="6" value="0.8"/> </aggregationLevelThresholdValues> <aggregationLevelThresholdValues> <levelThresholdId>2YRP</levelThresholdId> <timeSpanValueFunction unit="hour" multiplier="1" value="@IFD_2Y_1H@"/> <timeSpanValueFunction unit="hour" multiplier="3" value="@IFD_2Y_3H@"/> <timeSpanValueFunction unit="hour" multiplier="6" value="@IFD_2Y_6H@"/> </aggregationLevelThresholdValues> <timeSeriesSet> <moduleInstanceId>ThresholdCheck</moduleInstanceId> <valueType>scalar</valueType> <parameterId>P.m</parameterId> <locationId>H-2025</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="hour" multiplier="1"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </thresholdValueSet> {code}	
Plugin - Gui - Grid Display, Plugin - Gui - Time Series Modifier	FEWS-8845	FEWS-8828 BoM-HyFS: Toggle displayunit in more Displays				
Plugin - Gui - Grid Display	FEWS-9422	FEWS-8769 NWS: InterruptedException spatial thumbnails after resizing and selecting other display		A rare InterruptedException in the SpatialThumbnailPanel was fixed.		
Plugin - Gui - Grid Display, Plugin - Module - Reports	FEWS-9434	New option to export .pngw file for a .png file exported in the reportsModule				
Plugin - Gui - Grid Display	FEWS-9493	FEWS-8828 Save more info in png file of spatial display				
Plugin - Gui - Grid Display	FEWS-9293	FEWS-8828 Spatial Display accumulation slider label aanpassen zodat disabled niet meer getoond wordt. Dit moet originele tijdstap zijn.				
Plugin - Gui - Grid Display	FEWS-8827	FEWS-8828 SpatialDisplay: visualize spatially where a timeseries modifier is applied (D14)	Within the Spatial Display, the button for Quality Flags has become a dropdown box withe the additional option to show spatially where timeseries modifiers are applied.	SpatialDisplay: visualize spatially where a timeseries modifier is applied		
Plugin - Gui - Grid Display	FEWS-9074	Total sum on accumulation slide bar				
Plugin - GUI - IFD - Forecaster Help	FEWS-9655	FEWS-8834 Uitbreiden Forecaster folder structuur met template			{code:xml} <forecasterHelperDirectories> <directory>%REGION_HOME%/Products</directory> <allNodesDirectory>%REGION_HOME%/Products/national</allNodesDirectory> <multipleNodesDirectory nodeIdPrefix="newsouthwales">%REGION_HOME%/Products/newsouth wales</multipleNodesDirectory> <multipleNodesDirectory nodeIdPrefix="urbs">%REGION_HOME%/Products/urbs</multipleNodesDirectory> </forecasterHelperDirectories> {code}	
Plugin - Gui - Map	FEWS-9669	FEWS-8834 Allow use of location attributes in tool tip				
Plugin - Gui - Map	FEWS-9504	FEWS-8828 Also show thresholds for filters with validationIconsVisible=true				
Plugin - Gui - Map	FEWS-9285	FEWS-8828 Filters.xml: allow sub-filtering by moduleInstanceId from moduleinstanceSet				
Plugin - Gui - Map	FEWS-9477	FEWS-8828 Show location tool tips in explorer tree				
Plugin - Gui - System Monitor	FEWS-10447	FEWS-9915 Change background color of a tooltip in ForecasterNotes				

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Gui - System Monitor	FEWS-9672	FEWS-9915 Couple forecasterNotes (bulletinBoardPlus) to Topology.xml (filter messages)				
Plugin - Gui - System Monitor	FEWS-10330	FEWS-9916 Refactoring Manual logEntries (alias ForecasterNotes) text storage in the database field logMessage	Manual messages are (mostly) created manually by the user in the GUI plugins, i.e. in messages makers/viewers. The plugin ForecasterNotesDisplay stores the entered message in een xml file according to the schema LogMessage.xsd Schema LogMessage.xsd has one obligatory field "message" to store any text, and several optional attributes to store message properties. Presently we can use these attributes: userId, topologyNodeId, areaId, templateId, eventDate and eventTime. The components, that read the manual message from the database and are also interested in the field logMessage, should 'unwrap' the content of logMessage using the method LogMessage.createFromXmlText(xmlText), where xmlText is the content of database field logMessage LogEntriesTable: The methods of Fews class LogEntriesTable	Manual message (alias ForecasterNote) is stored as LogMessage.xml in the database field logMessage		
Plugin - Gui - System Monitor	FEWS-9625	FEWS-8834 Water Coach - F12 option to delete all manual log messages from the LDS				
Plugin - Gui - System Monitor	FEWS-9626	FEWS-8834 Water Coach - email notification (envelope, next to logLevelIcon) in ForecasterNotes (bulletinBoardPlus)	An envelope appears in FewsExplorer status bar if there are any unread messages in BulletinBoardPlus/ForecasterNotes . If at least one of the messages has error or fatal status, then an envelope icon with an exclamation mark appears. When all messages in BulletinBoardPlus are acknowledged, the envelope icon disappears.	Notification in FewsExplorer status bar if there are any unread manual messages in BulletinBoardPlus/ForecasterNotes		
Plugin - Gui - System Monitor	FEWS-9628	FEWS-8834 Water Coach - indication if you have read a message in forecasterNotes	All incoming messages in ForecasterNotes (BulletinBoardPlus) are marked with an envelope. When we have aknowledged a message, the envelope icon disapper. The way how to aknowledge the messages is the same as in the LogBrowser	ForecasterNotes (BulletinBoardPlus) - an indication whether a message has already been read		
Plugin - Gui - System Monitor	FEWS-9627	FEWS-8834 Water Coach - optional pop-up when new manual message arrives in forecasterNotes (bulletinBoardPlus)				

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Gui - TaskRunDialog	FEWS-9342	Lay-out of command buttons on TaskRunDialog not consistent with other buttons				
Plugin - Gui - Time Series	FEWS-3688	FEWS-3646 2.1d - Frequentiediagram / histogram per interval (dag, maand, seizoen, jaar, bepaalde periode) --> 'Gaussian-curve' bij natuurlijke fluctuaties [OC1]				
Plugin - Gui - Time Series	FEWS-10656	Add same color indicator as corresponding TimeSeries to Comment, Validation and User columns				
Plugin - Gui - Time Series	FEWS-9294	FEWS-8828 Add thresholds in Rating Curve plot, similar to standard time series plot	Thresholds configured for stage and/or discharge parameter are also shown in the rating curve plot. If the stage is on the vertical axis, stage thresholds are shown, otherwise the discharge thresholds are shown. Using TSD toobar we can choose which thresholds should be displayed, similar to the scalar plots

Note that all thresholds, that are configured for stage cq discharge parameter, are always collected.

See the configuration example below. In this case the rating curve plot shows 2 thresholds (25.0 and 19.0)

{code:xml}
<thresholdValueSet id="TVS1" name="TVS1">
<levelThresholdValue>
<levelThresholdId>evacuation</levelThresholdId>
<value>25</value>
</levelThresholdValue>
<timeSeriesSet> | Threshold markers in the rating curve plot | | |
| Plugin - Gui - Time Series | FEWS-9896 | FEWS-8462 Archive Display: Display of Historic Event time series in Time Series Display | | | | |
| Plugin - Gui - Time Series | FEWS-9190 | FEWS-8804 DisplayGroups: add moduleinstanceidfilter to display | Within the DisplayGroups, a plot template can be defined for reuse in displays. Often such PlotId uses a timeSeriesSet which holds a bulk moduleInstanceSet as well as a bulk locationSet. A display can point to the plot template and filter for locations. When multiple moduleInstances (in the set) generate a timeseries for the location, an exception is thrown that the software does not know which candidate moduleinstance to show. Similar to the location filtering, a moduleinstance filtering mechanism has been added to the display.

When using this filter, all moduleinstances should be listed which should be shown in the display, even if some of these moduleinstances are individually defined in a timeseriesset as part of the plot. In the example, the plot holds a timeSeriesSet with moduleInstanceSet URBS_Forecast, as well as a timeSeriesSet with moduleInstanceId LevelToFlow as well as a timeSeriesSet with moduleInstanceId Normalize_RiverTelemetry | DisplayGroups: add moduleInstanceId filtering to display when using plot template | {code:xml}
<singleLocationDisplays>
<locationSetId>URBS_matching.border_wallangra</locationSetId>
<moduleInstanceId>Border_Wallangra_URBS_Forecast</moduleInstanceId>
<moduleInstanceId>LevelToFlow</moduleInstanceId>
<moduleInstanceId>Normalize_RiverTelemetry</moduleInstanceId>
<plotId>URBS_1h</plotId>
</singleLocationDisplays>
{code} | |
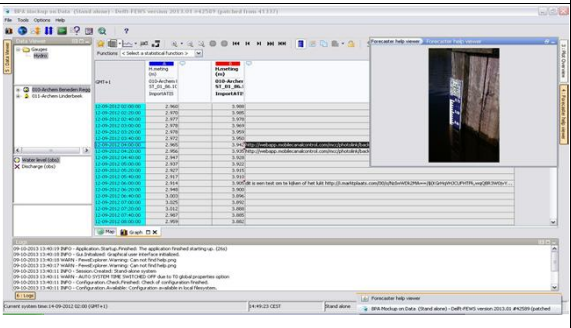
Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Gui - Time Series	FEWS-9083	FEWS-8804 Improve accessibility of TS RatingCurve display	If there are any rating curves in the region configuration, they can be shown in TimeSeriesDialog with the ToolBar button "Rating curve" . The rating curve is shown for the location that is associated with the selected series. If there are no series selected in the TimeSeriesDialog, the display shows the rating curve for the first location with rating curve. The location id/name is visible in the title of the rating curve chart. If the location, associated with the (selected) series, has no rating curve, an empty panel appears with the text "no rating curve is available" If you have also "Statistics" button on ToolBar, you can display Rating curve or statistics, not both. When you select "Rating curve" button, the "Statistics" becomes deselected and vice versa.	Rating curve in TimeSeriesDisplay		
Plugin - Gui - Time Series	FEWS-9495	FEWS-8804 Only allow show the global datum when available for all time series in the sub plot.				
Plugin - Gui - Time Series	FEWS-8823	FEWS-8828 Rating Curve Display: enable and show comment to rating curve	Rating curve comment, that is available in the rating curve header, is displayed in the chart title of the rating curve plot. The title is automatically wrapped if it is longer than the chart width. Note that the comments can be presently displayed only if we visualize rating curve in the TimeSeriesDisplay	Comments in rating curve plot		
Plugin - Gui - Time Series	FEWS-8824	FEWS-8804 Rating Curve display: enable togling axis (flow horizontal, stage vertical)	The default stage axis orientation is horizontal. If the vertical orientation is preferred, it can be specified in TimeSeriesDisplay.xml	Rating curve display: orientation of the stage axis	{code:xml} <ratingCurveDisplayConfig> <stageAxisOrientation>vertical</stageAxisOrientation> </ratingCurveDisplayConfig> {code}	
Plugin - Gui - Time Series	FEWS-8822	FEWS-8828 Rating curve display: show quality flags	A quality flag can be assing to each separate stage-discharge of the rating curve table. Similar to Time Series, the RatingCurve Display shows these flags using different colors for different quality flags. The row with a flag is colored in RatingCurve display table, and the colored bar is shown along the x-axis. To show the colored flag bar, the user should first select 'Show data label' in TimeSeriesDisplay tool bar. The chart shows interpolated values between separate table values. All interpolated values between table value A and B will get a color of flag A. Starting with table value B, all interpolated values will get a color of flag B, up to the next table value flag	RatingCurve display shows quality flags		
Plugin - Gui - Time Series	FEWS-9520	FEWS-8828 TSD. Add persistent void to the flag bar.				
Plugin - Gui - Time Series	FEWS-8796	FEWS-8834 TSEditor: add explicit method to specify forecast time when manually adding/editing forecast timeseries				

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Gui - Time Series, Plugin - Module - Thresholds	FEWS-9591	FEWS-8834 Thresholds and flags are not displayed for nonequidistant data				
Plugin - Gui - Time Series Modifier	FEWS-9202	FEWS-8804 AttributeModifiers table: enable hiding original column	By default, the LocationAttributeModifiers are presented as a table with parameters along the rows, and locations along the columns. for each location, a column is shown with original values and a column for the modified values. A configuration option has been added to hide the original values column.	LocationAttributeModifiers table: enable hiding originals values column	{code:xml} <locationAttributeModifier id="URBS" name="URBS Model Parameters"> <expiryTime unit="day" multiplier="14"/> <showOriginalValues>false</showOriginalValues> <modifiableGroup name="URBS Sub-catchments"> {code}	
Plugin - Gui - Time Series Modifier	FEWS-9711	FEWS-9915 Improve several display features in missingValueModifier				
Plugin - Gui - Time Series Modifier	FEWS-9344	FEWS-8828 LocationAttribute Modifier: allow tableLayout in combination with templateList				
Plugin - Gui - Time Series Modifier	FEWS-9332	FEWS-8828 LocationAttribute Modifier: allow templateId to be stored as attribute				
Plugin - Gui - Time Series Modifier	FEWS-9353	FEWS-9915 LocationAttribute modifier panel layout: add status bar info messages				
Plugin - Gui - Time Series Modifier	FEWS-9932	FEWS-9915 Summary of Missing modifier must be changed				
Plugin - Gui - Time Series Modifier	FEWS-9204	FEWS-8804 attribute modifier: enable location specific info using attributes	The LocationAttributeModifier presents in the statusbar the attribute description as an information message. This description is not location specific. A new configuration option has been added which allows location specific information to be presented in the status bar using a location attribute.	LocationAttributeModifier now facilitates location specific attribute comments	{code:xml} <attribute id="URBS_IF"> <comment>Advice for this sub-catchment: @URBS_IF_ADVICE@</comment> </attribute> {code}	
Plugin - Gui - Time Series Modifier	FEWS-9122	create scenario option for modifiers				
Plugin - Gui - Time Series Modifier	FEWS-8825	FEWS-8828 rating Curve Modifier: allow modification by table layout, including flags and comments	tableRatingCurveModifier can be used to change rating curve table. The modifier display shows the original rating curve on the left side. On the right side the rating curve table can be changed. Use popup menu to insert and delete table rows, and to change the flags. The popup menu is enabled if at least one table row is selected. To insert a new row, select exactly one table row and the new row will be added after this selected row. The new row is automatically filled with default values. To delete the rows, or to change the flags, select one or more table rows Table rows,that are edited or inserted, get the flag 'corrected reliable' by default. This default flag can be changed using popup menu.	tableRatingCurveModifier	To enable the tableRatingCurveModifier, add the following section to the ModifierTypes.xml: {code:xml} <ratingCurveModifiers> <tableRatingCurveModifier id="ratingtable" name="RatingTable"> <defaultStartTime>start run</defaultStartTime> <defaultEndTime>end run</defaultEndTime> </tableRatingCurveModifier> </ratingCurveModifiers> {code}	
Plugin - Module - Archive	FEWS-19516	FEWS-8462 Add Storage: Export of External Forecast series				
Plugin - Module - Archive	FEWS-19517	FEWS-8462 Add export of flags and comments for External Historical Time series				
Plugin - Module - Archive	FEWS-9903	FEWS-8462 Add possibility to delete events, and add permission to delete events	Details are available at https://publicwiki.deltares.nl/display/FEWSDOC/25.+The+Deltares+Open+Archive	Events can be deleted by selected group of users		
Plugin - Module - Archive	FEWS-9833	FEWS-8462 Archive Catalog: Implement Archive Catalog on a server				
Plugin - Module - Archive	FEWS-9832	FEWS-8462 Archive Catalog: Implement Archive catalog that can be run on a OC				
Plugin - Module - Archive	FEWS-9831	FEWS-8462 Archive Discussion: Decide on Archive Catalog				

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Module - Archive	FEWS-9824	FEWS-8462 Archive Discussion: Use of threshold events in Archive				
Plugin - Module - Archive	FEWS-9910	FEWS-8462 Archive Retrieval: Configuration				
Plugin - Module - Archive	FEWS-9825	FEWS-8462 Archive Retrieval: Forecaster Notes				
Plugin - Module - Archive	FEWS-9895	FEWS-8462 Archive Retrieval: Import Historic Event file with time series file				
Plugin - Module - Archive	FEWS-9830	FEWS-8462 Archive Retrieval: Import of external Historic time series				
Plugin - Module - Archive	FEWS-9828	FEWS-8462 Archive Retrieval: Import of external forecast time series in FEWS database				
Plugin - Module - Archive	FEWS-9829	FEWS-8462 Archive Retrieval: Import of simulated time series				
Plugin - Module - Archive	FEWS-9827	FEWS-8462 Archive Retrieval: Model States				
Plugin - Module - Archive	FEWS-9826	FEWS-8462 Archive Retrieval: Modifiers				
Plugin - Module - Archive	FEWS-9887	FEWS-8462 Archive Retrieval: Rating curves				
Plugin - Module - Archive	FEWS-9909	FEWS-8462 Archive Storage: Configuration			{code} <exportArchiveModule xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/exportArchiveModule.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.wldelft.nl/fews"> <exportConfig> <general> <archiveFolder>$ARCHIVE_FOLDER$/national</archiveFolder> </general> <activities> <exportCurrentConfig> <areaId>test</areaId> </exportCurrentConfig> </activities> </exportConfig> </exportArchiveModule> {code}	
Plugin - Module - Archive	FEWS-9674	FEWS-8462 Archive Storage: Export FEWS content to Archive to rebuild tasks	Run info (according archive-schemas/runInfo.xsd) is now written when forecast is exported. This run info also contains the config revision number. Config export task is now only available in old archive module. Can be reused in new archive module. Would be nice this export is scheduled when new config is uploaded.			
Plugin - Module - Archive	FEWS-9822	FEWS-8462 Archive Storage: FEWS Web Reports				
Plugin - Module - Archive	FEWS-19520	FEWS-8462 Archive Storage: Forecaster Notes				
Plugin - Module - Archive	FEWS-9821	FEWS-8462 Archive Storage: Model States				
Plugin - Module - Archive	FEWS-9886	FEWS-8462 Archive Storage: Rating Curves				
Plugin - Module - Archive	FEWS-9823	FEWS-8462 Archive: Discussion and implementation of Historic Events				
Plugin - Module - Archive	FEWS-9894	FEWS-8462 Archive: enable serverside transfer (download) of Historic Event to FSS directory when new Historic Event is created				
Plugin - Module - Archive	FEWS-9904	FEWS-8462 Don't allow import data, mods etc on a OC	Only Historical Events can be imported at an OC. Other data can only be imported at an SA.	Data from the archive should not be importable at an OC		
Plugin - Module - Archive	FEWS-9846	FEWS-8462 Export forecasts should export each export type to a dedicated directory	https://publicwiki.deltares.nl/display/FEWS DOC/25.+The+Deltares+Open+Archive	The data in the archive is stored in dedicated directories with self-explaining names		
Plugin - Module - Archive, System - Synchronisation	FEWS-8695	FEWS-8462 Freeze current archive reading code (backward compatibility) and detach Synchronisation code				
Plugin - Module - Archive	FEWS-9847	FEWS-8462 improve download facility in archive gui (make suitable for high volume downloads)	Details are available at https://publicwiki.deltares.nl/display/FEWS DOC/25.+The+Deltares+Open+Archive	Downloading data should be done in a background thread in the new archive		
Plugin - Module - Data Export	FEWS-9435	Add extra tags to metadata element in timeSeriesExportRun				
Plugin - Module - Data Export, Plugin - Module - Data Import	FEWS-9610	Add possibility to export/import flags, flagsource,user and comments to netcdf file				
Plugin - Module - Data Export	FEWS-9487	Custom naming of mapstacks				
Plugin - Module - Data Export	FEWS-8922	FOEN: GIN Export for update run / measured data (PQT-datascheme)	Added a TimeseriesExport that is similar to the GIN Export, but exports each location in a different file.	Added an additional GIN Timeseries Export		
Plugin - Module - Data Export	FEWS-9415	FEWS-8769 NWS: export name with dot (.) in name is messed up	The position of the dot in the TimeSeriesExport when using TimeZeroFormattingString is now restored to the correct position			

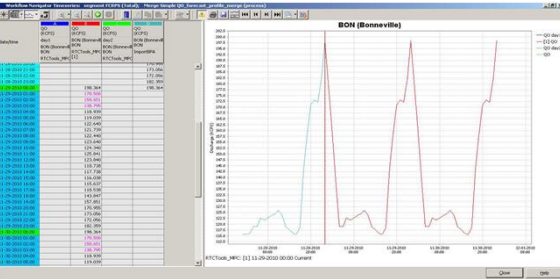| Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Module - Data Export	FEWS-9394	FEWS-8834 Rating Curves: Allow for saving of rating curves in PI-format, include older ratings + modified ratings				
Plugin - Module - Data Import	FEWS-9263	ADCON (Telemetry) Webservice				
Plugin - Module - Data Import	FEWS-9592	Add ensemble id to Nimrod import function	Nimrod import type imports also ensembles, if any ensemble members are specified in the Nimrod gridfiles Ensemble members are coded as integers in the Nimrod file, so Nimrod reader sets ensemble member numbers (and not string Ids)	Nimrod import type & importing ensembles		
Plugin - Module - Data Import	FEWS-9006	FEWS-8828 Add new feature to HHRR and HCS import to exclude comments in time series	Some data feeds may contain repeated comments with the data, therefore obscuring more relevant comments. The TimeSeriesImportRun module now allows the general section to include filtering of the comments by using <commentIgnoreFilter> element in the configuration. Two possibilties are build in for this -Ignoring exact matching comments, use the element <ignoreComment> within <commentIgnoreFilter> for this -Ignoring comments that match a certain pattern specified by a regular expression, use <ignoreCommentPattern> within <commentIgnoreFilter> for this Within <ignoreCommentPattern> use a regular expression that specifies which comments should be ignored during import. For instance the regular expression ^(FEWS).* specifies that comments starting with "FEWS" must be ignored. This can also be extended for multiple strings: for instance the regular expression	TimeSeriesImportRun can filter out pre-defined comments during importing	{code} <general> <importType>ContentReviewer</importType> <folder>$IMPORT_FOLDER$/scalar/content_reviewer</folder> <backupFolder>$BACKUP_FOLDER$/scalar/content_reviewer</backupFolder> <idMapId>IdImportContentReviewer</idMapId> <missingValue>-999.0</missingValue> <expiryTime unit="day" multiplier="366"/> <commentIgnoreFilter> <ignoreComment>standard comment</ignoreComment> <ignoreCommentPattern>^(FEWS).*</ignoreCommentPattern> </commentIgnoreFilter> </general> {code}	
Plugin - Module - Data Import	FEWS-9184	Allow time series import from database using jdbc driver outside FEWS bin dir.				
Plugin - Module - Data Import	FEWS-10582	Develop variant WDTF import format (GMW)	WdtfTsoXml is a variant of WdtfXml import type. The only difference is the element the location is read from. WdtfTsoXml reads the location from the id attribute of the element 'TimeSeriesObservation', while WdtfXml reads the location from element 'featureOfInterest' For example, the location Id 'tso-T27970' is read from the file sample below : {code:xml} <wdtf:observationMember> <wdtf:TimeSeriesObservation gml:id="tso-T27970"> <gml:description>William Hovell Level</gml:description> .... </wdtf:TimeSeriesObservation> </wdtf:observationMember> {code}	WdtfTsoXml import type	{code:xml} <import> <general> <importType>WdtfTsoXml</importType> <folder>$REGION_HOME$/import</folder> .... {code}	
Plugin - Module - Data Import	FEWS-10405	Extend Aquarius Import to include rating curves		Implemented a service import for importing ratingcurves from a Aquarius server	Example of {code} <?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 http://fews.wldelft.nl/schemas/version1.0/timeSeriesImportRun.xsd"> <!-- This is an example import configuration file for importing Observations and Measurements data from a service --> <import> <general> <parserClassName>nl.wldelft.aquarius.ratingcurveparsers.AquariusRatingCurveSoapServerParser</parserClassName> <binDir>%REGION_HOME%/Modules/aquarius</binDir> <serverUrl>http://w2k8-aquarius.adasasistemas.com/AQUARIUS/Publish/AquariusPublishService.svc?wsdl</serverUrl> <user>deltares</user> <password>deltares</password> <relativeViewPeriod unit="day" start="-365" end="0" startOverrulable="true" endOverrulable="true"/> <idMapId>IdImportAquariusRatingCurves</idMapId> <unitConversionsId>UnitConversionsAquarius</unitConversionsId> <flagConversionsId>ImportFlagConversion</flagConversionsId> <importTimeZone> <timeZoneOffset>-10:00</timeZoneOffset> </importTimeZone> <comment>	

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Module - Data Import	FEWS-10011	FEWS-5586 Extend NetcdfScalarTimeSeriesParser so that it can find station id variables using the cf_role="timeseries_id" attribute instead of the variable name	Netcdf scalar time series import (importType NETCDF-CF_TIMESERIES) now also recognizes station id variables that do not have "station" in their name but have the cf_role="timeseries_id" attribute instead. Netcdf scalar time series export now also writes the cf_role and featureType attributes, as required by the CF-1.6 conventions.	Extended netcdf scalar time series import/export to recognize the cf_role="timeseries_id" attribute.	No additional configuration needed.	
Plugin - Module - Data Export, Plugin - Module - Data Import	FEWS-10016	FEWS-9814 Functionality to have web service import and export to support backup hosts	Functionality to have web service imports and exports to support backup hosts.			
Plugin - Module - Data Import	FEWS-9260	Import Campbell data format				
Plugin - Module - Data Import	FEWS-8763	FEWS-8828 Improve HCS import function to support all required data types				
Plugin - Module - Data Import	FEWS-9878	LandsatHdf5Parser should read also grids where attribuut NB_BYTES (Number of bytes per pixel) = 4				
Plugin - Module - Data Import	FEWS-10161	Make MON import flexible for number of available Channels				
Plugin - Module - Data Import	FEWS-10229	Make matroos_netcdfspectrumseries more flexible (for different Matroos paths)	Added new optional properties "database" and "server_path" for importType "matroos_netcdfspectrumseries". Optional property: database, e.g. "maps1d". Optional property: server_path, e.g. "/direct/get_netcdf.php". If not configured, this is set to /matroos/scripts/matroos.pl by default.	Added new optional properties "database" and "server_path" for importType "matroos_netcdfspectrumseries".	{code} <properties> <string key="database" value="maps1d"/> <string key="server_path" value="/direct/get_netcdf.php"/> </properties> {code}	
Plugin - Module - Data Import	FEWS-9291	FEWS-8828 New Import AifsML function for HyFS				
Plugin - Module - Data Import	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	FEWS-9772	New import type: packed data NetCDF (grid)	Added new import type NETCDF-WDSS2_SPARSE_LAT_LON_GRID to import WDSS2 netcdf regular grid data of type "SparseLatLonGrid". There are several data formats associated to WDSS II (see http://www.wdssii.org/). Delft-FEWS only supports importing of WDSS II files of type "SparseLatLonGrid". These are netcdf files with regular grid data that is stored using run-length compression. For this data format each netcdf file contains data for only one timeStep. For more information about the WDSS II data type "SparseLatLonGrid" see http://www.cimms.ou.edu/~lakshman/WDSS2/dataformat.shtml.	Added new import type NETCDF-WDSS2_SPARSE_LAT_LON_GRID to import WDSS2 netcdf regular grid data of type "SparseLatLonGrid".	{code} <timeSeriesImportRun 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/timeSeriesImportRun.xsd"> <import> <general> <importType>NETCDF-WDSS2_SPARSE_LAT_LON_GRID</importType> <folder>import/netcdf_wdss2_sparse_lat_lon_grid</folder> <idMapId>NetcdfWdss2SparseLatLonGridImportIdMap</idMapId> </general> <timeSeriesSet> <moduleInstanceId>NetcdfWdss2SparseLatLonGridImport</moduleInstanceId> <valueType>grid</valueType> <parameterId>P.m</parameterId> <locationId>RadarLocation1<locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="hour" multiplier="1"/> <readWriteMode>read complete forecast</readWriteMode> </timeSeriesSet> </import> </timeSeriesImportRun> {code}	
Plugin - Module - Data Import	FEWS-8511	Possibilty to store URL (to pictures or PDF docs or whatever) with time series.	The Plot Overview is able to show hyperlinks in the value comments of a time series.		{code:xml}<explorerTask name="Plot Overview"> <taskClass>nl.wldelft.fews.gui.plugin.displaythumbnails.ShortcutsThumbnailsDialog</taskClass> <toolbarTask>false</toolbarTask> <menubarTask>false</menubarTask> <toolWindow>true</toolWindow> <loadAtStartup>true</loadAtStartup> </explorerTask>{code}	

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Module - Data Import	FEWS-9440	With new grid definition (with dry cells) from MATROOS netcdf file is imported flipped upside down				
Plugin - Module - Data Import	FEWS-9169	FEWS-8804 make new import function for BOM Astro data files	New import type (HyFSAstro) for Australian tidal data from the National Tide Center. UTC Date and Time,Sea Level Prediction for Brisbane_Bar 01-Apr-2013 00:00, 1.167 01-Apr-2013 00:01, 1.172 01-Apr-2013 00:02, 1.178 For the idMap: Parameter ID is not provided in Astro data files. It will take the parameter as configued in the timeSeriesSet. The external locationId equals in the example to: Brisbane_Bar	New data importtype: HyFSAstro for data from Australian National Tide Center	{code:xml} <general> <importType>HyFSAstro</importType> <folder>$IMPORT_FOLDER$/scalar/astro</folder> <fileNamePatternFilter>*.txt</fileNamePatternFilter> <idMapId>IdImportAstro</idMapId> </general> {code}	
Plugin - Module - Error Correction	FEWS-9612	Option in ARMA to WARN or INFO in case of missing data. Now it is a WARN only, which creates too many warnings.	Added option to schema to specify the log level for the log message that is logged when all observed values are missing for a given input time series. Can be error, warn or info. Default is warn.	In ErrorModel added option to configure the log level for log message when all observed values are missing.	{code} <logLevelNoObservedValues>info</logLevelNoObservedValues> {code}	
Plugin - Module - General Adapter	FEWS-9519	FEWS-8828 GA. Add ignoreExitCode option to execute activity				
Plugin - Module - General Adapter	FEWS-11185	FEWS-9916 Improve NetcdfTimeSeriesTsStfParser import in General Adapter				
Plugin - Module - General Adapter	FEWS-8956	FEWS-8955 Make all import/export routines available through the General Adapter			{code:xml} <exportCustomFormatTimeSeriesActivity> <exportFile>test.csv</exportFile> <serializerClassName>nl.wldelft.fews.system.plugin.dataExport.CsvDutchTimeSeriesSerializer</serializerClassName> <timeSeriesSets> <timeSeriesSet> <moduleInstanceId>MyModelUpdateRun</moduleInstanceId> <valueType>scalar</valueType> <parameterId>Q.obs</parameterId> <locationSetId>Hydro Stations</locationSetId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="hour"/> <relativeViewPeriod unit="day" start="-5" startOverrulable="true" end="0"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </timeSeriesSets> </exportCustomFormatTimeSeriesActivity> <importCustomFormatTimeSeriesActivity> <importFile>output.csv</importFile> <parserClassName>nl.wldelft.timeseriesparsers.CsvTimeSeriesParser</parserClassName> <timeSeriesSets> <timeSeriesSet> <moduleInstanceId>MyModelUpdateRun</moduleInstanceId> <valueType>scalar</valueType> <parameterId>Q.update</parameterId>	
Plugin - Module - General Adapter	FEWS-10884	FEWS-9916 STF Export moet altijd met time counter 1 beginnen en niet 0				
Plugin - Module - Modifiers (ModuleParameters)	FEWS-9729	FEWS-9915 Attribute Include is not defined meldingen modifierscherm moeten opgevangen worden				

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Module - Modifiers (ModuleParameters)	FEWS-9085	FEWS-9915 IFD: extend modifier display with attribute modifier that allows layout customization similar to task run dialog	By default the LocationAttribute modifier is presented as a table with the attributes as rows, and the location(s) as columns. This view might sometimes be overwhelming and a better organized layout is sometimes desired. Using the taskrun dialog as inspiration, the LocationAttributeModifier now has been extended with the ability to fine tune the layout of the display. Layout templates can be defined, where each template holds one or more panels. Each panel can hold one or more attributes, eaither a check box for (boolean attributes), a text box (for numerical attributes) or a drop down box (for numerical or text attributes). If the modifier applies to a set of locations, the locations are listed under each other (see figure).	ModifierDisplay: pretty layout customization for location attribute modifier	```xml <locationAttributeModifier id="Rainfall_Scenario" name="Rainfall"> <expiryTime unit="day" multiplier="14"/> <modifiableGroup name="Catchments"> <locationSetId>AUS_Catchments</locationSetId> <attribute id="CATCH_P_OBS_SELECT"> <selection> <predefined> <option>Gauges</option> <option>QPE</option> </predefined> </selection> </attribute> <attribute id="CATCH_P_OBS_MULT"/> <attribute id="CATCH_P_NWP_SELECT"> <selection> <predefined> <option>ACCESS_C</option> <option>ACCESS_R</option> <option>ACCESS_G</option> <option>OCF</option> <option>ECMWF</option> <option>Official_Mean</option> <option>None</option> </predefined> </selection> </attribute> <attribute id="CATCH_P_NWP_MULT"/>```	
Plugin - Module - Modifiers (ModuleParameters)	FEWS-9153	FEWS-8804 In Attribute Modifier scherm kan je bij een choice altijd kiezen tussen de opgegeven opties en een leeg veld.				
Plugin - Module - Modifiers (ModuleParameters)	FEWS-9706	FEWS-9915 Location Attribute modifier moet per locatie aangemaakt worden				
Plugin - Module - Modifiers (ModuleParameters)	FEWS-9771	Pre-defined parameter sets in the moduleParameterModifier	In moduleParameterModifier we can configure also pre-defined (default) parameter values. When we create a new moduleParameterModifier, these values are automatically filled in. This functionality is usefull if we need the parameter values that are different from the values configured in pi_modelparameters.xml. String, double, int and boolean values are currently supported.	Pre-defined parameter values in moduleParameterModifier	```xml <moduleParameterModifier id="ModelA_W" name="Winter"> <filter> <moduleParameter id="OPERATION_CONTENTS"> <stringValue>Default winter operation</stringValue> </moduleParameter > <moduleParameter id="THRESHOLD_TEMPERATURE"> <dblValue>-10.0</dblValue> </moduleParameter > <moduleParameter id="CARRYOVER_FLAG"> <intValue>3</intValue> </moduleParameter> <moduleParameter id="OUTPUT"> <boolValue>true</boolValue> </moduleParameter> </filter> <defaultValidTime/> </moduleParameterModifier>```	
Plugin - Module - Modifiers (ModuleParameters)	FEWS-9820	FEWS-9915 when attribute modifier template has only one item then do not show selection list				
Plugin - Module - Modifiers (TimeSeries)	FEWS-10414	FEWS-9915 Restructure Runinfo display columns				

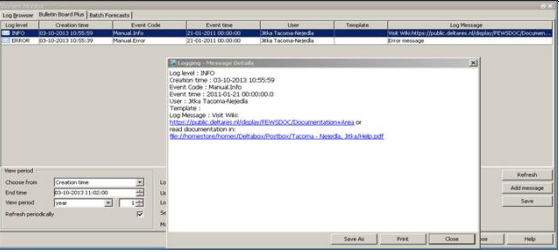| Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Module - Reports	FEWS-9239	FEWS-8834 Ability to add run info to reports				
Plugin - Module - Reports	FEWS-10338	FEWS-9915 Add element to export reports to keep current reports in export folder				
Plugin - Module - Reports	FEWS-9246	BWQFS : New report (CSV format) For Bathing Water Quality Project .	This table is a generic table type and contains for each configured location one row with several columns, separated by commas. The data displayed in a particular column are result of the function that is configured for that column. For each column the following elements can be configured: - header : text to display in the column header, - width: optional, width of the column - function: function that determines/computes the value displayed in the column. Note that the xml schema allows element 'format', however the format is not applicable to csv table type Also this report type uses templates. The template should contain at least table name. An example: {noformat} $TABLE(myTable)$ {noformat}	New report type "rowPerLocationCsvTable"	The rowPerLocationCsvTable can be configured directly in <report> section, or in the <declarations> section and reffered from the <report> section. Example of the configuration in <report> section: {code:xml} <report> <locationId>M-1000</locationId> <locationId>H-2091</locationId> <rowPerLocationCsvTable id="myTable"> <column> <header>Naam</header> <function>LOCATIONATTRIBUTE(shortname)</function> </column> <column> <header>Tijd maximale overschrijding</header> <function>THRESHOLDCROSSING(MAX_DATETIME;Qobserved;dateFormat1)</function> </column> <column> <header>Waarde maximale overschrijding (m3/s)</header> <function>THRESHOLDCROSSING(MAX_VALUE;Qobserved;numberFormat1)</function> </column>	
Plugin - Module - Reports	FEWS-9079	FEWS-8828 Extend web reports with functionality to use location attributes	In a report config file it is now possible to use locationAttributes in report elements "outputSubDir", "outputFileName" and "defineLocal" (only when singleLocation is true). Furthermore it is also possible to use locationAttributes in the "overlayFormat" element in a summaryFormat in a report.	In reports added functionality to use locationAttributes in report elements "outputSubDir", "outputFileName", "defineLocal" and "overlayFormat".	{code} <?xml version="1.0" encoding="UTF-8"?> <reports 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/reports.xsd" version="1.0"> <declarations> <summaryFormat id="summaryMapFormat1"> <map> <image> <file>../src/test/nl/wldelft/fews/system/plugin/report/config/images/queensland.png</file> <width>529</width> <height>415</height> </image> <x0>10</x0> <y0>100</y0> <leftLongitude>130.9681396484375</leftLongitude> <rightLongitude>159.55630493164062</rightLongitude> <bottomLatitude>-30.49459457397461</bottomLatitude> <topLatitude>-9.573212623596191</topLatitude> <mapFormat><div style="TOP:{1,number}px;LEFT:{0,number}px;position:absolute;Z-index:0"><img border="0" src="{4}" width="{2,number}" height="{3,number}" usemap="{5}" ></div></mapFormat> <overlayFormat><div style="TOP:{1,number}px;LEFT:{0,number}px;position:absolute;Z-index:1"><a	
Plugin - Module - Reports	FEWS-8832	FEWS-8834 Extend web-reports with run-info (D25, D26, D28, D30)	Added new modifier summaries table to reports. A modifier summaries table shows modifier summaries for all modifiers that have been used in the workflow in which the report is generated.	Added new modifier summaries table to reports.	{code} <reports 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/reports.xsd" version="1.0"> <declarations> <modifierSummariesTableFormat id="modifierSummariesTableFormat1"> <tableStyle>tableStyle1</tableStyle> <scrollableTable>false</scrollableTable> </modifierSummariesTableFormat> <templateDir>../src/test/nl/wldelft/fews/system/plugin/report/config/ReportTemplateFiles</templateDir> <reportsRootDir>../junit_test_output/nl/wldelft/fews/system/plugin/report</reportsRootDir> <reportsRootSubDir>output</reportsRootSubDir> <sendToLocalFileSystem>true</sendToLocalFileSystem> </declarations> <report> <modifierSummariesTable formatId="modifierSummariesTableFormat1" id="modifierSummariesTable1"> </modifierSummariesTable> <template>ReportModifierSummariesTableTest_template.html</template> <outputSubDir>ReportModifierSummariesTableTest</outputSubDir> <outputFileName>ReportModifierSummariesTableTest.html</outputFileName> </report>	

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Module - Reports	FEWS-9656	FEWS-9915 New performance graph type in reports				
Plugin - Module - Reports	FEWS-9295	FEWS-9246 New report functions	Function *LASTVALUEATTRIBUTE (variableId: valueAttributeMapId)* This function takes the most recent reliable or doubtful value of the timeseries and inserts the associated attribute from the valueAttributeMap. For instance, if the last value is 9.9, the valueAttributeMap should contain <attributes value="9.9"> If the timeseries value is not listed in the valueAttributeMap, the configured 'no data available' text is returned. Function *LASTVALUECOMMENT(variableId)* This function finds the most recent reliable or doubtful value of the timeseries and inserts the associated comment. If the value has no comment, the configured 'no data available' text is returned.	Additional report functions		
Plugin - Module - Statistics, Plugin - Module - Transformation	FEWS-9486	Counting the amount of ensemble members that fall within predefined boundaries for spatial/grid data				
Plugin - Module - Thresholds	FEWS-9011	FEWS-8804 Add labelFunction functionality in thresholdmodule	Added option to configure labelFunction for level, rate and max thresholdValues in thresholdValueSets config. Optional location dependent label that is specified by a function, e.g. "@FLOOD_WATCH@", in which tags between "@" signs refer to location attributes that are defined in the locationSets config file. The tags are replaced by actual attribute values. These attribute values can be different for different locations. If an attribute is missing for a location, then the label is ignored for that location.	Added option to configure labelFunction for level, rate and max thresholdValues in thresholdValueSets config.	{code:xml} <levelThresholdValue> <levelThresholdId>INFO1_H</levelThresholdId> <valueFunction>@INFO1_H@</valueFunction> <labelFunction>@INFO1_DESC@</labelFunction> </levelThresholdValue> {code}	
Plugin - Module - Thresholds	FEWS-9428	FEWS-8769 NWS: threshold colours in Topology Display not behaving as expected	Fixed bug where timeSeriesInfos of child displays were not included in the timeSeriesInfos of their parent displayGroup if some but not all of the child displays were updated. Also fixed bug where the timeSeriesInfo of the selected display was not included in the timeSeriesInfo of its parent displayGroup. Also fixed bug where firstValueInfo was not used when combining TimeSeriesInfos. Also in stable build 2013.01.	Fixed bug where threshold warnings for a display were sometimes not included in the warning icons/colors for the parent displayGroup.		
Plugin - Module - Transformation	FEWS-9653	FEWS-8834 Add Validationrule to Sample Function				
Plugin - Module - Transformation	FEWS-8180	Extrapolation with repeat period and smoothing period				

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Module - Transformation	FEWS-10379	FEWS-9915 Improve the 3 generation transformation functions with error trapping and additional feature		Improved error logging and added an offset possibility to the 3 generation transformations		
Plugin - Module - Transformation	FEWS-9331	FEWS-8828 Merge-selectDataSource transformation: user related location attribute				
Plugin - Module - Transformation	FEWS-10010	New Spatial Transformation: Vectors that are aligned to the grid cell orientation in a rotated pole coordinate system have to be transformed to vectors that are north-east orientated	The new transformation rotates the u,v components of the vector data from a rotated pole coordinate system to the WGS1984 system. For this to work the input time series must have a rotated pole grid definition in the grids.xml file. This assumes that the u,v vectors live on the grid cell centers. The transformation is done analytically.	Added new transformation ConversionRotateUVVectorsFromRotatedPoleToWgs1984.	{code} <?xml version="1.0" encoding="UTF-8"?> <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>inputU</variableId> <timeSeriesSet> <moduleInstanceId>DIM_hirlam72_hc</moduleInstanceId> <valueType>grid</valueType> <parameterId>Wind.u</parameterId> <locationId>KNMI-HIRLAM-V72</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="hour" multiplier="1"/> <relativeViewPeriod unit="day" start="-1" end="2"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </variable> <variable> <variableId>inputV</variableId> <timeSeriesSet> <moduleInstanceId>DIM_hirlam72_hc</moduleInstanceId> <valueType>grid</valueType> <parameterId>Wind.v</parameterId> <locationId>KNMI-HIRLAM-V72</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="hour" multiplier="1"/>	
Plugin - Module - Transformation	FEWS-10000	New Transformation: calculate gradient (dy/dt)	Transformation that calculates the gradient of a timeserie: (y1-y0)/(t1-t0). This is the change in the value per time unit (currently seconds)		{code} <variable> <variableId>input</variableId> <timeSeriesSet> <moduleInstanceId>FirstOrderGradientTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>T.historical</parameterId> <locationId>H-2010</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"></timeStep> <relativeViewPeriod unit="hour" start="1" end="4"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </variable> <variable> <variableId>output</variableId> <timeSeriesSet> <moduleInstanceId>FirstOrderGradientTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>T.historical</parameterId> <locationId>H-2011</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="nonequidistant"></timeStep> <relativeViewPeriod unit="hour" start="1" end="4"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </variable> <transformation id="gradient">	
Plugin - Module - Transformation	FEWS-9588	FEWS-8834 New transformations for Rainfall scenarios: Constant Depth				
Plugin - Module - Transformation	FEWS-9590	FEWS-8834 New transformations for Rainfall scenarios: Persistence				
Plugin - Module - Transformation	FEWS-9589	FEWS-8834 New transformations for Rainfall scenarios: Recession				
Plugin - Module - Transformation	FEWS-8821	FEWS-8828 RatingCurves: enable quality flag for each record in ratingcurve table and propagate flag to output timeseries (D12)	Rating Curve Time Series objects and the PI-schema are extended with an optional quality flag per table row. The quality flag indicates the quality of the rating from this row onwards to the next row. While converting the timeseries, the quality flag of associated rating section is assigned to the output.	Rating Curves can have quality flags		
Plugin - Module - Transformation	FEWS-9395	FEWS-8828 Timeshift Transformation: NumberOfTimeSteps and Direction in Timeshift transformation should be sourced from attributes	Extended timeShiftConstant transformation so that its configured options (direction and numberOfTimeSteps) can be references to location attributes.	Extended timeShiftConstant transformation so that its configured options (direction and numberOfTimeSteps) can be references to location attributes.	{code} <transformation id="TimeShiftConstantWithLocationAttributesTest"> <timeShift> <constant> <inputVariable> <variableId>input</variableId> </inputVariable> <direction>@direction@</direction> <numberOfTimeSteps>@nr_steps@</numberOfTimeSteps> <outputVariable> <variableId>output</variableId> </outputVariable> </constant> </timeShift> </transformation> {code}	

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Plugin - Module - Transformation	FEWS-9170	FEWS-8828 Transformation module should report transformation identifier as part of message				
Plugin - Module - Transformation	FEWS-8974	FEWS-8804 Transformation-sample-linear: add extra option to configure maxGapLength (unit, multiplier)	Gaps equal to or smaller than maxGapLength will be filled with sampled values. Gaps larger than maxGapLength will not be filled. If maxGapLength is not defined, then all gaps will be filled with sampled values. Only implemented for linear interpolation	Added a maxGapLength for Non-Equidistant to Equidistant interpolation		
Plugin - Module - Transformation	FEWS-8882	FEWS-8828 Transformation: API as user defined accumulation function	In UserSimple and UserPeriodic transformation it is now possible to use the calculated output value of the previous time step, by using "PREVIOUS_OUTPUT_VALUE" in uppercase letters in the expression (can be used multiple times). For each calculation time step "PREVIOUS_OUTPUT_VALUE" is replaced with the previous output value from the output time series. For the first calculation time step in the run period, the previous output value from before the start of the run period is read from the existing output time series in the database (e.g. from a previous run), if present. If for a given calculation time step the previous output value is not present or is unreliable, then "PREVIOUS_OUTPUT_VALUE" is replaced with NaN (missing value).	Added new option to use "PREVIOUS_OUTPUT_VALUE" in expression in UserSimple or UserPeriodic transformation.	{code} <transformation id="API calculation"> <user> <simple> <expression>K_catchment_QLD * Recession * PREVIOUS_OUTPUT_VALUE + P_catchment_QLD</expression> <coefficientSetFunctions> <coefficient id="Recession" value="@Recession@"/> </coefficientSetFunctions> <outputVariable> <variableId>API</variableId> </outputVariable> </simple> </user> </transformation> {code}	
Plugin - Module - Transformation	FEWS-8820	FEWS-9915 Transformation: disaggregation using nearest station timeseries (D19)			{code:xml} <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"> <!-- reference variables --> <variable> <variableId>reference</variableId> <timeSeriesSet> <moduleInstanceId>DisaggregationAccumulativeReferencePatternTest</moduleInstanceId> <valueType>scalar</valueType> <parameterId>P.obs</parameterId> <locationId>locRef</locationId> <timeSeriesType>external historical</timeSeriesType> <timeStep unit="minute" multiplier="15"/> <relativeViewPeriod unit="hour" start="0" end="15"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </variable> <!-- temporary variables --> <variable> <variableId>interpolatedReference</variableId> <timeSeriesSet> <moduleInstanceId>DisaggregationAccumulativeReferencePatternTest</moduleInstanceId> <valueType>scalar</valueType>	
Plugin - Module - Transformation	FEWS-8940	FEWS-8834 Transformations: accommodate locationattributes as upper/lower limiting values in rangeTransformation				
Plugin - Module - Transformation	FEWS-9393	FEWS-8642 twoDimensionalLookup: allow for inter/extrapolation options for the 2nd column of the 2D lookup table in the coefficientset				
System	FEWS-9322	Improve/Extend Use of Code Coverage Tools				
System	FEWS-9943	NTLM Authentication for OSM/WMS proxy server				
System - Logging	FEWS-9517	FEWS-8828 Add FEWS version and patch version of JAR files in log.txt of OC and FSS computers				
System - PI Service	FEWS-10017	FEWS-9814 Extend error logging of PI webservice		Added logging of DAC to the LogEntries table		
System - PI Service	FEWS-10014	FEWS-9814 Functionality to have PI webservice with JAVA - .NET integration for authentication	JAVA - .NET integration in webservice for authentication			
System - PI Service	FEWS-9796	FEWS-8834 Water Coach - decrease flush time for put actie van PI service				
System - Synchronisation	FEWS-9919	FEWS-8462 Historic events as timeseries needs its own synchLevel to accommodate MC-MC synch				
System - Synchronisation	FEWS-9854	FEWS-8462 Historic events: add DB table to synchronization				

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
System - Workflow	FEWS-9281	FEWS-8834 Allow usage of module instances as template without (sub)workflow specification	Module Config Files can now be used as templates. Module config files are composed with properties that need to be resolved to obtain valid locations/locationsets or moduleinstances. Workflows can assign those properties and call the ModuleConfigFile while assigning the instance under a unique name. Properties can be defined at any level in the workflow. Properties from the parent workflow can be used in the sub workflow, but properties at a lower level will overrule properties at a higher level. Workflow descriptors are now optional for those sub workflows To execute a full basin sub-catchment by sub-catchment in the GUI, the Topology.xml can reference the full basin workflow and filter out the module instances that need to be executed. To allow a dynamic number of location ids in the time series sets of the module config templates: Define sufficient empty location	Reusage of module config files as as template without (sub)workflow specification	{code} <?xml version="1.0" encoding="UTF-8"?> <workflow 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/workflow.xsd" version="1.1"> <properties> <string key="CATCHMENT" value="bega"/> </properties> <activity> <runIndependent>true</runIndependent> <moduleInstanceId>bega_Rainfall_Forecast</moduleInstanceId> <moduleConfigFileName>Rainfall_1h_Forecast</moduleConfigFileName> </activity> <activity> <runIndependent>true</runIndependent> <moduleInstanceId>bega_Rainfall_Subcatchment_Forecast</moduleInstanceId> <moduleConfigFileName>Rainfall_1h_Subcatchment_Forecast</moduleConfigFileName> </activity> </workflow> {code} {code} <node id="bellinger_glennifer" name=" Never Never Creek to Gleniffer"> <workflowId>Bellinger_URBS_IFD_Forecast</workflowId>	
Utilities	FEWS-8847	FEWS-8828 Update timeseries-object and xsd to accommodate new ratingcurvetable modifier	tableRatingCurveModifier can be used to change rating curve table	tableRatingCurveModifier	{code:xml} <ratingCurveModifiers> <tableRatingCurveModifier id="ratingtable" name="RatingTable"> <defaultStartTime>start run</defaultStartTime> <defaultEndTime>end run</defaultEndTime> </tableRatingCurveModifier> </ratingCurveModifiers> {code}	
Utility - Configurator	FEWS-9312	FEWS-9305 Extend MCProxy <stop> command				
Utility - Configurator	FEWS-9308	FEWS-9305 Generate structure for both LINUX and Windows in one go				
Water Coach	FEWS-9521	FEWS-8828 Clear Water coach indication in the FEWS explorer.	When a FEWS instance is used by the Water Coach an indication is added to distinguish this stand alone copy from the operational system. In the title bar the comment "(WaterCoach)" is added to the title and the window of the FEWS instance gets a yellow border.	Indicator when FEWS is used together with the WaterCoach		
Water Coach	FEWS-9629	FEWS-8834 Water Coach - method to open files (pdf, avi, jpg, html) from ForecasterNotes	It is possible to include one or more URL's in the log message. When we open the message with popup menu, then the URL are displayed as hyperlinks. When we click on this hyperlink, the file wil open using the browser that is associated with the file type. This is an example how we can enter a log message text with url's : Visit Wiki http://public.deltares.nl/display/FEWSDOC /Documentation+Area or read documentation in file://d:/Fews/FewsNL_sa/Help.pdf or call HelpDesk If one of the filenames contains spaces, we must surround all URL's with brackets : Visit Wiki [http://public.deltares.nl/display/FEWSDOC /Documentation+Area] or read documentation in [file://D:\Fews\FewsNL_sa\All Documents\Fews help.pdf] or call HelpDesk If we want to specify link names, we must	ForecasterNotes (BulletinBoardPlus) - usign hyperlink in the message text to browse the files		
Water Coach	FEWS-9634	FEWS-8834 Water Coach - (smaller) GUI always on top	The layout of the Water Coach GUI has been changed to make it smaller (and longer). It now appears on the right side of the screen, where it can be used along side the FEWS instance. The window will always remain on top. The analogue clock has been changed to a digital clock, to save space.	Water Coach GUI is smaller and always stays on top.		

Component/s	Key	Summary	Release Note Text Description	Release Note Text	Config Example	Images
Water Coach	FEWS-9632	FEWS-8834 Water Coach - Send messages via pi-service to database to display in forecasterNotes (Fews bulletinBoardPlus)	From the moment the FEWS instance has been started, messages generated by the Water Coach are displayed in the BulletinBoard or BulletinBoardPlus, instead of showing them as a separate pop-up window. The messages are communicated to FEWS via the pi-service, which is also used to synchronize the time between the Water Coach and FEWS. When the FEWS instance is closed, message are displayed as separate pop-up windows again.	Water Coach messages can be displayed in the FEWS BulletinBoard or BulletinBoardPlus		
Water Coach	FEWS-10446	FEWS-9916 Water Coach - add info for ForecasterNotes column to WaterCoach messages				
Water Coach	FEWS-9449	FEWS-8828 Water Coach - add use of system preferred viewer for pdf, png, mov, wav, etc				
Water Coach	FEWS-9639	FEWS-8834 Water Coach - allow for an event to pause the clock: user goes to next message with next button	The pause and next buttons can be configured to be shown in the Water Coach. The user can pause the clock and use the next button to go to the next event by hitting the next button. The time will also progress to the time belonging to that next event.	The user can pause the Water Coach and use the next button to go to the next event (and time)		
Water Coach	FEWS-9633	FEWS-8834 Water Coach - configurable labels in GUI	Button names and labels in the Water Coach are not configurable, but can be changed via a language-like file in a similar manner as in FEWS. For BoM, the locale in the application configuration can be set to EN_AU_BOM.	Water Coach labels can be changed via a Water Coach language file		
Water Coach	FEWS-10445	FEWS-9916 Water Coach - don't update FEWS time when WC is pauzed				
Water Coach	FEWS-9636	FEWS-9915 Water Coach - extend event codes from FEWS to be logged by the WC	In application_config.xml, the user can specify which manual log messages (i.e. which event codes) should be logged by the Water Coach. It makes sense to log all manual created messages in either the BulletinBoard or the BulletinBoardPlus, which eventCodes are configured in SystemMonitorDisplay.xml. All manual messages created by FEWS can be logged by the Water Coach in this way.	Configurable list of FEWS event codes which are logged by the Water Coach	<fewsLogEventCodes>Info;WaterLevelForecast</fewsLogEventCodes>	
Water Coach	FEWS-9641	FEWS-8834 Water Coach - reorganize build script (do not merge all jar files in 1 watercoach.jar)	The Water Coach code is no longer supplied as one single WaterCoach.jar file. Instead the separate components are kept as individual files, conform the LGPL license.	Water Coach bin folder now consists of multiple files		
Water Coach	FEWS-10142	FEWS-8834 WaterCoach - Add keywords to script_config.xml to refer to %REGION_HOME%	Messages may contain links to files using the file:// protocol. Absolute paths should be used in these links. However, two shortcuts may be used: the strings '%fewsRegionDir%' and '%scenarioScriptDatabasePath%' will be replaced by the paths as specified in the application configuration.	Support for file:// protocol has been added to messages.	<message>Have a look at the help file: file://%fewsRegionDir%\Help.pdf</message>	