

What is new in Delft-FEWS 2017.02

Release Remarks

Delft-FEWS 2017.02 New Features							
Key	Component/s	Summary	Release Note Text	Release Note Text Description	Config Example	Link to Documentation	Customer name
FEWS - 17763	App - Admin Web User Interface	FEWS-16767 Test AI functionality with new database schema changes					Deltares
FEWS - 17115	App - Admin Web User Interface	AI should check jdbc driver version	The system status page provides a warning when an older jdbc driver is used and provides a tooltip when all is well.	There have been some problems with older jdbc drivers, and they have been replaced in the master-controller. However the jdbc drivers in the admin interface might also need updating. The migration update procedure now also includes a version check of the jdbc driver in tomcat where the admin interface is running. The system status page now warns if this step was not executed properly as a precaution. Jdbc driver versions postgres 42 and oracle 12.2 are now required (included in master-controller lib directory).			Deltares

FEWS - 16904	App - Admin Web User Interface	FEWS-16887 NWS: #24695 AI scheduled tasks should be MC-specific	Allow downloading tasks for the current MC only	The admin interface has been extended to support downloading tasks for the current MC only. The following scheduled tasks actions are now available: Download Scheduled Tasks: All Current MC			NWS	
FEWS - 18268	App - Admin Web User Interface	FEWS-16767 AI: additional functionalities	Admin Interface displays status for synchronization, rolling barrel, system alerter and task runs	Admin Interface displays status for synchronization, rolling barrel, system alerter and task runs			Deltares Roadmaps	-
FEWS - 18523	App - Admin Web User Interface	FEWS-16767 AI: Add button to update schema modification time to force rebuilding cache files.	AI: Add button to update schema modification time to force rebuilding cache files.	SystemControl now has a button to force clear cache on FSSs.			Deltares Roadmaps	-
FEWS - 17527	App - Archive	Verify that the export to the archive is successful					Deltares Roadmaps	-
FEWS - 17660	App - Archive	remove dependency from tomcat for archive backend	the architecture of the archive is simplified	To make it easier to write unit tests for the archive the architecture is now simplified. It is now possible to start the core of the archive server without tomcat. This will make it easier to write unit tests and develop new functionality.			Deltares Roadmaps	-
FEWS - 17385	App - Archive	FEWS-17266 TVA : webservice request for checkbox to allow filtering on data type	onlyForecasts can be used to only get forecast time series from the pi service	onlyForecasts can be used to only get forecast time series from the pi service			TVA	

FEWS - 17477	App - Archive	Cache elastic search queries only for the requesting thread	code improvement for the seamless integration	To improve the performance of the seamless integration requests are cached. The results are now stored in cache specific for the requesting thread.			Deltares	
FEWS - 18018	App - Archive	FEWS-14334 Verify exported metadata file for simulated datasets	additional check in archive export	To ensure that the data is exported correctly to the archive an additional check is added. The export will now verify that all exported netcdf-files are listed in the metaData.xml file.			Deltares	
FEWS - 16882	App - Archive	FEWS-15003 make it possible to access elastic catalogue by the piwebservice	access the elastic catalogue by the piwebservice	In the future it will be possible to access the elastic catalogue by the piwebservice. In this release a temporary version is available. It is mainly used for demo and evaluating purposes and will be extended later to final production version.			BPA	
FEWS - 18364	App - Archive, Plugin - Gui - System Monitor	FEWS-14334 Open Archive status in SystemMonitor	Archive Server Status in SystemMonitor	When Fews is connected to Archive version 2017.02 or higher, then the status of the Archive is shown in a separate tab "Archive Server Status" in SystemMonitor. The picture ArchiveStatus.png shows an example of this tab.				

FEWS - 17898	App Configuration Manager Gui, Database	- FEWS-16767 Migrate default config tables to default config synch level	DatabaseInitialization tool migrates default config tables	The DatabaseInitialization tool will migrates default config tables by setting synchlevel 11 for the corresponding table. After completion the default config tables will be deleted.		https://publicwiki.deltares.nl/display/FEWS2020/Database+InitializationTool	Deltares Roadmaps	-
FEWS - 16447	App - Data Conversion Module	DCM Export: MeteoAlarm					RWS	
FEWS - 14305	App - Delft-FEWS	FEWS-16767 Remove JMS from OC					Deltares Roadmaps	-
FEWS - 18702	App - Master Controller Server, Database	FEWS-16767 Reduce number of database connections per OC/FSS/PI to 4					Deltares Roadmaps	-
FEWS - 17355	App - Master Controller Server, Database	FEWS-16767 Create MC datasource					Deltares Roadmaps	-
FEWS - 17900	App - Master Controller Server	FEWS-16767 Remove populater					Deltares Roadmaps	-
FEWS - 17516	App - Master Controller Server	FEWS-16767 Implement Delft_SQL.jar in MC code					Deltares Roadmaps	-
FEWS - 17764	App - Master Controller Server	FEWS-16767 M C initialisation					Deltares Roadmaps	-
FEWS - 18240	App - Master Controller Server	FEWS-16767 System Alerter and Log Processor					Deltares Roadmaps	-

FEWS - 17560	App - Master Controller Server	FEWS-16663 Quebec - Eliminate plain-text database password in fews.master.mc.conf	Make it possible to use encryptedPassword in fews.master.mc.conf	Configurator can now generate a fews.master.mc.conf with a encryptedPassword for the database connection	<pre>{code} <dbServer> <!-- The central database server type (oracle, postgresql, sqlserver (=sqlserverjtds), sqlserverjtds (SQL Server using the jtds jdbc driver) or sqlserverms (SQL Server using the Microsoft jdbc driver)) --> <dbServerType>postgresql< resql< /dbServerType> <!-- The server name or IP address of the central database server. -- > <dbServerName>dbserver01.deltares.nl< /dbServerName> <!-- Optional database port if non-standard. Assumed are 1521 for Oracle, 5432 for PostgreSQL, 1433 for SQL Server. --> <!-- <dbServerPort>5432< /dbServerPort> --> <!-- The database instance ID. --> <dbInstanceName>nlw100< /dbInstanceName> <!-- The database user name. --> <dbInstanceUser>nlw100< /dbInstanceUser> <!-- The database user's password. -- > <dbInstancePassword>password< /dbInstancePassword> > <!-- Option to produce encrypted password --> <dbEncryptPassword>true< /dbEncryptPassword> </dbServer> {code}</pre>	Quebec
FEWS - 17899	App - Master Controller Server, Database	FEWS-16767 Implement deletion of rows using DeletedRows and ProcessedDeletedRows tables (replace marked record manager)	Distributed deletion of rows has been implemented using the new DeletedRows and ProcessedDeletedRows tables.	see also section on RollingBarrel in https://publicwiki.deltares.nl/display/FEWS2020/Implementation+process		Deltares Roadmaps
FEWS - 16299	App - Operator Client Gui (Explorer)	FEWS-17266 TVA: ability to minimize undocked windows				TVA

FEWS - 16897	App - Operator Client Gui (Explorer)	FEWS-17266 TVA: F12 option to remove cache files without having to restart client manually					TVA	
FEWS - 17057	App - Operator Client Gui (Explorer)	Add re-scale option while using expression filter					GO-FEWS (Selection of Dutch Waterboards)	
FEWS - 18313	App - Operator Client Gui (Explorer)	FEWS-16767 Rolling Barrel Implementation s SA / OC					Deltares Roadmaps	-
FEWS - 18269	App - Operator Client Gui (Explorer)	FEWS-16767 OC System Monitor: add mc-mc synch metrics					Deltares Roadmaps	-
FEWS - 18242	App - Operator Client Gui (Explorer), Database	FEWS-16767 Remove on demand blob download					Deltares Roadmaps	-
FEWS - 17848	App - Operator Client Gui (Explorer)	FEWS-16132 HERMES: Today Button Zoom to System Cardinal Time in SA					BPA	
FEWS - 17600	App - Operator Client Gui (Explorer)	FEWS-17202 Smart labeling for polylines	smart labeling for line shapelayers	Instead of a single fixed label location, labels for line shapelayers are now displayed at the line and will move along the line when the view window is adjusted. Note: FEWS-17802 allows for this new behavior to be turned off through the layer configuration.			APP	

FEWS - 17599	App - Operator Client Gui (Explorer)	FEWS-17202 Option to make labels invisible	option to make labels invisible in layer selection panel (moved color change options)	When you right-click a layer in the layer selection panel, an option will be available to turn off/on the labels for that label (when applicable). The already present functionality to change the fill and line color of layers was moved from the double-click menu to this new right-click menu.			APP	
FEWS - 17598	App - Operator Client Gui (Explorer)	FEWS-17202 Option to show legend for background layer (eg DTM)	layer selection panel is displayed as legend next to map and contains legends images for wms layers	The layer selection panel was moved from a separate pop-up menu to a panel displayed to the right of the map when toggled. For WMS layers a legend image is downloaded and displayed in this panel (when available), similar to how it already contained a legend for layers with classbreaks.			APP	
FEWS - 16969	App - Operator Client Gui (Explorer)	FEWS 64 bit OC starts really slow	known issue: 64b JRE does not contain client caching. Might take longer to startup OC using 64b				Deltares	
FEWS - 17821	App - Operator Client Gui (Explorer)	FEWS-17521 Expand/shrink selection functionality unclear	clearer expand /shrink selection window	More text was added to the expand/shrink selection box, to make the possible entries clearer.			Deltares	

FEWS - 17556	App - Operator Client Gui (Explorer)	FEWS-17202 Add button to show last value in explorer	added button to change location labels to map display	Added a drop-down button to the map display to allow selecting whether the last value should be displayed in the labels. The functionality is similar to the label button already present in the spatial / grid display.			APP	
FEWS - 17654	App - Operator Client Gui (Explorer)	FEWS language: add Vietnamese as user language (GUI)	add Vietnamese to language options	Language files for Vietnamese were added to FEWS.			Provinces Vietnam	

FEWS - 18435	App - Operator Client GUI (Explorer)	Store system time in user_settings.ini for SA	Store system time in user settings for Stand Alone	<p>The system time of a stand alone is now stored in and read from the user settings, if and only if <adjustSystemTimeAutomatically> is set to false. Note that this is the default for stand alone environments. Set this element (found in explorer.xml -> <dateTime>) to true for a stand-alone environment in which the system time should be adjusted to the actual time automatically. For stand alone environments in which this is not configured, the new default behavior will be that the system time is only changed when adjusted manually, and no longer updated to the current time on start-up. Note that the value stored in the user settings will be overruled if a T0 is configured in the global properties.</p>	https://publicwiki.deltares.nl/display/FEWSDOC/01+FEWS+Explorer#id-01FEWSExplorer-adjustSystemTimeAutomatically	Deltares	
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FEWS - 18416	App - Operator Client Gui (Explorer)	Split location counter (data viewer) in main and sublocations	Location counter in data viewer is split between parent and child locations	When the time navigator toolbar is enabled in the explorer, a location count is shown in the data viewer. This count has now been split in two separate counts: the number of parent locations and the number of child locations.			HDSR	
FEWS - 17281	App - Operator Client Gui (Explorer)	Embedded PDF viewer default print format A4	Embedded PDF print changed default format from Letter to A4					
FEWS - 18385	Configuration	FEWS-14299 IdMap. Allow multi value attributes for parameterIdFunction						
FEWS - 18147	Configuration	Custom hourly timestep at half hours (e.g. 00:30, 01:30, 02:30)	new timestep at specified minutes of each hour	A new possibility for defining a <timeStep> was added. The minutes attribute can be used to specify minute offsets for each hour. For example <timeStep minutes="15 50"/> will result in steps at 0:15, 0:50, 1:15, 1:50, etc.	<code>{code:xml}<timeStep minutes="15 50"/> <!-- 0:15, 0:50, 1:15, 1:50, etc. --> {code}</code>	https://publicwiki.deltares.nl/display/FEWSDOC/26+TimeSteps#Otherexamples		

FEWS - 16983	Configuration	client.truststore improvements	client.truststore can be configured in the clientConfig.xml	The clientConfig.xml can now be used to explicitly configure the client.truststore and client.keystore using a custom name and location. If the configured files are not found, a configuration error will be logged. For backwards compatibility the client.truststore and client.keystore will still be used if no clientConfig.xml configuration was found.	<pre> {code} <?xml version="1.0" encoding="UTF-8"?> <clientConfiguratio n 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 /clientConfig.xsd" > <localDataStoreForm at>Derby< /localDataStoreForm at> <clientStore> <trustStoreFile>% REGION_HOME% /client.truststore< /trustStoreFile> <keyStoreFile>% REGION_HOME% /client.keystore< /keyStoreFile> </clientStore> </clientConfiguratio n> {code} </pre>	https://publicwiki.deltares.nl/display/FEWSDOC/How+to+configure+secure+http+connection+to+Matroos	Deltares	
FEWS - 16883	Database	FEWS-16887 NWS: #28627 Sequence table incorrect after database rebuild and initial MC_synchronisation					NWS	
FEWS - 18365	Database	Expand the taskTag column in the Tasks table to 146 characters so workflowId and taskTag do not need to be chopped anymore					Deltares Roadmaps	-
FEWS - 17353	Database	FEWS-16767 Create new table ForecastingShells					Deltares Roadmaps	-
FEWS - 16876	Database	FEWS-16767 Add globalRowId column to all tables					Deltares Roadmaps	-
FEWS - 17647	Database	FEWS-16767 Database time provider in extended datasource					Deltares Roadmaps	-
FEWS - 18237	Database	FEWS-16767 Add integer build number column to log entries table					Deltares Roadmaps	-

FEW S - 17575	Database	Optimize Snapshot Replicate functionality	/		<pre> {code:xml} <?xml version="1.0" encoding="UTF-8"?> <exportArchiveModul e x s i : schemaLocation=" http://www.wldelft. nl / f e w s http://fews. wldelft.nl/schemas /version1.0 /exportArchiveModul e.xsd" xmlns:xsi=" http://www.w3.org /2001/XMLSchema- instance" xmlns=" http://www.wldelft. nl / f e w s "> <exportSnapShot> <general> <archiveFolder>\$ARC HIVE_DIR\$< /archiveFolder> < /general> <activities> <exportSnapShot> <areaId>test< /areaId> <filter id="only time series "> <xmlConfig enabled="false" name="Default xml c o n f i g " synchLevel="11"/> <coldStates enabled="false" name="Default cold s t a t e s " synchLevel="11"/> <moduleDataSets enabled="false" name="Default module data sets" synchLevel="11"/> <mapLayers enabled="false" name="Default map l a y e r s " synchLevel="11"/> <icons enabled=" false" name=" Default icons" synchLevel="11"/> <reportTemplates enabled="false" name="Default report templates" synchLevel="11"/> <reportImages enabled="false" name="Default report images" synchLevel="11"/> <continuousTimeSeri es enabled="true" name="Simulated" synchLevel="0" maxAge="1000" unit="week"/> <continuousTimeSeri es enabled="true" name="Telemetry" synchLevel="1" maxAge="1000" unit="week"/> <continuousTimeSeri es enabled="true" name="Manual" </pre>	Deltares
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					<pre>synchLevel="5" maxAge="1000" unit="week"/> <continuousTimeSeries enabled="true" name="Astronomical a n d climatological" synchLevel="4" maxAge="1000" unit="week"/> <continuousTimeSeries enabled="true" name="Small external forecast grids" synchLevel=" 6" maxAge="1000" unit="week"/> <continuousTimeSeries enabled="true" name="Large external forecast grids" synchLevel=" 16" maxAge="10000" unit="week"/> <warmStates enabled="false" name="Warm states" maxAge="10" unit=" week"/> <logEntries enabled="false" name="Log Entries" maxAge="1" unit=" week"/> <thresholdEvents enabled="false" name="Threshold Events" maxAge="1" unit="week"/> </filter> </exportSnapshot> </activities> </exportSnapshot> </exportArchiveModule> {code}</pre>			
FEWS - 18432	Database	FEWS-16767 Always use sequences when inserting system activities					Deltares Roadmaps	-
FEWS - 17885	Database	Indexing TaskRunCompletion table is slow					D-USA	
FEWS - 18411	Database	FEWS-16767 Connection naming	name all database connections based on component name	name all database connections based on component name			Deltares Roadmaps	-
FEWS - 17175	Database	FEWS-16315 Add nullable exportTime column to ThresholdEvent table	The ThresholdEvents table has a new exportTime column.				BoM	
FEWS - 17354	Database	FEWS-16767 Replace Sequences table with 4 database sequences	Sequence tables replaced by actual database sequences which are simpler and more efficient	Sequence tables replaced by actual database sequences which are simpler and more efficient			Deltares Roadmaps	-

FEWS - 18051	Database	FEWS-14299 FFFS: Add power function to time series rating curves	Rating curve with stageToDischargePowerEquation	stageToDischargePowerEquation represents the equations $\text{discharge} = \text{cr} * (\text{stage} - \alpha)^\beta$ beta where 'cr' and 'beta' are rating curve constants, and 'alpha' is a constant which represents the stage corresponding to zero discharge. To show the stageToDischargePowerEquation rating curves in the TimeSeriesDisplay, a table is generated on the fly from the power equations. For each equation ten stage values are generated using increment (max stage - min stage) / 10, and for each stage a discharge is computed. Please note that this table is only used in the display and not in Transformation Module computations.	Example from pi_ratingcurves.xml {code:xml} <ratingCurve> <header> <locationId>LocA</locationId> <startDate date="2011-01-01" time="00:00:00" /> <stationName>Loccat ionA</stationName> <stageUnit>m</stageUnit> <dischargeUnit>m3 /s</dischargeUnit> </header> <stageToDischargePowerEquation minStage="0.02757" maxStage="0.5" cr="8.8605" alpha="0.02757" beta="1.8032" /> <stageToDischargePowerEquation minStage="0.5" maxStage="10.0" cr="8.8605" alpha="0.02757" beta="1.8032" /> <stageToDischargePowerEquation minStage="10.0" maxStage="999.0" flag="3" cr="17.7210" alpha="0.02757" beta="1.8032" /> </ratingCurve> {code}		EA	
FEWS - 18238	Database	FEWS-16767 Implement Maintenance Mode	Maintenance mode support	From the admin interface maintenance mode can be started or stopped. When in mainenance mode other FEWS components aren't allowed to write to the database.			Deltares Roadmaps	-

FEWS - 17101	Debug Tool - Workflow Navigator	WFN should check if all referenced properties are available	WFN check of transformation module expressions	WFN checks to see if the variables and coefficients, referenced in the expressions, are defined. When any expression variable or coefficient is not defined, then the transformation module node is marked with a red cross. Using menu "Show messages" the popup can be opened that shows the undefined variables and/or coefficients. See picture WFN.png				Deltares	
FEWS - 18635	Documentation	FEWS-17521 Check with ICT-OS what Database recovery mode means							
FEWS - 18633	Documentation	FEWS-17521 Check how OC logging is written to, read from and acknowledged from central database							
FEWS - 17399	Module Adapter - All	Upgrade wanda adapter with new dll-s						Deltares	
FEWS - 18247	Module Adapter - All	FEWS-16663 Québec: Hydrotel Adapter	Created pre and post adapter for Hydrotel model			https://publicwiki.deltares.nl/pages/viewpage.action?pageId=132449418		MDDELCC (Quebec)	

FEWS - 17003	Module Adapter Calibration	FEWS-16887 NWS: #34172 (b) CHPS Calibration: MapLayers C S V Compatibility for model parameters	Modified location attribute parameters can be visualized in the tabular config file display	Modified location attribute parameters can be visualized in the tabular config file display. Marking the the "Show modified values" checkbox will show the changed values and highlight the background in blue. The modified values can be exported to CSV>			NWS
FEWS - 17504	Plugin - Gui Forecast Manager	Forecast management dialog: add extra column with runtime of workflow					Nationaal Water Model
FEWS - 17883	Plugin - Gui Grid Display	FEWS-17145 GridDisplay - Mask (or erase) coarse model results in areas with detailed model results			{code:xml} <locationSet id="wave_EAM_clipper.shp"> <esriShapeFile> <file>wave_EAM_clipper.shp</file> <id>EAM.Wave</id> <x>0</x> <y>0</y> </esriShapeFile> </locationSet> {code} remove the EAM.Wave from the locations.xml		
FEWS - 16905	Plugin - Gui Grid Display	FEWS-16887 NWS: #24896 Spatial Display time-slider snapped to moving accumulation time step			{code:xml} </dataLayer> <accumulationTimeStep unit="minute" multiplier="30"/> <accumulationTimeStep unit="hour" multiplier="1"/> <accumulationTimeStep unit="hour" multiplier="3" timeZone="CST"/> <accumulationTimeStep unit="hour" multiplier="6" timeZone="CST"/> <accumulationTimeStep id="12Z"/> <classBreaks> {code}		NWS
FEWS - 17462	Plugin - Gui Grid Display	Show time series set locations instead of related in spatial display					FEWS Sava

FEWS - 17149	Plugin - Gui Grid Display	- Functionality to show a fixed logo at grid product, like EUMETSAT H-SAF		The image file should be placed in the MaplayerFiles directory	<pre> {code:xml} <gridPlot id="Precipitation"> <timeSeriesSet> <moduleInstanceId>Import_NWP< /moduleInstanceId> <valueType>grid< /valueType> <parameterId>P.fc< /parameterId> <qualifierId>aladin_hr</qualifierId> <locationId>NWP_ALADIN_HR< /locationId> <timeSeriesType>external_forecasting< /timeSeriesType> <timeStep unit="hour" /> <relativeViewPeriod unit="day" start="-5" end="10"/> <readWriteMode>readOnly< /readWriteMode> </timeSeriesSet> <logo> <imageFile>logo.png</imageFile> <position>topRight</position> </logo> <classBreaksId>Precipitation_1h< /classBreaksId> <contourLinesColor>gray< /contourLinesColor> </gridPlot> {code} </pre>	https://publicwiki.deltares.nl/display/FEWSDOC/01+Grid+Display	FEWS Sava	
FEWS - 17837	Plugin - Gui Grid Display	- LastValue checkbox in spatial display default setting	store "last value" checkbox status from spatial display in the user settings	The status of the "last value" checkbox in the spatial display is now stored in the user settings. When FEWS is restarted, the checkbox will still be checked/unchecked like it was when FEWS was exited.			APP	

FEWS - 17208	Plugin - Gui - Grid Display	FEWS-17202 Make labels of background layers configurable	new label formatting options for shape-layers	For shape-layers (esriShapeLayer and serverShapeLayer), several new elements are available to format the labels: * labelFontSize * labelFontColor * labelBackgroundColor * labelOpacity (opacity of the background color) * labelBorder * labelAtLine (controls whether smart labeling is used for lines, see FEWS-17600) * labelXAttribute & labelYAttribute (allow defining label coordinates in the shape files)	{code:xml} <esriShapeLayer id = "myPrettyLabelLayer"> <file>layerFile</file> <label>%labelColumn%</label> <labelFontSize>15</labelFontSize> <labelFontColor>blue</labelFontColor> <labelBackgroundColor>red</labelBackgroundColor> <labelOpacity>20</labelOpacity> <labelBorderColor>black</labelBorderColor> <labelXAttribute>labelXColumn</labelXAttribute> <labelYAttribute>labelYColumn</labelYAttribute> <lineColor>gray90</lineColor> <fillColor>yellow</fillColor> <opacityPercentage>25</opacityPercentage> </esriShapeLayer> {code} {code:xml} <esriShapeLayer id = "noSmartLineLabels"> <file>Contour</file> <label>%CONTOUR%</label> <labelAtLine>>false</labelAtLine> <lineColor>lightgoldenrod yellow</lineColor> <lineWidth value="2" /> </esriShapeLayer> {code}	https://publicwiki.deltares.nl/display/FEWSDOC/GeoMap#CommonShapeLayerElements	APP
FEWS - 17845	Plugin - Gui - Grid Display	Mousepointer does not show calculation symbol when hovering on map	mouse pointer shows hourglass symbol when hovering over map	The mouse pointer will now show an hourglass symbol when hovering over the map when FEWS is still calculating, similar to how the hourglass symbol was already shown when hovering outside of the map.			Deltares

FEWS - 17990	Plugin - Gui Grid Display	FEWS-17202 Enable classification of point layers in geoMap	enable classification for point layers in geoMap	It is now possible to configure a classification for point shapelayers using icons.	{code:xml} <esriShapeLayer id="VenHLozingspunten" name="VenHLozingspunten"> <file>VenH_lozingspunten.shp</file> <pointIconId>meteo_site_data.gif</pointIconId> <classBreaksAttribute Name>OWA_OWA_ID</classBreaksAttribute Name> <classBreaks> <break lowerValue="0" label="red" icon="meteo_site_data.gif"/> <break lowerValue="1000" label="blue" icon="meteo_site_data_blue.gif"/> </classBreaks> </esriShapeLayer> {code}	https://publicwiki.deltares.nl/display/FEWSDOC/GeoMap#CommonShapeLayerElements	APP
FEWS - 17986	Plugin - Gui Grid Display	FEWS-17202 Add MapExtentId to Gridplot	couple zoom extent to grid plot	It is now possible to configure a mapExtentId for grid plots, the map will then automatically select the configured zoom extent when the grid plot is selected in the spatial display. The mapExtentId can be coupled to specific grid plots or defaults can be used to configure the same mapExtentId for several grid plots at once.	{code:xml} <defaults> <plotGroupId>Rainfall_obs</plotGroupId> <mapExtentId>New South Wales</mapExtentId> </defaults> {code:xml} <gridPlot id="Peilschaal" name="Peilschaal"> <mapExtentId>Jambi</mapExtentId> <dataLayer> <circleBorderSize>1</circleBorderSize> <timeSeriesSet> <moduleInstanceId>Process_WMMS_auto</moduleInstanceId> <valueType>scalar</valueType> <parameterId>WL_obs</parameterId> <locationSetId>WaterLevel_RiauSMF</locationSetId> <timeSeriesType>external_historical</timeSeriesType> <timeStep id="Week"/> <relativeViewPeriod unit="week" start="-4" end="0" startOverrulable="true"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </dataLayer> <classBreaksId>WaterLevel</classBreaksId> </gridPlot> {code}	https://publicwiki.deltares.nl/display/FEWSDOC/01+Grid+Display	APP
FEWS	Plugin - Gui	FEWS-17145	When DFlow	When 2D or 3D	<gridPlot id="		Deltares

S - 17850	Grid Display	GridDisplay configuration optimization using multiple grid partitions	FM model results have been imported for multiple computational domains, the 2D or 3D data can be displayed in Grids.xml by Create a LocationSet including the LocationId for all partitions. This LocationSet can be used consistently throughout the gridDisplay configuration, like when displaying: * 2D data, e.g. water level * 3D data, e.g. a combination of uTimeSeriesSet, VTimeSeriesSet a n d sigmaScaleReferenceTimeSeries Set * 3D data, e. g . a combination of timeSeriesSet (e.g. temperature) a n d sigmaScaleReferenceTimeSeries Set	data is imported using multiple domain partitions, this data can be displayed in Grids.xml making use of LocationSets. This LocationSet including the LocationId for all partitions. This LocationSet can be used consistently throughout the gridDisplay configuration, like when displaying: * 2D data, e.g. water level * 3D data, e.g. a combination of uTimeSeriesSet, VTimeSeriesSet a n d sigmaScaleReferenceTimeSeries Set * 3D data, e. g . a combination of timeSeriesSet (e.g. temperature) a n d sigmaScaleReferenceTimeSeries Set	3D_data" name="3D_data display"> <dataLayer> <arrowColor>white</arrowColor> <arrowSymbol>flow</arrowSymbol> <multipleArrowsPerValue>>false</multipleArrowsPerValue> <uTimeSeriesSet> <moduleInstanceId>DFlowFM_FC</moduleInstanceId> <valueType>grid</valueType> <parameterId>C.simulated.u</parameterId> <locationSetId>DFlowFM_0_####</locationSetId> <timeSeriesType>simulated forecasting</timeSeriesType> <timeStep unit="nonequidistant"/> <readWriteMode>read complete forecast</readWriteMode> </uTimeSeriesSet> <vTimeSeriesSet> <moduleInstanceId>DFlowFM_FC</moduleInstanceId> <valueType>grid</valueType> <parameterId>C.simulated.v</parameterId> <locationSetId>DFlowFM_0_####</locationSetId> <timeSeriesType>simulated forecasting</timeSeriesType> <timeStep unit="nonequidistant"/> <readWriteMode>read complete forecast</readWriteMode> </vTimeSeriesSet> <uvAmplitudeParameterId>C.simulated.speed</uvAmplitudeParameterId> <uvDirectionParameterId>C.simulated.dir</uvDirectionParameterId> <sigmaScaleReferenceTimeSeriesSet> <moduleInstanceId>DFlowFM_FC</moduleInstanceId> <valueType>grid</valueType> <parameterId>WD.simulated</parameterId> <locationSetId>DFlowFM.merged</locationSetId> <timeSeriesType>simulated forecasting</timeSeriesType>
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					<pre><timeStep unit=" nonequidistant"/> <readWriteMode>read complete forecast< /readWriteMode> < /sigmaScaleReferenc eTimeSeriesSet> < /dataLayer> <barLegend> <position>right< /position> <width>50</width> <length>400< /length> <labelsInside>true< /labelsInside> < /barLegend> <classBreaksId>Clas s.Currents< /classBreaksId> <contourLinesColor> antique white< /contourLinesColor> </gridPlot></pre>		
FEWS - 18289	Plugin - Gui - Grid Display	FEWS-17145 Hide "Last Value" box in grid display when not applicable	Added configuration option to hide the last value checkbox in the GridDisplay	The last value checkbox in the GridDisplay can now be hidden through configuration. Documentation on the new configuration option and the functionality of the last value checkbox was added to the wiki.	https://publicwiki.deltares.nl/display/FEWSDOC/01+Grid+Display#01GridDisplay-AccumulationMovingAverageSliderorLastValueCheckbox		
FEWS - 17973	Plugin - GUI IFD Forecaster Help	List of 'Product' doesn't refresh after a task/node has finished running	Forecaster help selection panel is improved	The forecaster help selection panel gives an overview of the files which are available for a certain topology node to help the forecaster. After selection of a file the content will be displayed in the forecaster documentation panel. It is possible to show the content of multiple folders for each separate node. If the content of these folders is changed the selection panel will now always refresh its content.		RWS	

FEWS - 12981	Plugin - Gui Map	FEWS-14893 FOEN-DEV: Add feature to disable threshold icons in Filters and Map display	new button in the map display which can disable threshold icons	A new button was added to the map display to turn the threshold icons for the locations on and off. Turning the threshold icons off allows the validation icons to become visible.			FOEN
FEWS - 18286	Plugin - Gui Map, Plugin Module Reports	FEWS-17145 - Link location-specific reports to Map viewer	Added option to link a report to locations	Locations can now be linked to a specific report. When configured, if the location is selected, the linked report will be automatically selected in the ForecasterAidSelectionPanel. Note that the report must already be present in the list of reports in this panel. Information on the configuration of these feature is available on the wiki.		https://publicwiki.deltares.nl/display/FEWSDOC/27+Forecaster+Aid+Selection+Panel	
FEWS - 18214	Plugin - Gui Schematic Status Display	FEWS-17521 Context menu - save as - error when extension not entered					Deltares
FEWS - 16812	Plugin - Gui Schematic Status Display	SSD, switching between panels with different timestep causes loss of time definition	Time slider activation button can be configured to toggle between active and inactive timeslider	Time navigator toolbar activation button can be configured to toggle between active and inactive time navigator. When the time navigator is set to inactive, the behaviour is equal to the case where no navigator toolbar was configured at all.	<pre>{code} <showTimeNavigatorToolbar> <timeNavigatorRelativePeriod unit="day" start="-30" end="0"/> <activate>false</activate> <showTimeNavigatorActivationToggle>true</showTimeNavigatorActivationToggle> </showTimeNavigatorToolbar> {code}</pre>	https://publicwiki.deltares.nl/pages/viewpage.action?pageId=8684020	RWS (NL)

FEWS - 17490	Plugin - Gui Schematic Status Display	Configurable schematic status display background	Schematic Status Display can have a custom background color	A Schematic Status Display can have a custom background color. The colors can be colorScheme dependent. A background color can be define on the display level, that will apply to all panels in the display. On the panel level a color can be defined as well to overrule the color on the displaylevel.	Example of background color for a display. {code} <displayName>Scada Display Twenthekanalen</displayName> <showTimeNavigatorToolBar> <timeNavigatorRelativePeriod unit="day" start="-30" end="0"/> <activate>true</activate> <showTimeNavigatorActivationToggle>true </showTimeNavigatorActivationToggle> </showTimeNavigatorToolBar> <backgroundColor>[HLH_blue]</backgroundColor> {code} Example of a panel specific color: {code} <scadaPanel id="TK" name="Twenthekanalen 10 min" > <svgFile>TK_Twentek analen_10min.svg</svgFile> <overrulingTimeNavigatorTimeStep multiplier="10" unit="minute"/> <backgroundColor>yellow</backgroundColor> {code}	https://publicwiki.deltares.nl/pages/viewpage.action?pageId=8684020	IWP
FEWS - 18373	Plugin - Gui Schematic Status Display	Use of attributes in SSD the 'title' of the 'leftSingleClick Action'	PARAMETER tag and LOCATIONATTRIBUTE tag S S D improvements	PARAMETER tag and LOCATIONATTRIBUTE tag S S D improvements.	https://publicwiki.deltares.nl/pages/viewpage.action?pageId=8684020	RWS - IWP	
FEWS - 18080	Plugin - Gui System Monitor	FEWS-14730 System Monitor Display, Import status tab - highlight selected row	System Monitor Display, Import status tab - highlight selected row	If rows are selected in the table of the import status tab in the System Monitor Display, they are now highlighted.		MDBA	
FEWS - 18418	Plugin - Gui Schematic Status Display, Plugin - Gui Threshold Display	Set transparency of svg elements based on a timeseries	opaquenessPercentage available for ThresholdWarningLevels	In the ThresholdWarningLevels.xml it is now possible to configure a opaquenessPercentage. Default a value is set to 100%.	{code} <thresholdWarningLevel id="4" name="Afvoer is positief, overschot"> <color>green</color> <opaquenessPercentage>20</opaquenessPercentage> {code}	RWS	

FEWS - 16092	Plugin - Gui Threshold Display	FEWS-17266 System wide threshold crossing display with action acknowledge functionality	Display that shows table like overview of all Threshold Events	User manual is documented under link: https://publicwiki.deltares.nl/display/FEWSDOC/29+System+Wide+Thresholds+Display	<pre>{code} <explorerTask name="Events"> <iconFile>table. png</iconFile> <mnemonic>T< /mnemonic> <taskClass>n1. wldelft.fews.gui. plugin. thresholdeventsview er. ThresholdEventsTabl eViewer< /taskClass> <toolbarTask>true< /toolbarTask> <menubarTask>true< /menubarTask> <allowMultipleInsta nces>>false< /allowMultipleInsta nces> <accelerator>ctrl T</accelerator> <loadAtStartup>fals e</loadAtStartup> < /explorerTask> {code}</pre>	https://publicwiki.deltares.nl/display/FEWSDOC/29+System+Wide+Thresholds+Display	TVA	
FEWS - 17028	Plugin - Gui Time Series	FEWS-17266 TVA: ability to auto-sort times when editing nonequidistant data					TVA	
FEWS - 16981	Plugin - Gui Time Series	H K V : Timeseries Marker as icon (for displaying wind direction as arrow)			<pre>{code:xml} <parameterDisplayOp tions id="WS.15"> <preferredColor>pur ple< /preferredColor> <lineStyle>solid< /lineStyle> <markerRotationPara meterId>WR.15< /markerRotationPara meterId> <!-- <markerIcon>arrow_i con_test.png< /markerIcon>--> < /parameterDisplayOp tions> {code}</pre>		HHS Delfland	
FEWS - 17193	Plugin - Gui Time Series	FEWS-16132 HERMES: show single day (0-23hr) in the 24N display irrespective of hour of the day FB97					BPA HERMES	

FEWS - 17364	Plugin - Gui Time Series	FEWS-16132 ability to configure colors of table headers for specific timeseries	table column header background color	It's now possible to configure a tableHeaderBackgroundColor in the parameterDisplayOptions of the timeSeriesDisplay.xml to have a custom background color. It's also possible to use a color that has been defined in the color schemes.	<pre>{code}<parameterDisplayOptions id="Q_Obs"><preferredColor>green</preferredColor></parameterDisplayOptions>{code}</pre> <pre><parameterDisplayOptions id="Q_Obs"><preferredColor>green</preferredColor><lineStyle>solid</lineStyle><markerStyle>triangledown</markerStyle><markerSize>3</markerSize><precision>1</precision><scaleUnit>1</scaleUnit><tableHeaderBackgroundColor>[HLH_blue]</tableHeaderBackgroundColor></parameterDisplayOptions>{code}</pre> <pre>In the CustomColors.xml the HLH_Blue color has been defined: {code}<customColorKey key="HLH_blue" color="light blue"/>{code}</pre>		BPA HERMES
FEWS - 12984	Plugin - Gui Time Series	FEWS-14893 FOEN-DEV: Add a second icon to the icons of the shortcuts to know if thresholds are crossed before or after the system time	show threshold warnings in time series display only based on values before / after display time	The show threshold warnings button in the time series display (graph display) could already be used to turn on/off the threshold icons in the shortcuts menu. A drop-down menu was added to this button with options to only use values before, or only use value after the display time, when deciding what icon to display.			FOEN
FEWS - 17059	Plugin - Gui Grid Display, Plugin - Gui Time Series	Add pixel information to pasted timeseries (from grid-display)	add pixel information to pasted timeseries (from grid-display)	When you double click on a grid cell in the grid display, the time series for this point is shown in a graph. The coordinates of the grid cell are now shown in the title of this graph.			GO-FEWS (Selection of Dutch Waterboards)

FEWS - 17029	Plugin - Gui Time Series	FEWS-17266 TVA: default last row in nonequidistant table to T0	When a new time step is added at the end of the period in the data editor let the new time default to T0 if possible.	When a new time step is added at the end of the period in the data editor let the new time default to T0 if possible.			TVA	
FEWS - 17025	Plugin - Gui Time Series	FEWS-10616 TVA: Data editing of nonequidistant time series (remove time)	Remove time in the time series editor now removes the whole row				TVA	
FEWS - 16936	Plugin - Gui Time Series	FEWS-16887 NWS: #25016 Distance reduced of cursor (tooltip) readout showing nearest timeseries value	Option tooltipMargin to configure radius (in pixels) round the time series value the tooltip starts appearing	An example from TimeSeriesDisplayConfig.xml : <generalDisplayConfig> <thresholdLabelFontSize>9</thresholdLabelFontSize> <barMarginPercentage>20</barMarginPercentage> *<tooltipMargin>10</tooltipMargin> * <convertDatum>false</convertDatum> </generalDisplayConfig>			NWS	

FEWS - 17315	Plugin - Gui Time Series	Add functionality to scatter plot to show multiple parameters for single location	Option to show "ShowAsScatterPlot" for the displayGroups is extended	It is possible to define a scatterplot for a certain node in the display groups. This was already possible in the previous releases by using the showAsScatterPlot option. However the timeseries were always paired my matching the parameter. This means that if a set of time series were defined for a certain node that two time series with the same parameter were always compared in the scatter plot. Since the 201702 release it is now also possible to create pairs by matching the location. This can be done by setting the option creatPairsByMatchingParameter to false.	<pre> <displayGroup name = " Verification_parameters_scatter"> <display name=" Rotterdam parameters scatter" > <nrofRecentForecasts > 2 < /nrofRecentForecasts > <locationId>rotterdam</locationId> <plotId>Scatterplot_parameters< /plotId> <showAsScatterPlot> <chartTitle>My scatter plot< /chartTitle> <referencePoints> <point> <x>-1</x> <y>-1</y> </point> <point> <x>0</x> <y>0</y> </point> <point> <x>2</x> <y>2</y> </point> < /referencePoints> <xAxisRange> <min>-1</min> <max>2< /max> < /xAxisRange> <yAxisRange> <min>-1</min> <max>2< /max> < /yAxisRange> <createPairsByMatchingParameter>false< /createPairsByMatchingParameter> < /showAsScatterPlot> </display> </pre>	RWS
FEWS - 17862	Plugin - Gui Time Series	Button "return to default"	Explorer File menu option "Reload default user settings"	The user may modify the preferences in the OC Gui. For example changing colors or switching TimeSeriesDisplay toolbar buttons on/off. These preferences are stored in user_settings.ini. File menu option "Reload default user settings" restarts FewS with the default settings again. The previously entered user preferences are removed.		RWS

FEW S - 15730	Plugin - Gui Time Series	- Add option to use identical vertical scales in timeseries viewer in 'multi-panel' mode	Added option to use identical vertical scales in graphs	The time series display already contained the option "Toggle graph" to display each time series in a separate graph. A second option "Toggle graph with equal scaling" was added. When this button is used, time series which were shown in the same graph originally, will use the same scale on the y-axis.			Office of Public Works, Ireland
FEW S - 17926	Plugin - Gui Time Series	- A d d configuration option for whitespace between (sub) plots	A d d configuration option for whitespace between (sub) plots	The subplot element in displayGroups.xml now has an element <plotSeparator Weight> (in addition to the <plotWeight> element) which controls the amount of whitespace above the subplot. For example, if two subplots are configured and the first subplot, second subplot and separator of the second subplot are all given equal weight, each will occupy 1/3 of the screen.			HHS Delfland

FEWS - 18223	Plugin - Gui - Time Series Modifier, System Workflow	FEWS-18222 HyFS: Dynamic selection of catchments	Workflow activity option "enabled"	If the option "enabled" is present and the location attribute, specified with attributeId, has value FALSE, then the activity will be excluded from the workflow run. AttributeId should refer to the boolean attribute. To change interactively the attribute value, use location attribute modifiers.	An example from Workflow.xml : {code:xml} <activity> <properties> <string key="CATCHMENT" value="goulburn"/> </properties> <enabled locationId="hunter_goulburn" attributeId="INCLUDE_IN_WORKFLOW" /> <runIndependent>true</runIndependent> <moduleInstanceId>goulburn_Rainfall_Multi_Scen_Forecast</moduleInstanceId> <moduleConfigFileName>Rainfall_1h_Multi_Scen_Forecast</moduleConfigFileName> </activity> <activity> <properties> <string key="CATCHMENT" value="goulburn"/> </properties> <enabled locationId="hunter_goulburn" attributeId="INCLUDE_IN_WORKFLOW" /> <runIndependent>true</runIndependent> <workflowId>goulburn_URBS_Catchment_Forecast</workflowId> </activity> {code}		BoM
FEWS - 16937	Plugin - Gui - Time Series Modifier	FEWS-16887 NWS: #23388 Order of available time of the "create series types" in the Create model's sub-menu should be configurable	The order of the parameters in the submenu of the "create modifier"-button dropdownlist is now configurable	When a time series modifier can be applied to multiple parameters the parameter can be selected from a submenu in the drop down list of the "create modifier"-button. The parameters are sorted alphabetically. It is now possible to configure the order of the parameters in the modifierDisplay Config.xml	<dropDownMenuDisplayOrder> <modifier id="rrichng"/> <modifier id="tschnng"> <parameterId>SQIN</parameterId> <parameterId>STG</parameterId> </modifier> </dropDownMenuDisplayOrder>		NWS

FEWS - 16902	Plugin - Gui - Time Series Modifier	FEWS-16887 NWS: #23387 Order of modifiers in drop-down menu should be configurable	Order of the modifiers in the drop down list of the "create modifier" button is now configurable	By default the list of modifiers in the drop down menu of the "create modifier" button are sorted alphabetically. It is now possible to configure this order in the modifierDisplay.xml. It is not necessary to configure the order for all modifiers. These modifiers will added to the list alphabetically.	<dropDownMenuDisplayOrder> <modifier id="wechnng"/> <modifier id="weadd"/> </dropDownMenuDisplayOrder>	NWS
FEWS - 14443	Plugin - Gui - Time Series Modifier	FEWS-14471 Add modifier for "Staumatrixfullen" (p2)	New Modifier added using referenceColumns	Example from ModifierTypes.xml {code:xml} <highLowSurgeSelectionModifier id="staumatrix1" name="StauMatrix1"> <modifierColumn name="Modifier"> <timeSeries> <moduleInstanceId>ImportStauMatrix</moduleInstanceId> <parameterId>Surge</parameterId> <qualifierId>Default</qualifierId> </timeSeries> </modifierColumn> <referenceColumnName="ModelA"> <timeSeries> <moduleInstanceId>ImportStauMatrix</moduleInstanceId> <parameterId>Surge</parameterId> <qualifierId>ModelA</qualifierId> </timeSeries> </referenceColumnName> <referenceColumnName="ModelB"> <timeSeries> <moduleInstanceId>ImportStauMatrix</moduleInstanceId> <parameterId>Surge</parameterId> <qualifierId>ModelB</qualifierId> </timeSeries> </referenceColumnName> <referenceColumnName="ModelC"> <timeSeries> <moduleInstanceId>ImportStauMatrix</moduleInstanceId> <parameterId>Surge</parameterId> <qualifierId>ModelC		BSH

					<pre> </qualifierId> < /timeSeries> < /referenceColumn> <astronomicalNumber Selection> <timeSeriesFilter> <moduleInstanceId>I mportStauMatrix< /moduleInstanceId> <parameterId>Surge< /parameterId> <qualifierId>ModelA </qualifierId> <locationId>LocA< /locationId> < /timeSeriesFilter> <relativePeriod unit="hour" start=" 0" end="48"/> < /astronomicalNumber Selection> <correctionTimeLoca tionAttributeId>MHW I < /correctionTimeLoca tionAttributeId> <defaultStartTime>s tart run< /defaultStartTime> <defaultEndTime>end run < /defaultEndTime> <defaultValidTime / > <onlyApplyLastModif ier>true< /onlyApplyLastModif ier > <resolveInWorkflow> true < /resolveInWorkflow> <resolveInPlots>tru e</resolveInPlots> < /highLowSurgeSelect ionModifier> {code} </pre>		
FEWS - 16655	Plugin - Gui - Time Series Modifier	FEWS-17266 TVA: ability to combine MAP modifiers when editing in plots	Merge multiple small time series modifiers into a single modifiers	Normally when a forecaster makes multiple small changes to a time series then this will result in multiple modifiers. With this new option it is possible to merge these small mods automatically into 1 single large mod. The automated merging will only be done for new uncommitted time series modifiers which edit the same time series.	<pre> {code} <timeSeriesModifier id="my mod" name=" my modifier"> <timeSeries> <parameterId>my parameter< /parameterId> < /timeSeries> <mergeUnCommittedMo difiers>true< /mergeUnCommittedMo difiers> <defaultStartTime>s tart run< /defaultStartTime> <defaultEndTime>end run < /defaultEndTime> <resolveInWorkflow> true < /resolveInWorkflow> <resolveInPlots>tru e</resolveInPlots> < /timeSeriesModifier > {code} </pre>	TVA	

FEWS - 17503	Plugin - Gui What-if Scenario, Plugin Module Archive	- use custom properties in archive export for what-if name	Applied what-if scenarios are now stored in the archive	When a forecast is exported to the archive and a what-if scenario was applied to one of the time series which is part of the exported data set the applied what-if scenario (s) will be added to the runinfo.xml in the archive. The harvester of geonetwork will also add this information to the geonetwork archive.			Nationaal Water Model	
FEWS - 16241	Plugin Module Amalgamate	- FEWS-10616 - TVA. maintain edit meta data in tss data history after amalgamating					TVA	
FEWS - 18406	Plugin Module Archive	- FEWS-17145 - Archive 3D Scalar profile data to NetCDF						
FEWS - 17144	Plugin Module Archive	- FEWS-17145 - On-the-fly generation of regular NetCDF-GRID file based on bbox and viewperiod from Archive						

FEWS - 17289	Plugin - Data Export	FEWS-12539 Add to generalCSV export option to deal with enumeration values			<pre>{code:xml} <general> <exportType>general Csv</exportType> <folder>\$EXPORT_DIR \$</folder> <exportFileName> <name>ExportGeneral Csv.csv</name> </exportFileName> <table> <dateTimeColumn name="DateTime" pattern="yyyy-MM-dd HH:mm" /> <locationColumn name="Location"/> <parameterColumn name="Parameter"/> <valueColumn name=" ValueOnly" ignoreForEnumeratio nParameters="true" /> <valueColumn name="LabelOnly" ignoreForNumericalP arameters="true"/> <unitColumn name=" Unit" /> </table> <idMapId>GeneralCsv </idMapId> <exportMissingValue String/> <convertValuesToEnu merationLabels>true </convertValuesToEnu merationLabels> </general> {code}</pre>	https://publicwiki.deltares.nl/display/FEWSDOC/General+CSV+Export	NZV	
FEWS - 17546	Plugin - Data Export	FEWS-17145 Export 3D Z-Layer to NetCDF (GA export)	NETCDF-CF_ZLAYERS	NETCDF-CF_ZLAYERS exports scalar time series as Z-layers. Scalar time series at the same geo point Z but different X,Y are considered to be a Z-layer. All available Z's are used to create a Z-axis (layer axis) in the NetCdf file, and the time series values are written to the associated Z element. An example: float salinity(time=5, node=26, z=40); Values of Z-axis are stored in meters. Per parameter only one Z-axis is allowed. Different parameters may have different				

Z-axis values are sorted in ascending order. The number of stations in the nc file equals to the number of unique X,Y that are available in the scalar time series. The location id's /names associated with the first (lowest) Z are written to the nc file as station id's /names. If there are parent locations configured, then the IdMap can be used to write the parent locations id's to the nc file (see config example) The long_name attribute of the parameters is equal to the parameter id by default. To override the default long_name, configure parameter description in Parameters.xml. The parameter description will be then written to the nc file as long_name.

Usage

NETCDF-CF_ZLAYERS

in

GeneralAdapter:

To export scalar time series as Z_layers in GA, use option

```
<exportZLayers>true</exportZLayers>
```

in

```
<exportNetcdfActivity>
```

In GA the default missing value for time series is -999. You

				can overwrite it in GA using <missVal>, for example <missVal>NaN </missVal>			
FEWS - 17154	Plugin Module - Data Export	- FEWS-16887 NWS: #35088 FEWS HEC DSS Export /Import	Import and export for time series data from files in Hydrologic Engineering Center Data Storage	Import and export for time series data from files in Hydrologic Engineering Center Data Storage System format: http://www.hec.usace.army.mil/software/hecdss/ These files were already used in HEC-XXX models and their FEWS adapters.	Config for Hec Dss export {code:xml} <timeSeriesExportRun xmlns="http://www.wldelft.nl/fews" 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>HecDss</exportType> <folder>\$EXPORT_FOLDER\$</folder> <exportFileName> <name>equidistant.dss</name> </exportFileName> </general> <timeSeriesSet> <moduleInstanceId>Hec</moduleInstanceId> <valueType>scalar</valueType> <parameterId>H_max</parameterId> <locationId>Dummy</locationId> <timeSeriesType>external_historical</timeSeriesType> <timeStep unit="minute" multiplier="10"/> <relativeViewPeriod unit="week" start="-100" end="0"></relativeViewPeriod> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </export> </timeSeriesExportRun> {code} WIKI: https://publicwiki.deltares.nl/pages/viewpage.action?pageId=130383980 Config for Hec Dss import IdMap is needed for import when location and/or parameter id in FEWS is not in capitol letters. HecDss always uses Capitol letters. {code:xml} <timeSeriesImportRun xmlns="http://www.wldelft.	https://publicwiki.deltares.nl/display/FEWSDOC/HecDss	NWS

					<pre>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 /timeSeriesImportRu n.xsd"> <import> <general> <importType>HecDss< /importType> <folder>\$REGION_HOM E\$/import/dss< /folder> <idMapId>IdMapDssIm port</idMapId> < /general> < /import> < /timeSeriesImportRu n> {code} Example id map for import config above and attached [^H_MAX- DUMMY-10MIN.dss] {code:xml} <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://fews. wldelft.nl/schemas /version1.0/idMap. xsd"> <parameter internal="H_max" external="H_MAX"/> <location internal="Dummy" external="DUMMY"/> </idMap> {code} W I K I : https://publicwiki. deltares.nl/display /FEWSDOC/HecDss</pre>			
FEWS - 17758	Plugin Module - Data Import	- Feature to apply locationSelection also on import modules.				https://publicwiki.deltares.nl/display/FEWSDOC/06+Configuring+WorkFlows#id-06ConfiguringWorkFlows-loopLocationSetId	W I S WaterschapsBedrijf Limburg (WBL)	
FEWS - 17530	Plugin Module - Data Import	- FEWS-17145 Improve Netcdf-CF_Grid so it can read .nc files without time coordinate						

FEWS - 18201	Plugin Module - Data Import	- FEWS-16663 Québec: generalCSV parser supporting daylight savings time with separate date and time columns					Quebec
FEWS - 17039	Plugin Module - Data Import	- FEWS-17145 Import Profile Data with varied domain parameter (z layer or sigma layer)					Panama
FEWS - 18531	Plugin Module - Data Import	- FEWS-16464 FOEN: Update SHD parser with new locationID mapping				https://publicwiki.deltares.nl/display/FEWSDOC/SHD+-+Swiss+Hydro+Data	FOEN
FEWS - 17092	Plugin Module - Data Import	- FEWS-14337 nc4 import for NOAA GPM radar data					BMT-WBM
FEWS - 17594	Plugin Module - Data Import	- FEWS-17202 Import user information from database table			<pre>{code:xml} <table> <dateTimeColumn name="Datum/Tijd" pattern="dd-MM-yy HH:mm " /> <parameterColumn name="Parameter"/> <valueColumn name=" Waarde" /> <locationColumn name="Locatie" /> <userColumn name=" Gebruiker" /> < /table> {code}</pre>	https://publicwiki.deltares.nl/display/FEWSDOC/General+Csv#GeneralCsv-userColumn	APP
FEWS - 17802	Plugin Module - Data Import	- API Import TAHMO	import TAHMO	Added a new import type TAHMO.		https://publicwiki.deltares.nl/display/FEWSDOC/TAHMO+import	Tanzania
FEWS - 17484	Plugin Module - Data Import	- FEWS-17202 New Import type: In-Situ Rugged Troll	Timeseries import supports gotoLineWhich StartsWith option to skip lines until configured starts with string is found	Timeseries import supports gotoLineWhich StartsWith option to skip lines until configured starts with string is found. Usefull in case the start of CSV headers is variable.		https://publicwiki.deltares.nl/display/FEWSDOC/General+Csv#ExamplegotoLineWhichStartsWit h(Since2016.02)	APP

FEWS - 18532	Plugin Module - Data Import	FEWS-17145 Add fileNameObservationDateTimePattern to NETCDF-CF_GRID import from OpenDAP	TimeSeriesImport from OpenDAP can use fileNameObservationDateTimePattern	When OpenDAP NC datasets does not contain any event time, and the date and time are available in the Url, then fileNameObservationDateTimePattern can be used to obtain date and time from this Url. Symbol ? can be used if the part of Url is variable, however the number of ? must match the actual number of characters in the Url. This is useful if the configured URL is a catalog. Please note that catalog should be a XML document.	An example from TimeSeriesImport. xml {code:xml} <general> <importType>NETCDF-CF_GRID< /importType> <serverUrl>http://t1-tc068.xtr.deltares.nl:8080/thredds/dodsC/Ganga/S3A_SR_2_WAT____20180406T010052_20180406T011037_20180406T033003_0585_029_359____MAR_O_NR_003.nc</serverUrl> <fileNameObservationDateTimePattern>'?????????????????????????????????????????yymdd'T'HHmmss'?????????????????????????????????????????'< /fileNameObservationDateTimePattern> <idMapId>IdMapGrid</idMapId> </general> {code}		
FEWS - 16898	Plugin Module - Data Import	FEWS-16887 NWS: #32624 Enhancement request for updates to SHEF imports	SHEF import supports multiparameter lines and continuations	The SHEF import now has support for multiple parameters on one line using the .A code. The continuations (.A1, .A2 etc.) are supported as well.	https://publicwiki.deltares.nl/display/FEWSDOC/SHEF+-+Standard+Hydrometeorological+Exchange+Format	NWS	
FEWS - 17865	Plugin Module - Data Import	Import for FEWS Bolivia	SENAMHI import	A new SENAMHI import module was added to FEWS.	https://publicwiki.deltares.nl/display/FEWSDOC/SENAMHI+import	SENAMHI	
FEWS - 16857	Plugin Module - Data Import	Import json CoVadem data via http GET	New import (COVADEM) is available in FEWS.	The covadem webservice provides measurements of the water depth by ships. A new data import is available in FEWS to consume this data. The import is available with the tag "Covadem".		RWS	

FEWS - 18212	Plugin Module - Data Import	- FEWS-17145 NetCDF irregular grid import - Automate geometry detection	NetCDF irregular grid import - Automate geometry detection for temporary time series	The existing NETCDF-CF_GRID import was expanded. When the time series being imported has a timeSeriesType set to "temporary" or "temporary external forecast", the import no longer requires the grid to be configured in the grids.xml, but can automatically detect the grid geometry instead. The irregular grid geometry will be stored along with the imported data, to be used later (within the same workflow). This is currently only available for grids that do not have z-values / z-layers.		https://publicwiki.deltares.nl/display/FEWSDOC/NETCDF-CF_GRID	
FEWS - 16899	Plugin Module - Data Import	- FEWS-16887 NWS: #23704 Import reservoir storage curves to allow display capabilities similar to rating curves	LookupTables	Storage curves and any other curves can be stored in region config file LookupTables.xml, according to the pi_tables format. Similar to the rating curves, the LookupTable curves can be displayed in TSD and can be used to create the right axis in the plots. ConfigExample LookupTables.zip contains very simple example configuration with imaginary data, to demonstrate the functionality (import scalar series first, see			NWS

ImportBackup\scalar). The lookup tables can be referenced using domain parameter Id, Parameter Id, optionally qualifier Id's and optionally location Id. An example from DisplayGroups:

```
{code:xml}
<subplot>
<lookupAxis>
<inputColumnParameterId>Stage
e <
/inputColumnParameterId>
<outputColumnParameterId>Storage<
/outputColumnParameterId> <
/lookupAxis>
<timeSeriesSet>
.....
.....
.... {code}
Picture
LookupTablesAndRightAxis2
a n d
LookupTablesAndRightAxis2
shows the
displays created
with the
example
LookupTables.
xml and
DisplayGroups.
xml The
LookupTables
can be
displayed in the
same way as
rating curves,
see
RatingCurveAndLookupTables
Display1 and
RatingCurveAndLookupTables
Display2 All
available curves
for the selected
location(s)
appear in the
list box. The
LookupTables
curves are
indicated as
'parameter
column a' -
'parameter
```


				column x' If there are multiple locations selected, each curve name contains also location name . In the list box we select a curve to display. The list box only appears if there are multiple curves for the selected location.			
FEWS - 16916	Plugin Module - Data Import	- FEWS-16663 Import of bespoke Hydro Québec .prn files	Import type added: HydroQuebecPRN	Import for specific Quebec format, containing flow for 3 Quebec locations	<importType>HydroQuebecPRN</importType>	https://publicwiki.deltares.nl/display/FEWSDOC/HydroQuebecPRN	MDDELCC
FEWS - 18525	Plugin Module - Data Import	- FEWS-16464 FOEN: Add separate year, month, day, hour, minute and second columns to generalcsv import	Add separate year, month, day, hour, minute and second columns to generalCsv import	The generalCsv import can now handle the date being specified through three separate columns (year, month and day), and the time being specified through one to three separate columns (hour, minute and second). If no second or minute column is given, they are assumed to be 0.		https://publicwiki.deltares.nl/display/FEWSDOC/General+Csv#GeneralCsv-Importingdatesandtimeswithseparateyear,month,day,hour,minuteandsecondcolumns(since2017.01)	FOEN
FEWS - 16111	Plugin Module - General Adapter	- FEWS-17266 importing multiple states in one GA run			{code:xml} <importStateActivity> <stateImportDir>\$TEST_DIR\$</stateImportDir> <stateFileDateTimePattern>'state'yyyyMMddHHmm'.bin'</stateFileDateTimePattern> <relativeExportFile>start.bin</relativeExportFile> </importStateActivity> {code}	https://publicwiki.deltares.nl/display/FEWSDOC/05+General+Adapter+Module	TVA

FEWS - 18559	Plugin Module General Adapter	- FEWS-14299 - NFFS: Improve the exportCustomFormatRunFileActivity with format	added option to specify the width of output values in exportCustomFormatRunFileActivity	The exportCustomFormatRunFileActivity now takes two additional optional elements: a fixedWidth attribute and a numberOfDecimals attribute. The fixedWidth element can be used to specify the length of the output each location attribute or property tag ('@' or '\$') is replaced with. The numberOfDecimals element can be used to specify the number of decimals the number attribute values must be rounded to.	<pre> {code:xml} <generalAdapterRun xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews.wldelft.nl/schemas/version1.0/generalAdapterRun.xsd"> <general> . . . <startDateTimeFormat>yyyy MM dd HH mm</startDateTimeFormat> <endDateTimeFormat>yyyy MM dd HH mm</endDateTimeFormat> </general> <activities> <exportActivities> <exportCustomFormatRunFileActivity> <templateFile>%ROOT_DIR%/templatefiles/event_tox2_template.inp</templateFile> <exportFile>event_tox2.inp</exportFile> <locationId>locationWithAttributes</locationId> <fixedWidth>10</fixedWidth> <numberOfDecimals>5</numberOfDecimals> </exportCustomFormatRunFileActivity> </exportActivities> </activities> </generalAdapterRun> </pre>	https://publicwiki.deltares.nl/display/FEWSDOC/05+General+Adapter+Module#id-05GeneralAdapterModule-exportCustomFormatRunFileActivity	EA
FEWS - 16265	Plugin Module General Adapter	- FEWS-17266 - TVA: Add ImportShapeFileActivity to GA module	Shape files can now be imported as time series via the importShapeFileActivity in the generalAdapter	Shape files can now be imported as time series via the importShapeFileActivity in the generalAdapter	<pre> {code:xml} <?xml version="1.0" encoding="UTF-8"?> <!-- edited with XMLSPY v2004 rel. 3 U (http://www.xmlspy.com) by rooij_e (WL Delft Hydraulics) --> <generalAdapterRun xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews.wldelft.nl/schemas/version1.0/generalAdapterRun.xsd"> <!-- General </pre>	https://publicwiki.deltares.nl/display/FEWSDOC/05+General+Adapter+Module#id-05GeneralAdapterModule-importShapeFileActivity	TVA

					<pre> information for General Adapter run --> <general> <rootDir>\$REGION_HO ME\$</rootDir> <workDir>%ROOT_DIR% </workDir> <exportDir>% ROOT_DIR%< /exportDir> <importDir>% ROOT_DIR%/polygon< /importDir> <dumpFileDir>% ROOT_DIR%/polygon /dumpfiledir< /dumpFileDir> <dumpDir>%ROOT_DIR% /polygon/dumpdir< /dumpDir> <diagnosticFile>% ROOT_DIR%< /diagnosticFile> < /general> <activities> <importActivities> <importShapeFileAct ivity> <shapeFileImportDir >import< /shapeFileImportDir > <fileDateTimePatter n>'ImportShapeFileA ctivity_'dd MMM yyyy HH mm ss'. shp' < /fileDateTimePatter n> <geoDatum>EPSG: 102736</geoDatum> <timeSeriesSet> <moduleInstanceId>I mportShapeActivity< /moduleInstanceId> <valueType>polygon< /valueType> <parameterId>QPE< /parameterId> <locationId>Polygon </locationId> <timeSeriesType>ext ernal_historical< /timeSeriesType> <timeStep unit=" nonequidistant"/> <readWriteMode>read only< /readWriteMode> < /timeSeriesSet> < /importShapeFileAct ivity> < /importActivities> < /> /generalAdapterRun> {code} </pre>		
FEWS - 17411	Plugin Module General Adapter	- Import loop over directories while import ensemble results openda using GA	Added unit tests and a clear description with config examples (also on WIKI) for an OpenDA ensemble member import	Added unit tests and a clear description with config examples (also on WIKI) for an OpenDA ensemble member import	In the workflow file specify the ensemble and index range to loop over: {code:xml} <workflow version="1.1" xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation=" https://publicwiki.deltares.nl/display/FEWSDOC/05+General+Adapter+Module#id-05GeneralAdapterModule-Combinedwithworkflowensembleloop	GLOFFIS	

```

http://www.wldelft.
nl/fews
http://fews.
wldelft.nl/schemas
/version1.0
/workflow.xsd">
<activity>
<moduleInstanceId>I
mportOpenDAEnsemble
s
<
/moduleInstanceId>
<ensemble>
<ensembleId>EnKF<
/ensembleId>
<ensembleMemberInde
xRange start="0"
end="64" />
<runInLoop>false<
/runInLoop>
</ensemble>
</activity>
</workflow> {code}
ModuleConfigFile.
xml should contain
the %
ENSEMBLE_MEMBER_ID%
tag in either the
<importDir> or
<importFile> (in
<importNetcdfActivi
ty>). Do not
specify the
ensemble member.
This only works
for the
importNetcdfActivty
. Other activities
that do not
contain the %
ENSEMBLE_MEMBER_ID%
tag will only be
executed once.
{code:xml} <?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>
<description>Test
run for nautboom<
/description>
<rootDir>../modules
/fews/src/test/java
/nl/wldelft/fews
/system/plugin
/generaladapter<
/rootDir>
<workDir>%ROOT_DIR%
</workDir>
<exportDir>%
ROOT_DIR%
/importDir<
/exportDir>
<importDir>%
ROOT_DIR%/importDir
/ensemblesmultiplei
dentialfiles/work%

```

					<pre> ENSEMBLE_MEMBER_ID% </importDir> <importIdMap>Import NetcdfScalarEnsembl eMultipleIdenticalF iles</importIdMap> <dumpFileDir>% ROOT_DIR%/.< /dumpFileDir> <dumpDir>%ROOT_DIR% </dumpDir> <diagnosticFile>% ROOT_DIR%< /diagnosticFile> < /general> <activities> <importActivities> <importNetcdfActivi t y > <importFile>netcdf_ timeseries.nc< /importFile> <timeSeriesSets> <timeSeriesSet> <moduleInstanceId>I mportNetcdfScalarEn sembleMultipleIdent icalFiles< /moduleInstanceId> <valueType>scalar< /valueType> <parameterId>WaterL evel</parameterId> <locationId>27< /locationId> <timeSeriesType>ext ernal_historical< /timeSeriesType> <timeStep unit=" nonequidistant" /> <readWriteMode>read complete_forecast< /readWriteMode> < /timeSeriesSet> < /timeSeriesSets> < /importNetcdfActivi t y > < /importActivities> </activities> < /generalAdapterRun> {code} </pre>		
FEWS - 17297	Plugin Module Modifiers (ModuleParameters)	- create location specific drop-down enumeration in location attribute modifier using fixed boolean attributes	define location specific options in drop down list by using attributes	Attributes can be modified by using location attribute modifiers. By default the attributes can be changed by using a text box. It is also possible to use a drop down list. The content of this drop downlist can be controlled by using a multi value attribute.	<pre> {code} <attribute id="NWP"> <selection> <optionsControlling LocationAttributeId >NWP_OPTIONS< /optionsControlling LocationAttributeId > </selection> <comment>Default value: @NWP_DEFAULT@< /comment> < /attribute>{code} </pre>		SAVA

FEWS - 16912	Plugin Module Modifiers (ModuleParameters)	- FEWS-16887 - NWS: #25022 incorrect BASEFLOW and UNITHG modifier interaction	Combine multiple module parameter modifiers	The unithg modifiers and baseflow modifier are both module parameter modifiers which both apply changes to the same module parameter file. It is now possible to apply multiple module parameter modifiers to the same module parameter file. This means that it is now possible to apply a unithg and baseflow mod to the same module parameter file at the same time.			NWS	
FEWS - 17561	Plugin Module Modifiers (ModuleParameters)	- FEWS-16887 - NWS: #34172 (a) CHPS Calibration: add attributeModifier capability for snow17, sacsma, lagk parameter calibrations	Calibration modifiers can now be used in combination with csv files	It is possible to use attributes in the general adapter parameter export. It was not possible yet to combine this feature with the calibration modifiers (multiple model modifiers). This is now possible.			NWS	

FEWS - 16900	Plugin Module Modifiers (TimeSeries)	FEWS-16887 - NWS: #24038 Add shift arrows for UNITHG mod	UNITHG modifier : shift arrows to shift the unit hydrograph ordinate values	The unit hydrograph ordinate values can be shifted forward or backward using the forward or backward arrows. Times in fields "Start time", "End time" and "Valid time" are shifted accordingly. To shift the values, also a context menus 'Shift Values forward in Time (Ctrl Right)' and 'Shift Values backward in Time (Ctrl Left)' can be used. An example is shown in the picture UnitHG_shiftButtons.png			NWS
FEWS - 10848	Plugin Module Performance Indicators	FEWS-10851 - Performance Indicators: Store all individual indicator values in separate time series	leadTimeAccuracyIndicator - new options to store intermediate indicator values and forecast and observed values, that have been used for the analysis, in the output time series arrays	To create the new output time series, use the following options: - intermediateValueVariableId to create time series with intermediate indicator values - analysedCalculatedVariableId to create time series with exact those forecast values, that have been used for the analysis - analysedObservedVariableId to create time series with exact those observed values, that have been used for the analysis Config example is available in PerformanceIndicator.xml The new time series are created for each input			RWS

forecast. For example , if 3 input forecast are used, then also 3 time series with intermediate values are created. To be able to create multiple simulated forecasts using the same TimeSeriesSet, the ensembles are used. Values associated with a particular forecast are stored using an ensemble member Id and this member Id equals to the forecast time of that forecast. An example: Picture LeadTimePerformanceIndicator Results.png shows the results of the computation that has been done with the configuration example PerformanceIndicator.xml This example uses observed series (Q.m) and 3 input forecasts (Q.sim). For each input forecast the following series are created : intermediate values (Q.rmse.interm), forecast values used in the analysis (Q.sim.analysed) and observed values used in the analysis (Q.m.analysed). Ensemble member Id's are
1985010100000
0 ,
1985010106000
0 ,
1985010180000

				and are equal to the forecast times of the used forecasts. The new output options are available only for leadTimeAccuracyIndicator that uses leadTimePeriods,				
FEWS - 10847	Plugin Module Performance Indicators	- FEWS-10851 - Performance Indicator: Set the <ForecastSelectionPeriod> manually in the FEWS Client	Performance Indicators: manually setting of the forecastSelectionPeriod and changing of the relativeViewPeriod	*Manually setting of the forecastSelectionPeriod* With forecastSelectionPeriod the user defines how much of the forecasts or hindcast should be analysed. The configured forecastSelectionPeriod can be changed manually in the ManualForecast Dialog or in the RunOptions of the IFD Forecasts, by selecting a certain cold state or warm state . The configured forecastSelectionPeriod should have the attributes startOverrutable and/or endOverrutable, to specify that the changing of the forecastSelectionPeriod is allowed. The user selects Cold state if only the start of the forecastSelectionPeriod should be amended. Then the cold state start time is used as start of the forecastSelectionPeriod. ForecastSelectionPeriod should have an overrutable			RWS	

				<pre>start: {code: x m l } <forecastSelecti onPeriod unit=" day" start=" -10" end="0" startOvrrulable ="true"/> {code} The user selects Warm state if the start and also the end of t h e forecastSelectio nPeriod should be amended. The warm state start time is used as start of t h e forecastSelectio nPeriod, the warm state end time is used as the end of the forecastSelectio nPeriod. ForecastSelectio nPeriod should have an ovrrulabel start and end: {code:xml} <forecastSelecti onPeriod unit=" day" start="-3" end="0" startOvrrulable ="true" endOvrrulable ="true"/> {code} *Manually setting of the relativeViewPer iod of the forecast and/or observed series* In PerformanceIndi cators module the user can change the relativeViewPer iod of the time series in the same way as in other modules, for example in GeneralAdapter The configured relativeViewPer iod can be changed manually in the ManualForecast Dialog or in the RunOptions of</pre>			
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			<p>the IFD Forecasts. To change the start of the relativeViewPeriod, the user selects cold state or warm state. The start time of the state will be used as new start of the relativeViewPeriod. To change the end of the relativeViewPeriod, the user selects a particular forecast length in ManualForecast Dialog. Then the new end of the relative view period will be set to $T_0 + \text{number of time units selected with forecast length option}$. The relativeViewPeriod can be also amended by Forecast Length estimator. For details, please see the Forecast Length estimator. To be able to change the relativeViewPeriod, the user should configure attributes startOverrutable and/or endOverrutable.</p>			
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FEWS - 10846	Plugin Module Performance Indicators	- FEWS-10851 - Performance Indicator: store number of analysed samples in separate TimeSeries	Performance Indicators module : leadTimeAccuracyIndicator stores number of analyzed samples in separate time series. The number of analyzed samples can be stored in a single time series or in time series per lead time period. In single time series the number of samples is stored at T0 + end of the lead time periods . Otherwise the number of samples is stored at T0 in time series per lead time period.	leadTimeAccuracyIndicator : optionally stores number of analyzed samples in separate time series. The number of analyzed samples can be stored in a single time series or in time series per lead time period. In single time series the number of samples is stored at T0 + end of the lead time periods . Otherwise the number of samples is stored at T0 in time series per lead time period.	<p>The number of samples is stored in single time series, referenced with sampleOutputVariableId "sampleOutput" {code:xml}</p> <pre><leadTimeAccuracyIndicator indicatorType=" meansquareerror" calculatedVariableId="calculated" observedVariableId=" observed" outputVariableId=" output " sampleOutputVariableId="sampleOutput" > <leadTimePeriods unit="hour"> <leadTimePeriod start="0" end="1" outputVariableId=" output1" /> <leadTimePeriod start="0" end="4" outputVariableId=" output4" /> <leadTimePeriod start="0" end="6" outputVariableId=" output6" /> < /leadTimePeriods> < /leadTimeAccuracyIndicator> {code}</pre> <p>The number of samples is also stored in time series per lead time period: {code:xml}</p> <pre><leadTimeAccuracyIndicator indicatorType=" meansquareerror" calculatedVariableId="calculated" observedVariableId=" observed" outputVariableId=" output " sampleOutputVariableId="sampleOutput" > <leadTimePeriods unit="hour"> <leadTimePeriod start="0" end="1" outputVariableId=" output1" sampleOutputVariableId="sample1" /> <leadTimePeriod start="0" end="4" outputVariableId=" output4 " sampleOutputVariableId="sample4" /> <leadTimePeriod start="0" end="6" outputVariableId=" output6 " sampleOutputVariableId="sample6" /> < /leadTimePeriods> < /leadTimeAccuracyIndicator> {code}</pre>	RWS
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FEW S - 17534	Plugin Module Reports	<p>- Use scadaPanel defined in scadaDisplay for reports and other scadaDisplays</p> <p>SchematicStatus display : scadaPanels , configured in one SchematicStatus display, can be included in other SchematicStatus displays or in reports</p>	<p>Use option scadaPanelId to include scadaPanels , configured in other SchematicStatus displays, in a particular SchematicStatus display or in a particular report. In SchematicStatus display both scadaPanel and scadaPanelId can be mixed. When we use scadaPanelId, then also the numberFormat(s), dateFormat(s) and variables that are configured in the referred SchematicStatus display are used. The formats and variables from the referred SchematicStatus display can be overruled by configuring the same Id's but with a different content in the display with scadaPanelId. When using scadaPanelId, then all scadaPanels should have an unique Id. If there are any duplicities, then the first scadaPanel found is used.</p>	<pre> scadaDisplay.xml : {code:xml} <scadaDisplay 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 /scadaDisplay.xsd" > <displayName>SSD composed< /displayName> <showTimeNavigatorT oolbar> <timeNavigatorRelat ivePeriod unit=" day" start="-1" end=" 0 " /> <timeNavigatorTimeS tep unit="hour"/> < /showTimeNavigatorT oolbar> <backgroundColor>gr a y < /backgroundColor> <scadaPanelId>panel A</scadaPanelId> <scadaPanelId>panel B</scadaPanelId> < /scadaDisplay> {code} Example from Reports.xml: {code:xml} <schematicStatusDis playPanelSnapshotsP ng> <variable> <variableId>Hmeasur ed</variableId> <timeSeriesSet> <moduleInstanceId>I mport < /moduleInstanceId> <valueType>scalar< /valueType> <parameterId>H.m< /parameterId> <locationSetId>Repo rtLocations< /locationSetId> <timeSeriesType>ext ernal historical< /timeSeriesType> <timeStep unit=" hour " /> <relativeViewPeriod unit="hour" start=" -10" end="0"/> <readWriteMode>read only < /readWriteMode> < /timeSeriesSet> < /variable> <scadaPanelId>scada Panel_01< /scadaPanelId> <width>1200< /width> <height>740< /height> <snapshot id="Scada"> <relativeTime unit="day" value=" </pre>	IWP
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					<pre> 0 " / > <fileName>scada. png</fileName> < /snapshot> < /schematicStatusDis playPanelSnapshotsP ng> {code} </pre>			
FEWS - 17207	Plugin Module Reports	- FEWS-17202 extend functionality rowperlocation HtmlTable	Reports/Scada template function improvements	<p>*VALUECOUNT(type; variable id)* This function counts the number of values in the time series. The argument 'type' specifies the value type that should be counted. Supported types are ALL, MISSING, COMPLETED, CORRECTED, RELIABLE, UNRELIABLE S , DOUBTFULS</p> <p>Usage in Reports : VALUECOUNT (COMPLETED; Hmeasured)</p> <p>Usage in Scada : VALUECOUNT (COMPLETED)</p> <p>*THRESHOLD CROSSINGCOUNT*(<level threshold id;> variable id)</p> <p>This function counts the number of time steps in which the level thresholds have been crossed. If a specific level threshold id is configured, then only the crossings for this threshold are counted.</p> <p>Usage in Reports : THRESHOLD CROSSINGCOUNT (Hmeasured) , THRESHOLD CROSSINGCOUNT(Level_A; Hmeasured)</p> <p>Usage in Scada</p>			APP	

:
 THRESHOLDC
 ROSSINGCOU
 NT() ,
 THRESHOLDC
 ROSSINGCOU
 N T
 (Hmeasured)
 Option
 *IgnoreMissings
 i n
 STATISTICS*
 function Use
 IgnoreMissings
 if the missing
 values should
 be ignored
 while
 evaluating of
 the statistics
 function. By
 default the
 statistics are not
 computed if the
 time series has
 one or more
 missing values.
 Usage in
 Reports :
 STATISTICS
 (MEAN;
 IgnoreMissings;
 H . m ;
 numberFormat1
) Usage in
 Scada :
 STATISTICS
 (MEAN;
 IgnoreMissings;
 numberFormat1
) Option
 *ClosestToT0
 in MINTIME
 a n d
 MAXTIME*
 functions Use
 ClosestToT0 to
 find the date
 /time of the
 minimum c.q.
 maximum value
 in the time
 series that is
 closest to T0.
 By default , in
 case of forecast
 series the
 functions return
 the date/time of
 the first
 minimum
 /maximum
 value , and in
 case of external
 historical series
 the date/time of
 the last
 minimum
 /maximum is

				returned. Usage in Reports : MINTIME (ClosestToT0;H. m ; dateFormat1), MAXTIME (ClosestToT0;H. m;dateFormat1) Usage in Scada : MINTIME (ClosestToT0; dateFormat1), MAXTIME (ClosestToT0; dateFormat1)			
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FEWS - 17963	Plugin Module Reports	- FEWS-16663 - Quebec: new report tag for userId who generated a certain workflow	Report tag WORKFLOW (key; workflow Id; format Id)	<p>This function provides properties of the most recent run of the workflow configured with workflow Id. The key specifies the required run property. Format Id is optional and if specified it represents date format . The following keys are supported:</p> <p>USERID: user Id MCID: MasterController Id FSSID: Forecasting shell Id DESCRIPTION: description of the forecast TIMEZERO: time0 DISPATCH_TIME: dispatch time COMPLETION_TIME: completion time RUNTIME: duration of the forecast run OUTPUT_TIME_SPAN: time span of the forecast</p> <p>Examples: WORKFLOW (USERID; ImportExternalForecast) WORKFLOW (COMPLETION_TIME; ImportExternalForecast; dateFormat1) Where ImportExternalForecast is a workflow Id</p>			Quebec	
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FEWS - 16978	Plugin Module Statistics	- FEWS-16132 - FB 89 TFS42046: Daily Aggregation Button does not appear to aggregate according to the parameter type	The CalendarAggregationFunction has now the option to accumulate according to parameter type: SUM (accumulative), MEAN (mean) or LAST_VALUE (instantaneous)	The CalendarAggregationFunction has now the option to accumulate according to parameter type: SUM (accumulative), MEAN (mean) or LAST_VALUE (instantaneous)	{code:xml} <quickViewStatistic alFunction function=" calendarAggregation " ignoreMissings=" true " aggregateByParamete rType="true"> <timeStep id=" daily00 "/> <iconName>dailyv3. png</iconName> <label>Daily< /label> <toolTip>Aggregate dailies</toolTip> <accelerator>ctrl alt D < /accelerator> < /quickViewStatistic alFunction> <quickViewStatistic alFunction function=" calendarAggregation " ignoreMissings=" true " aggregateByParamete rType="true"> <timeStep id=" weekly00 "/> <iconName>weekly. png</iconName> <label>Weekly< /label> <toolTip>Aggregate weeklies</toolTip> <accelerator>ctrl alt W < /accelerator> < /quickViewStatistic alFunction> {code}		BPA
FEWS - 16986	Plugin Module Thresholds	- FEWS-16315 - HyFS-alerts: Improve logging of threshold crossing	More information in threshold crossing logs + improved logging of action events	-Added threshold values and rate timespan to logs -Added the possibility to add location attributes to the threshold logs. Per ThresholdValue Set it is possible to configure which locationAttributeKeys to include in the messages. - Added option to be able to stand down each location separately by configuring the 'standDownIndividualLocations' option -Added 'graceTime' to control how	{code} <thresholdValueSet id="GraceTime" name="ROC Observed water levels"> <description>rate of change threshold values should be specified ascending according to the element 'value'< /description> <standDownIndividualLocations>true< /standDownIndividualLocations> <locationAttributeKeys> <attributeKey>att1< /attributeKey> <attributeKey>att2< /attributeKey> < /locationAttributeKeys> <graceTime unit="hour" multiplier="6" /> <rateThresholdValue > <rateThresholdId>EnhanceRate< /rateThresholdId> <value>10</value> <upActionLogEventTy		BoM (Aus)

				<p>frequently (rainfall) thresholds are issued per location.</p>	<pre> peId>Action. RateEnhanced< /upActionLogEventTy pe I d > <downEventTypeId>Ac tion.RateStandDown< /downEventTypeId> <timeSpan unit=" hour " /> < /rateThresholdValue > <rateThresholdValue > <rateThresholdId>En hanceRate1< /rateThresholdId> <value>12</value> <upActionLogEventTy peId>Action. RateEnhanced1< /upActionLogEventTy pe I d > <downEventTypeId>Ac t i o n . RateStandDown1< /downEventTypeId> <timeSpan unit=" hour " /> < /rateThresholdValue > <timeSeriesSet> <moduleInstanceId>R ateThreshold< /moduleInstanceId> <valueType>scalar< /valueType> <parameterId>P.obs< /parameterId> <locationSetId>Loca tionsWithAttributes </locationSetId> <timeSeriesType>ext ernal historical< /timeSeriesType> <timeStep unit=" minute " multiplier="15"/> <relativeViewPeriod unit="hour" start=" 0 " end="12"/> <readWriteMode>read o n l y < /readWriteMode> < /timeSeriesSet> < /thresholdValueSet> {code} </pre>		
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FEWS - 16987	Plugin Module Thresholds	- FEWS-16315 - HyFS-Alerts: Simplify standdown activity in Threshold module	Added option to issue StandDown events individually	With the option 'standDownIndividualLocations' in the ThresholdValueSets file it is now possible to issue standdown events for individual locations instead issuing a standdown only when entire catchment is stood down.	{ code } <thresholdValueSet id="HObserved2" name="Observed water levels"> <description> level threshold values should be specified ascending according to the element 'value'</description> <standDownIndividualLocations>true</standDownIndividualLocations> <levelThresholdValue> <levelThresholdId>EnhanceLevel</levelThresholdId> <value>10</value> <upActionLogEventTypeId>Action.Enhanced</upActionLogEventTypeId> <downActionLogEventTypeId>Action.StandDown</downActionLogEventTypeId> </levelThresholdValue> <timeSeriesSet> <moduleInstanceId>LevelThreshold</moduleInstanceId> <valueType>scalar</valueType> <parameterId>H.obs</parameterId> <locationId>A</locationId> <locationId>B</locationId> <locationId>C</locationId> <timeSeriesType>external_historical</timeSeriesType> <timeStep unit="minute" multiplier="15"/> <relativeViewPeriod unit="hour" start="0" end="12"/> <readWriteMode>readonly</readWriteMode> </timeSeriesSet> </thresholdValueSet> {code}	BoM (Aus)
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FEWS - 17853	Plugin Module Transformation	- FEWS-17145 Transformation Module - Merge simple optimization	new merge transformation - MergeInterpolation	This transformation can be used to merge multiple input grids to a single output grid. More detailed information can be found at: https://publicwiki.deltares.nl/display/FEWSDOC/Merge+Interpolation	<pre> {code} <transformation id="merge interpolation example"> <merge> <interpolation> <inputVariable> <variableId>input< /variableId> < /inputVariable> <interpolationType> closestDistance< /interpolationType> <outputVariable> <variableId>output< /variableId> < /outputVariable> < /interpolation> < /merge> < /transformation> {code} </pre>			
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FEW S - 17470	Plugin Module Transformation	- Configure - keywords for transformation elements	ad d e d possibility to provide a property (\$) to several transformation config elements	A d d e d possibility to provide a property (\$) to the following elements: * ImportNetcdfAc tivity -> maximumSnap Distance & maximumVertic alSnapDistance * TimeSeriesImpo rtGeneral -> maximumSnap Distance & maximumVertic alSnapDistance * InterpolationSpa tialClosestDista n c e -> searchRadius & distanceGeoDat u m * InterpolationSpa tialVerticalProfi leClosestDistan c e -> searchRadius & distanceGeoDat u m * InterpolationSpa tialThiessenPoly g o n -> distanceGeoDat u m * InterpolationSpa tialInverseDista n c e -> searchRadius & distanceGeoDat u m * InterpolationSpa tialSnapTrackTo Locations -> maximumSnap Distance * TimeShiftConst a n t -> numberOfTime Steps			Deltares	
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FEWS - 18053	Plugin Module Transformation	- FEWS-14299 - FFFS: Allow use of multiple coordinates for locations	added possibility to overrule location coordinates via attributes to closestDistance transformation	The spatial interpolation transformation <closestDistance> now has two additional optional elements <overrulingXAttribute> and <overrulingYAttribute>. If these are configured, the attribute value is used instead of the location coordinate if present, i.e., if the location has this attribute and has a value for the attribute. Otherwise, the regular coordinate is used. This is done for both input and output variables.	{code:xml} <transformation id = "ClosestDistanceWithOverrulingCoordinates"> <interpolationSpatial> <closestDistance> <inputVariable> <variableId>input</variableId> </inputVariable> <overrulingXAttribute>ALT_X</overrulingXAttribute> <overrulingYAttribute>ALT_Y</overrulingYAttribute> <outputVariable> <variableId>output</variableId> </outputVariable> </closestDistance> </interpolationSpatial> </transformation> {code}	https://publicwiki.deltares.nl/display/FEWSDOC/InterpolationSpatialClosestDistance	EA
FEWS - 18052	Plugin Module Transformation	- FEWS-14299 - FFFS: New Raingauge weighting function	added option to use multi-value attributes to decide inputs for weighted average transformation	The existing interpolationSpatial - weighted transformation was expanded to allow specifying the input locations and their weights through two multi-value attributes of the output location. This means the module configuration file no longer needs to contain a transformation for each combination of inputs and output, but a single transformation using locationSets can be configured.	{code:xml} <transformation id="interpolationSpatial weighted"> <interpolationSpatial> <weighted> <inputVariable> <variableId>input</variableId> </inputVariable> <attributedOutputVariable> <outputVariable> <variableId>output</variableId> </outputVariable> <locationIdAttribute>LOCS</locationIdAttribute> <weightAttribute>WEIGHTS</weightAttribute> </attributedOutputVariable> </weighted> </interpolationSpatial> </transformation> {code}	https://publicwiki.deltares.nl/display/FEWSDOC/InterpolationSpatialWeighted	EA

FEWS - 17112	Plugin Module Transformation	- FEWS-17266 - TVA: Edited data not overwritten in transformations, temporary flag	Preserve manual edits in transformation and clear manual edits from dataviewer	A new configuration has been added to the transformation Module to allow preserving manual edits. By default manual edits were overwritten. Its now also possible to clear manual edits from the TimeSeriesDialog dataviewer.	<pre>{code} <transformationModule xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.wldelft.nl/fews.wldelft.nl/schemas/version1.0/transformationModule.xsd" version="1.0"> <preserveManualEdits>false</preserveManualEdits> {code}</pre>	https://publicwiki.deltares.nl/display/FEWSDOC/20+Transformation+Module+-+Improved+schema#id-20TransformationModule-Improvedschema-ManualEdits	TVA	
FEWS - 16869	Plugin Module Transformation	- New transformation: copy a (2D) data from an arbitrary time level in the past to a time series over a relative view period	New sample transformation SampleSingleTimeStep	A new sample transformation is available for copying the values of a time series with a single time step to all of the time steps in the view period of another time series. The transformation can be used for scalar and grids.	A config example is available in the documentation: https://publicwiki.deltares.nl/display/FEWSDOC/sampleSingleTimeStep	https://publicwiki.deltares.nl/display/FEWSDOC/sampleSingleTimeStep	RWS (NL)	
FEWS - 16034	Plugin Module Transformation	- FEWS-17266 - TVA. ability to use PI-tables (1D scalar map series) as lookup tables in transformations.	It is now possible to use LookupTables.xml from RegionConfig in the simple and twoDimensional lookup transformations by referencing with locationId, inputParameterId and outputParameterId.	It is now possible to use LookupTables.xml from RegionConfig in the simple and twoDimensional lookup transformations by referencing with locationId, inputParameterId and outputParameterId.	Example lookup based on 1 input value https://publicwiki.deltares.nl/display/FEWSDOC/twoDimensional#twoDimensional-LookupusingLookupTables.xmlfromRegionConfigFiles <pre><?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.wldelft.nl/schemas/version1.0/transformationModule.xsd"> <variable> <variableId>scalar1</variableId> <timeSeriesSet> <moduleInstanceId>SimpleLookupFromPiTableTest</moduleInstanceId> <valueType>scalar<</pre>	https://publicwiki.deltares.nl/display/FEWSDOC/twoDimensional#twoDimensional-LookupusingLookupTables.xmlfromRegionConfigFiles	TVA	


```

/valueType>
<parameterId>H.m<
/parameterId>
<locationId>H-2002<
/locationId>
<timeSeriesType>ext
ernal    historical<
/timeSeriesType>
<timeStep    unit="
nonequidistant"/>
<relativeViewPeriod
unit="day"    start="
-1"          end="6"/>
<readWriteMode>add
originals<
/readWriteMode>    <
/timeSeriesSet>    <
/variable>
<variable>
<variableId>scalar2
</variableId>
<timeSeriesSet>
<moduleInstanceId>S
impleLookupFromPiTa
bleTest<
/moduleInstanceId>
<valueType>scalar<
/valueType>
<parameterId>H.obs<
/parameterId>
<locationId>H-2002<
/locationId>
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ernal    historical<
/timeSeriesType>
<timeStep    unit="
nonequidistant"/>
<relativeViewPeriod
unit="day"    start="
-1"          end="6"/>
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originals<
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/timeSeriesSet>    <
/variable>
<transformation
id = "
simpleLookupFromPiT
able">    <lookup>
<simple>    <input>
<variableId>scalar1
</variableId>    <
/input>
<coefficientSet>
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linear<
/interpolationType>
<extrapolationType>
notAllowed<
/extrapolationType>
<lookupTable>
<piTable>
<locationId>H-2002<
/locationId>
<inputParameterId>H
.m    <
/inputParameterId>
<outputParameterId>
H.o b s<
/outputParameterId>
</piTable>    <
/lookupTable>    <
/coefficientSet>
<output>
<variableId>scalar2
</variableId>    <
/output>    </simple>
</lookup>    <
/transformation>    <

```

```
/transformationModule> {code} Example
lookup based on 2
input      values
https://publicwiki.
deltares.nl/display
/FEWSDOC
/twoDimensional#two
Dimensional-
LookupusingLookupTa
bles.
xmlfromRegionConfig
Files {code} <?xml
version="1.0"
encoding="UTF-8"?>
<transformationModu
le      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
/transformationModu
le.xsd">
<variable>
<variableId>scalar1
</variableId>
<timeSeriesSet>
<moduleInstanceId>T
woDimensionalLookup
FromPiTableTest<
/moduleInstanceId>
<valueType>scalar<
/valueType>
<parameterId>H.m<
/parameterId>
<locationId>H-2001<
/locationId>
<timeSeriesType>ext
ernal      historical<
/timeSeriesType>
<timeStep      unit="
nonequidistant"/>
<relativeViewPeriod
unit="day"      start="
-1"      end="6"/>
<readWriteMode>add
originals<
/readWriteMode>    <
/timeSeriesSet>    <
/variable>
<variable>
<variableId>scalar2
</variableId>
<timeSeriesSet>
<moduleInstanceId>T
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FromPiTableTest<
/moduleInstanceId>
<valueType>scalar<
/valueType>
<parameterId>H.obs<
/parameterId>
<locationId>H-2001<
/locationId>
<timeSeriesType>ext
ernal      historical<
/timeSeriesType>
<timeStep      unit="
nonequidistant"/>
<relativeViewPeriod
unit="day"      start="
```

```

-1"          end="6"/>
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originals<
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/variable>
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</variableId>
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/valueType>
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updated<
/parameterId>
<locationId>H-2001<
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ernal_historical<
/timeSeriesType>
<timeStep_unit="
nonequidistant"/>
<relativeViewPeriod
unit="day" start="
-1"          end="6"/>
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/readWriteMode>  <
/timeSeriesSet>  <
/variable>
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up>  <input1>
<variableId>scalar1
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/input1>  <input2>
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/input2>
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/interpolationType>
<extrapolationType>
extrapolate<
/extrapolationType>
<lookupTable>
<piTable>
<locationId>H-2001<
/locationId>
<inputParameterId1>
H.m<
/inputParameterId1>
<inputParameterId2>
H.updated<
/inputParameterId2>
<outputParameterId>
H.obs<
/outputParameterId>
</piTable>  <
/lookupTable>  <
/coefficientSet>
<output>
<variableId>scalar3
</variableId>  <
/output>  <
/twoDimensionalLook
up>  </lookup>  <
/transformation>  <
/transformationModu
le> {code} Example
[^LookupTables.
xml]          from

```

					RegionConfig			
FEWS - 18102	Plugin Module Transformation	- Covadem: spatial interpolation van p-de percentiel bodemligging tracklayers in view period naar output polygons	A new interpolation transformation "trackToGrid" was added.	The new transformation produces a grid time series from a track. The coordinates of the track are used to see which grid cell a track value corresponds to, the value is then linked to the closest time for this grid cell. To obtain the output values, either the minimum of the maximum of all track values corresponding to a grid cell and output time combination is used. Optionally, a minimum number of track values and a percentile range can be provided.		https://publicwiki.deltares.nl/display/FEWSDOC/Transformation+-+InterpolationSerial+TrackToGrid	Covadem	
FEWS - 18101	Plugin Module Transformation	- Covadem: interpolatie tijd en plaats van grid of profile tijdserie naar bestaand track layer tijdseries	A new interpolation transformation "LongitudinalProfileToTrack" was added.	The new transformation produces values for a track using closest distance interpolation. It takes three time series as input: the longitudinal profile, track latitude and track longitude and produces a single scalar time series as output, which can be used as track values. See the wiki for more information.		https://publicwiki.deltares.nl/display/FEWSDOC/Transformation+-+InterpolationSerial+LongitudinalProfileToTrack	Covadem	
FEWS - 17153	System	FEWS-16767 Replace JMS messages between MC and MC Proxy with entry in ForecastingShells table					Deltares Roadmaps	-

FEWS - 17152	System	FEWS-16767 Create overview of all places where and which JMS messages are sent					Deltares Roadmaps	-
FEWS - 17356	Database, System	FEWS-16767 Create Delft_SQL.jar					Deltares Roadmaps	-
FEWS - 17366	System	FEWS-16132 adjust Install/Update scripts to delete local caches/lds from all clients inc SR					BPA	
FEWS - 17744	System	Improve fews.sh script on LINUX to interpret memory settings from *.ini	fews.sh script improved	De Linux fews.sh script now by default has 1024Mbyte op max heap space.		https://publicwiki.deltares.nl/display/FEWSDOC/02+Launching+FEWS	Deltares	
FEWS - 18149	System	Merge configured truststore with JDK default truststore	client.truststore will be merged with default JDK truststore	When a client truststore is configured, only the public certificates in that store were trusted. If no keystore is configured, all public certificates in the JDK are used to keep track of trusted servers. This resulted for example in failure of https imports that used to work when no truststore was configured if the import used a secure connection for which the root certificate was in the trusted JDK store. With this change the root certificates of the JDK will be merged with the ones configured in the custom truststore.			Deltares	

FEWS - 16618	System - PI Service	FEWS-15083 Simplify installation and system administration		Simplification and alignment of FEWS Webservices has been completed: <ul style="list-style-type: none"> • Integrated all the different implementations of the pi-webservice into a single war-file, • Integrate the DAC.jar into this war-file, • Remove requirement to change Tomcat configurations • Removed requirement to add libraries to Tomcat lib dir. • Made it possible to start and debug a pi-webservice from the IntelliJ (FEWS development environment) 		https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+Web+Services	Deltares	
FEWS - 18371	System - PI Service	FEWS-15083 PI locations xsd should support location attributes for pi services.	location attributes added to PI service	Location attributes are now available in the PI service.: https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI+REST+Web+Service Passing the showAttributes=true parameter to the locations resource, will generate the locations attributes. <pre>{code} curl "http://localhost:8080/FewsWebServices/rest/fewspiservice/v1/locations?showAttributes=true&documentVersion=1.24"</pre> <pre>{code}</pre>				

FEWS - 16975	System - PI Service	Add status page to PI webservice	The pi webservice (REST) has now a small status page to facilitate debugging	The pi webservice (REST) has a small status page (status.jsp) which can be used to get some basic information about the webservice. The page provides info about the memory usages and several basic configuration options.			Deltares Roadmaps	-
FEWS - 16619	System - PI Service	FEWS-15083 Improve testability	Testability of Fews Web Services improved.	FEWS test pages have been improved and made available for both PI-SOAP and PI-REST services. Unit testing of the FEWS Web Services has been improved. On the public Wiki examples are given on how to test the REST service using the curl command line.		https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI-XML+REST+service	Deltares Roadmaps	-
FEWS - 17639	System - PI Service	FEWS-15083 Align functionality of PI Webservice SOAP with PI Webservice REST	PI Webservice REST service has been aligned with SOAP service	All functionality available in the PI Webservice SOAP is now also available in the PI Webservice REST API. One exception is the support of POSTING binary timeseries to the REST service.		https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI-XML+REST+service	Deltares Roadmaps	-
FEWS - 17053	System - PI Service	FEWS-16132 Update the PI-Service so that it will Import Modifiers	Import modifiers added to the pi-webservice	The pi-webservice is extended with a service which can be used to upload modifiers.		https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI-XML+REST+service	BPA	

FEWS - 16901	System - PI Service	FEWS-16887 NWS: #24580 Supply PI-service port numbers to FEWS plug-ins	Additional consumer interface added to the Open API	It is now possible for custom plugins to obtain the port number at which the pi webservice was started by implementing an interface. If a plugin implements the following interface: public interface EmbeddedPiServerPortConsumer { void setPortNumber (int portNumber); } The port number will be provided to the plugin by invoking the implementation of the method setPortNumber.			NWS	
FEWS - 17070	System - PI Service	Retrieve manual edits from PIService	Added argument to getTimeSeries that allows client to retrieve only manual edits	For the method getTimeSeries it is now possible to pass the argument 'onlyManualEdits'. When used in combination with the arguments startCreationTime and endCreationTime it is possible to return all manual edited values from FEWS.			Sava	
FEWS - 17801	System Session	FEWS-16767 Remove usage of Session classes from OC	Obsolete session classes removed. Session has been simplified to 1 row in the database with a unique id.	Obsolete session classes removed. Session has been simplified to 1 row in the database with a unique id.			Deltares Roadmaps	-
FEWS - 16446	System Synchronisation	FEWS-16767 Did a clientConfig.xml jms configuration JMSServerInstallComplexType has no option to specify timeout.		Not relevant anymore since JMS has been removed	Not relevant anymore since JMS has been removed		Deltares Roadmaps	-

FEWS - 17864	System Synchronisation, System Synchronisation 2.0	FEWS-16767 Remove old Synchronisation I and II	Old jars and code removed for synchronisation I and II	Old jars and code removed for synchronisation I and II			Deltares Roadmaps	-
FEWS - 18144	App - Data Conversion Module	DCM Export: MeteoAlarm (CAP format)	MeteoAlarm Cap export	MeteoAlarm Cap export generates cap files to folder and posts them to SOAP servicew.		https://publicwiki.deltares.nl/display/FEWSDOC/MeteoAlarmCap	RWS	
FEWS - 18774	App - Master Controller Server	Synchronisation of ImportStatus table between two MC's					Deltares	
FEWS - 17766	App - Master Controller Server	FEWS-16767 GlobalRowIdRe generator	database initialization tool generates global row ids	Generation of global row ids is part of the database initialization tool		https://publicwiki.deltares.nl/display/FEWS2020/Database+InitializationTool	Deltares	
FEWS - 18773	App - Admin Web User Interface, App - Master Controller Server, System - PI Service	FEWS-16767 Load ntlmauth_x64.dll in java.library.path					Deltares	
FEWS - 18881	App - Operator Client Gui (Explorer)	Chinese language update for 2017.02					Deltares	
FEWS - 19121	App - Operator Client Gui (Explorer)	Correct reference Delft-FEWS Copyright & Credits page from About box					Deltares	
FEWS - 18313	App - Operator Client Gui (Explorer)	FEWS-16767 Rolling Barrel Implementation SA / OC					Deltares	
FEWS - 4834	Database	FEWS-4832 DB Schema check	Schema validation			https://publicwiki.deltares.nl/pages/viewpage.action?pageId=133857857		
FEWS - 18725	Database	FEWS-16767 create clone script for migration of 2017.02	Database clone scripts for duplicating a Delft-FEWS database in support of 2017.02 migration without offline time.			https://publicwiki.deltares.nl/display/FEWSDOC/How+to+create+a+clone+of+the+database	Deltares	

FEWS - 16943	Database	Migrate MSSQL server script from using osql to sqlcmd. Osql will be removed from SQL Server.					Deltares	
FEWS - 15954	Database	database replicator should be able to cope with default values / schema changes.					Deltares	
FEWS - 17575	Database	Optimize Snapshot / Replicate functionality			{code:xml} <?xml version="1.0" encoding="UTF-8"?><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"><exportSnapShot><general><archiveFolder>\$ARCHIVE_DIR\$</archiveFolder></general><activities><exportSnapShot><areaId>test</areaId><filter id="only time series"><xmlConfig enabled="false" name="Default xml config" synchLevel="11"/><coldStates enabled="false" name="Default cold states" synchLevel="11"/><moduleDataSets enabled="false" name="Default module data sets" synchLevel="11"/><mapLayers enabled="false" name="Default map layers" synchLevel="11"/><icons enabled="false" name="Default icons" synchLevel="11"/><reportTemplates enabled="false" name="Default report templates" synchLevel="11"/><reportImages enabled="false" name="Default report images" synchLevel="11"/><continuousTimeSeries enabled="true" name="Simulated" synchLevel="0" maxAge="1000"		Deltares	

					<pre>unit="week"/> <continuousTimeSeries enabled="true" name=" Telemetry" synchLevel=" 1" maxAge="1000" unit="week"/> <continuousTimeSeries enabled="true" name=" Manual" synchLevel=" 5" maxAge="1000" unit="week"/> <continuousTimeSeries enabled="true" name=" Astronomical and climatological" synchLevel="4" maxAge="1000" unit=" w e e k " / > <continuousTimeSeries enabled="true" name=" Small external forecast grids" synchLevel="6" maxAge="1000" unit=" w e e k " / > <continuousTimeSeries enabled="true" name=" Large external forecast grids" synchLevel="16" maxAge="10000" unit=" week"/> <warmStates enabled="false" name=" Warm states" maxAge=" 10" unit="week"/> <logEntries enabled=" false" name="Log Entries" maxAge="1" unit="week"/> <thresholdEvents enabled="false" name=" Threshold Events" maxAge="1" unit=" week"/> </filter> < /exportSnapShot> < /activities> < /exportSnapShot> < /exportArchiveModule> {code}</pre>		
FEWS - 17901	McRecoveryTool	FEWS-16767 Add "clear_database" task to mc recovery tool	McRecoveryTool optino to wipe all tables from the central database in order to replace no longer present functionality of populator tool.		https://publicwiki.deltares.nl/display/FEWSDOC/MCRecoveryTool	Deltares	

FEWS - 18831	Plugin - Gui Time Series, Plugin Module Reports	Arrow in the display: plot and html report	add support for rotated arrow markers to the report module	For FEWS-16981, support for rotated arrow markers, which could for example be used to plot wind speed graph with arrow markers showing the wind direction, was added to the time series dialog (data display). The report module now also supports such arrow markers, allowing them to be used in the exported charts.	In the <code><parameterDisplayOptions></code> of the <code>TimeSeriesDisplayConfig.xml</code> : <pre> {code:xml} <parameterDisplayOptions id="WS.15"> <preferredColor>purple</preferredColor> <lineStyle>solid</lineStyle> <markerRotationParameterId>WR.15</markerRotationParameterId> <markerIcon>arrow_test.png</markerIcon> <markerRotationOffset>180</markerRotationOffset> </parameterDisplayOptions> {code}</pre> For the report module to include the arrows, the direction time series must be included in the chart of the module config file: <pre> {code:xml} <chart id="chartMain" formatId="chartFormat" width="1200" height="600"> <timeSeries label="speed" preferredColor="purple">Speed</timeSeries> <timeSeries label="direction" preferredColor="purple">Direction</timeSeries> <fileName>arrow_test</fileName> </chart> {code}</pre>	https://publicwiki.deltares.nl/display/FEWSDOC/02+Time+Series+Display+Configuration#id-02TimeSeriesDisplayConfiguration-Directionalarrowmarkers	Mozambique	
FEWS - 18883	Plugin Module - Data Import	Covadem: add header to existing Covadem import						

FEW S - 18996	Plugin Module - Data Import	- New import for SMN ETA based on previous UruguaySMNE TA	EtaSmn Import type	EtaSmn imports gridded time series from asci file format. File example : {code} lon lat p01 p02 p03 p04 p05 p06 -56.9874 -28.0166 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 -56.9250 -28.0166 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 -56.8625 -28.0166 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 {code} The forecast time is read from the file name. The file name should comply with the following file name pattern: ????????? yyyyMMddHH? ???, for example Datos_WRF_20 18062000.txt. Event times are stored in the column headers p01, p02,... where the numbers correspond to the hours. The dates/times are always in GMT. This reader needs a geometry configured in the region config			Yacyreta (Arg)
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FEWS - 18833	Plugin - Module - Data Import	New import for hydroestimator format file	New import for hydroestimator format file	A new importType "UruguayHydroEstimator" was added for files following the hydroestimator format.	ModuleConfigFile: {code:xml} <import> <general> <importType>UruguayHydroEstimator</importType> <folder>\$IMPORT_FOLDER\$ /HYDRO_ESTIMATOR </folder> </general> <timeSeriesSet> <moduleInstanceId>Import_Hydro_Estimator</moduleInstanceId> <valueType>grid</valueType> <parameterId>P.pro</parameterId> <locationId>hydroEstimator</locationId> <timeSeriesType>external_historical</timeSeriesType> <timeStep unit="hour" multiplier="12"/> <readWriteMode>add originals</readWriteMode> </timeSeriesSet> </import> {code} With a grid configured for locationId "hydroEstimator" in grids.xml.	https://publicwiki.deltares.nl/display/FEWSDOC/UruguayHydroEstimator	Yacyreta
FEWS - 17771	Plugin - GUI - Sample Viewer, Plugin - Module - Data Import	FEWS-17944 Request to import same sample via different imports without overwriting	Add optional prefix to sampleIdColumn in generalCsv import	In the generalCsv import an optional "prefix" attribute was added to the <sampleIdColumn>. The prefix (if present) is added to the front of each sampleId imported from the file. This allows you to differentiate between samples from different imports, preventing the samples from another import from being overwritten.	{code:xml} <table> <dateTimeColumn name="DATE_SMP" pattern="dd-MM-yy HH:mm"/> <locationColumn name="LOC_CODE"/> <unitColumn name="Eenheid"/> <parameterColumn name="PARAMETER_ID"/> <sampleIdColumn name="SMP_CODE" prefix="Prefix_"> <propertyColumn name="COST_CODE" key="COST_CODE"/> <valueColumn name="Waarde"/> </table> {code}	https://publicwiki.deltares.nl/display/FEWSDOC/General+Csv#GeneralCsv-SampleIdprefix	Waternet

FEWS - 17762	Plugin - GUI - Sample Viewer, Plugin - Module - Data Import	FEWS-17944 GeneralCsv parser gives warning on incorrect date but just continues importing next line					Waternet	
FEWS - 19124	Plugin - Module - Data Import, Plugin - Module - General Adapter	G A <importNetcdfActivity> doesn't recognize sea_surface_height as a CF conform standard name					Water Technology (AUS)	
FEWS - 18032	Plugin - Module - Data Import	Vigicrues webservice import	Vigicrues webservice import added	Two new import types were added, Vigicrues_web and Vigicrues_xml, which can be used to import data from the Vigicrues webservice.		https://publicwiki.deltares.nl/display/FEWSDOC/Vigicrues+Web	Rijkswaterstaat	
FEWS - 18916	Plugin - Module - Data Import	Update aqualarm import	Aqualarm REST service import	AqualarmRest import has been implemented in favor of the deprecated Aqualarm import. Currently the import doesn't support ending a session. This means at most 3 sessions can be started in a period of 5 minutes. Another thing to notice is that the parameterId's have been changed.		https://publicwiki.deltares.nl/display/FEWSDOC/AqualarmRest	RWS	
FEWS - 18236	Plugin - Module - Data Import	WIWB-API Time series import	WIWB API import	The WIWB API import has been implemented and is available as import type: WIWB		https://publicwiki.deltares.nl/display/FEWSDOC/WIWB	GO-FEWS	
FEWS - 17529	Plugin - Module - Data Import	Handling dynamic location coordinates	Dynamic locations can be displayed using a tracklayer in the gridDisplay	Dynamic locations can be displayed using a tracklayer in the GridDisplay. Using the displayCurrentTrackOnly	{code} <gridPlot id="SkyGeo Demo" name="Sky Geo Track"><trackLayer><displayCurrentTrackOnly>true</displayCurrentTrackOnly> <lineColor>yellow</lineColor><geoDatum>WGS 1984</geoDatum>	https://publicwiki.deltares.nl/display/FEWSDOC/SkyGeo	DamSAFE project	

allows you to see the moving locations.	<pre> <xTimeSeriesSet> <moduleInstanceId>ImportSkyGeo< /moduleInstanceId> <valueType>scalar< /valueType> <parameterId>X< /parameterId> <locationSetId>sky_geo. locations< /locationSetId> <timeSeriesType>external historical< /timeSeriesType> <timeStep unit=" nonequidistant"/> <readWriteMode>read complete forecast< /readWriteMode> < /xTimeSeriesSet> <yTimeSeriesSet> <moduleInstanceId>ImportSkyGeo< /moduleInstanceId> <valueType>scalar< /valueType> <parameterId>Y< /parameterId> <locationSetId>sky_geo. locations< /locationSetId> <timeSeriesType>external historical< /timeSeriesType> <timeStep unit=" nonequidistant"/> <readWriteMode>read complete forecast< /readWriteMode> < /yTimeSeriesSet> <valueTimeSeriesSet> <moduleInstanceId>ImportSkyGeo< /moduleInstanceId> <valueType>scalar< /valueType> <parameterId>height< /parameterId> <locationSetId>sky_geo. locations< /locationSetId> <timeSeriesType>external historical< /timeSeriesType> <timeStep unit=" nonequidistant"/> <readWriteMode>read complete forecast< /readWriteMode> < /valueTimeSeriesSet> < /trackLayer> <classBreaks> <color color="070268" lowerValue="-0.01" opaquenessPercentage=" 70"/> <color color=" 0900AE" lowerValue=" -0.008" opaquenessPercentage=" </pre>
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					<pre> 70"/> <color color=" 4040FF" lowerValue=" - 0 . 0 0 6 " opaquenessPercentage=" 70"/> <color color=" 0080C0" lowerValue=" - 0 . 0 0 4 " opaquenessPercentage=" 70"/> <color color=" 129FFE" lowerValue=" - 0 . 0 0 2 " opaquenessPercentage=" 70"/> <color color=" 00FF40" lowerValue=" 0 " opaquenessPercentage=" 70"/> <color color=" FFFF00" lowerValue=" 0 . 0 0 2 " opaquenessPercentage=" 70"/> <color color=" FF8000" lowerValue=" 0 . 0 0 4 " opaquenessPercentage=" 70"/> <color color=" FF0000" lowerValue=" 0 . 0 0 6 " opaquenessPercentage=" 70"/> <color color=" FF0080" lowerValue=" 0 . 0 0 8 " opaquenessPercentage=" 70"/> <color color=" FFFFFF" lowerValue=" 0 1 . 0 " opaquenessPercentage=" 70"/> </classBreaks> < /gridPlot> {code} </pre>			
FEWS - 18034	System	Update Indonesian language files					APP	
FEWS - 18630	System - PI Service	FEWS-18470 No default filter configured error when no configuration is available	standalone FEWS Web Services startup error improvement	In case the FEWS Web Services is started in standalone mode (by configuring the clientConfig.xml as a standalone client) without a Config folder this is now correctly reported.			Deltares	
FEWS - 18695		FEWS-16767 Force/advise usage of Java 1.8.0_172 or later						
FEWS - 18186		FEWS-16767 Log Collector Service	log collector can be installed as a separate process	log collector can be installed as a separate process.				

FEW S - 18817		FEWS-18245 Navigation panel's run options window larger than available screen					Deltares	
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