



#### What's New in Delft-FEWS...

Presentation Delft-FEWS User Days Netherlands 2018
Marcel Ververs & Gerben Boot (Deltares)

5<sup>th</sup> of June 2018

#### Overview...

- Features
  - Roadmaps
  - Regulars
- Other new(s): Delft, Community
- Questions & discussion...







# Where are we...(heading)?







## Delft-FEWS Server side roadmap...

#### Delft FEWS - FEWS 2017.02 development aubohyt01 postgres

#### Main menu

- » System Status
- » Live System Status
- » View Logs
- » Log Manager
- » Collect System LogFiles
- » Files
- » Forecast Tasks
- » Workflows and FSSs
- User Administration
- » System Control
  » Database Analysis

Running on aubohytmc01

Logged on as ADMIN » Log Off

#### **System Status**

**Live System Status** 

Refresh

#### Status MCs

MC ID	Status	Pending Tasks	Running Tasks	OC Sessions	Last Heartbeat	Software version	Schema version	DB version
aubohytmc01	OK	0	0	0	27/04/2018 07:09:11 GMT	MasterController:stable_2017.02 (74822)	v2017.02_20171129_1	PostgreSQL 9.6
nldefedmc01	OK	0	0	0	27/04/2018 07:09:09 GMT	MasterController:stable_2017.02 (74822)	v2017.02_20171129_1	Oracle 12.1
nldefedmc02	OK	0	0	0	27/04/2018 07:09:10 GMT	MasterController:stable_2017.02 (74822)	v2017.02_20171129_1	SqlServer 14.0

#### Status FSSs

MC ID	FSSID	Status	Last Run Workflow ID	Last Task Run Dispatch Time	Last Heartbeat
aubohytmc01	FSS00	Complete	Ovens_SWIFT_Ensemble_Forecast	26/04/2018 19:28:06	27/04/2018 07:09:15 GMT
aubohytmc01	FSS01	Complete	Ovens_Rainfall_Forecast	27/04/2018 07:05:02	27/04/2018 07:09:15 GMT
aubohytmc01	FSS02	Complete	Process_Forecasts	27/04/2018 06:28:00	27/04/2018 07:09:15 GMT
aubohytmc01	FSS03	Complete	CalculateAPI	26/04/2018 23:00:05	27/04/2018 07:09:15 GMT
nldefedmc01	FSS00	Complete	Abercrombie_SWIFT_Rainfall_Forecast	27/04/2018 07:05:00	27/04/2018 07:09:14 GMT
nldefedmc02	FSS00	Complete	ImportExternal	27/04/2018 06:44:06	27/04/2018 07:09:13 GMT

#### Status MC Components

Task Run Manager Status	MC Rolling Barrel Status	System Alerter Status	MC Synchronization Status
OK	OK	OK	OK

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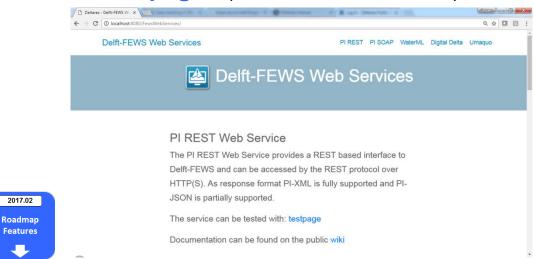
# Roadmap Backend: when...

2017.02	2018.01	2018.02
JMS removed		
New MC		
New Database Schema		
Current Admin Interface adjusted	New Admin Interface	
New (MC-MC) Synchronisation		
New RollingBarrel		
	Secure login/https	
	Scalability	Improved scalability
	Cloud-ready: Azure	Cloud-ready Amazon
	Improved security	
New install procedure	Improved install procedure	(almost) Automatic install procedure
New upgrade procedure	Improved upgrade procedure	(almost) Automatic upgrade procedure
New (WIKI) documentation		Automatic system documentation

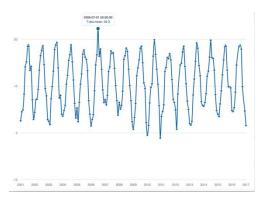


#### Delft-FEWS PI Webservice Roadmap

- Simplified installation
- New documentation (incl. nice examples for JSON)
- REST / SOAP web services aligned
- Test pages (for each web service)









# Roadmap PI Webservice: when...

2017.02	2018.01	2018.02
Simplify installation and configuration	Option in installation procedure Delft-FEWS	Part of install procedure Delft-FEWS (optional)
Improved testability	Improved performance and stability	
PI-XML SOAP/REST alignment	Data streaming/chunking/thinning	
	Improved security and authentication	
	JSON Support	
		Seamless integration of grid data
		Web Mapping Tile Service (WMTS)
Improved documentation	Improved documentation	Improved documentation



#### **Archive Health Checker** is a component with:

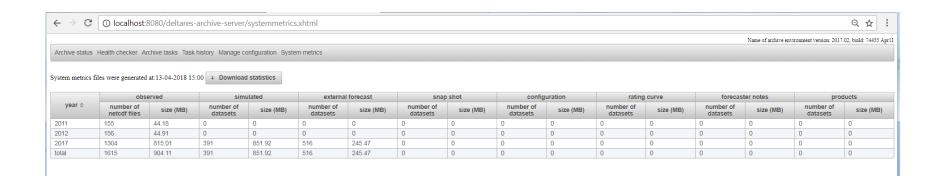
- A list of pre-defined checks
- Each check is for specific problem/bug
- Tasks when Health Checker is stated
  - Run analyze,
  - Download report,
  - Inspect report,
  - Run repair.







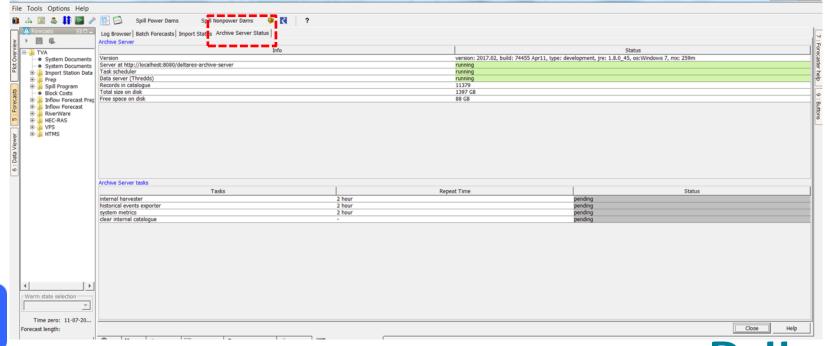
- Overview of the system metrics
- You must run the task system metrics first!







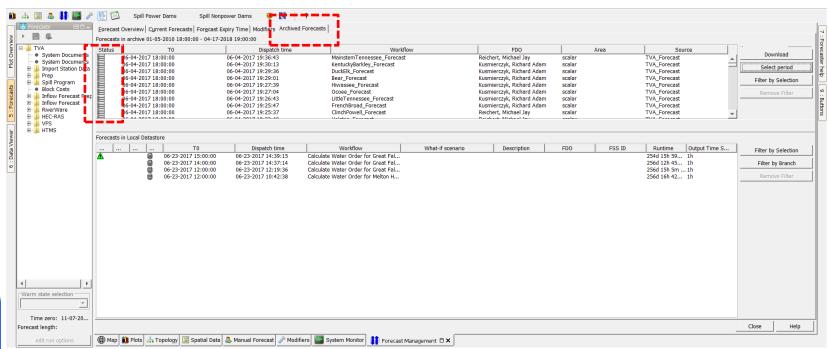
New tab Archive server status added to the OC/SA System Monitor







New tab Archived Forecasts added to the OC/SA Forecast Manager





Data from the archive can be used in a workflow that runs on the FSS

- Enabled: seamless integration in workflows
- Only enabled if downloadMissingDataFromArchive is configured in workflow!

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| Comparison of the control of the c
```



2017.02 Roadmap Features

# Roadmap PI Webservice: when...

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# Finances (end of April 2018)

Roadmap	Content	Finances*
Backend	40%	130%
PI web service	50%	30%
Archive	50%	35%

<sup>\*</sup> Based on: (original) 680 kE estimate



### Finances (01.05.2018)

Roadmap	Content	Finances*
Backend	40%	130%
PI web service	50%	30%
Archive	50%	35%

→ actions !!

- Promised roadmap features only
- Postpone less urgent features (2019)
- More roadmap features in projects
- Community contributions



<sup>\*</sup> Based on: (original) 680 kE estimate

#### 2017.02 delayed...but & because...

- Roadmaps in general: we started later (first: finish non-roadmap features)
- Some generic / regular features: originally planned for: 2018.01 are in...
- Agile approach: design choices not completely ready at start
- Backend: remove JMS
  - Not possible to split over more releases: → one go...
- Huge increase in knowledge development across developers
  - Same level of knowledge with more than one developer → takes time
- Planning and availability of developers
- Mainly: more has been done
  - Database schema/design: completely new
  - MC-OC synch is in (where only DDA was planned for 2017.02)
  - Synchronisation is prepared for large files (streaming)



# Release Summary (with roadmap functionality)

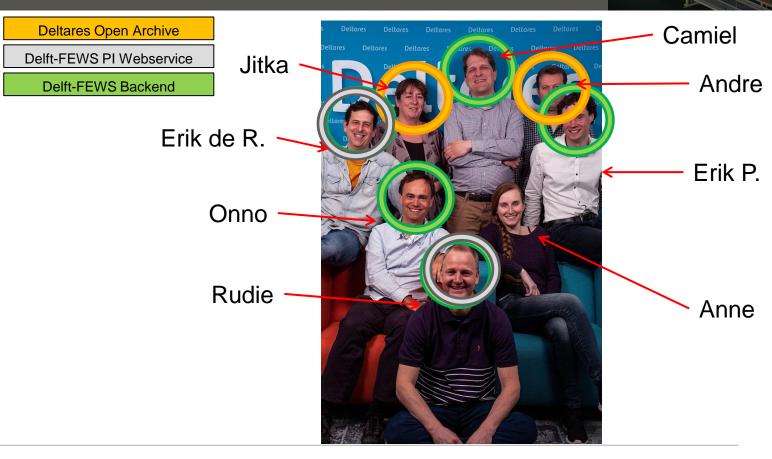
Release	2017.02	2018.01	2018.02	2019.01
Date	1st of June 2018	1st of Sept 2018	1st of Dec 2018	1st of June 2019

Release	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
2017.02																
2018.01																
2018.02																
2019.01																

	test	test	released
development	Intern	extern	version



# Who: the Delft-FEWS Development Team...





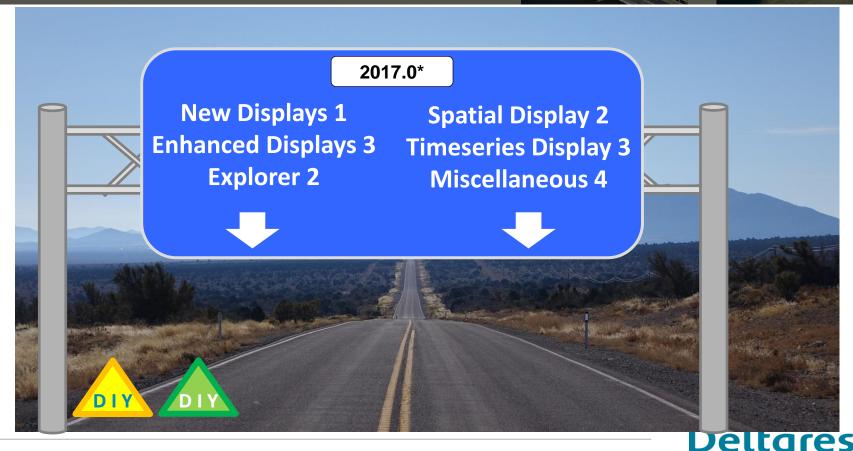
# Where are we...(heading)?



## What's new...?



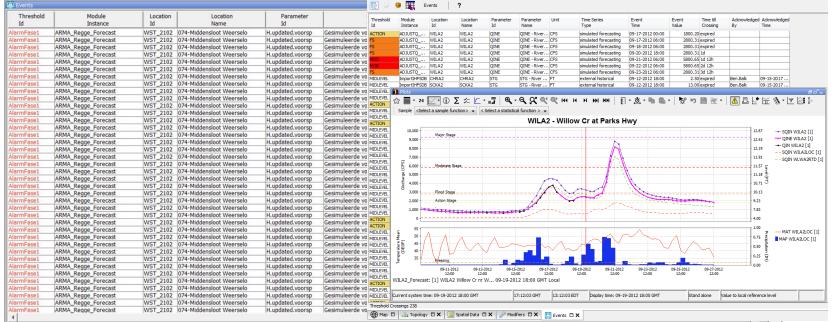
## What's new...?



#### New Displays...



 System wide thresholds display containing an overview of all Threshold Events which can be acknowledged (+ acknowledge is tracked)





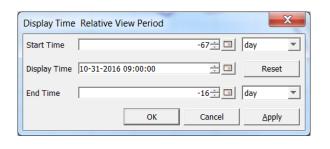
Threshold Crossings 814

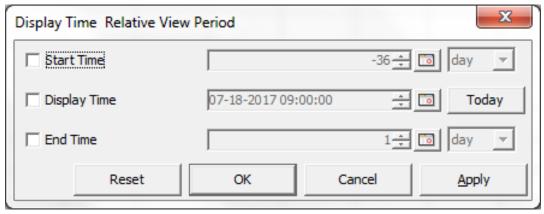


### Enhanced Displays...



 The time window popup used in the time series dialog and grid display is now redesigned.





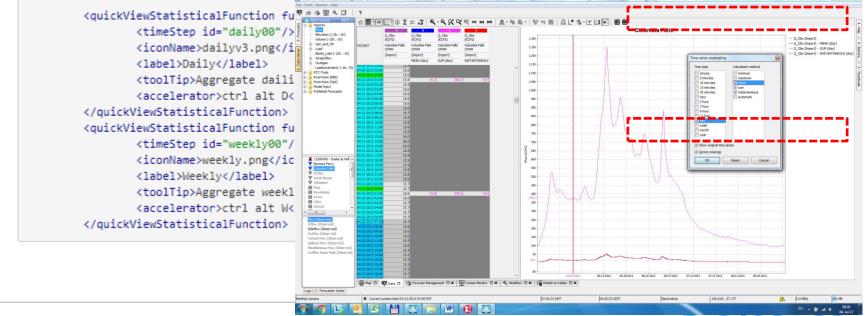




#### Enhanced Displays...



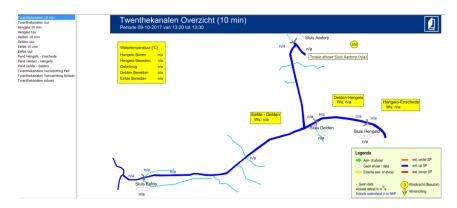
 The CalendarAggregationFunction has now the option to accumulate according to parameter type: SUM (accumulative), MEAN (mean) or LAST VALUE (instantaneous)



### Enhanced Displays...



- Schematic Data Display
  - Background color configurable
  - More visible/clickable no-data character
  - Use of attributes in the 'title' of the 'leftSingleClickAction'
  - Set transparency of SVG elements based on a time series





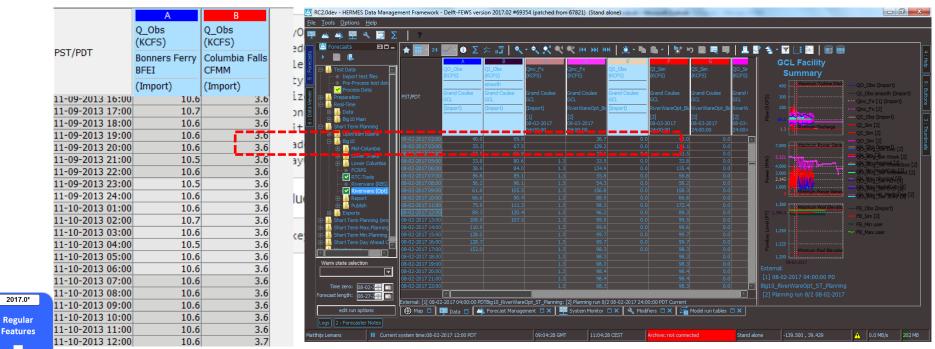




#### Timeseries Display: features added....



Option to configure a custom background color in the table header

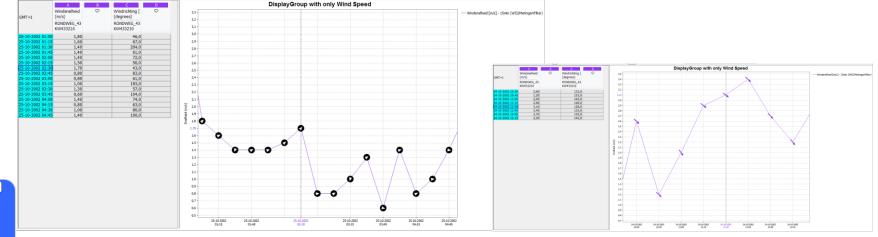




### Timeseries Display: features added....



- Add functionality to scatter plot to show multiple parameters for single location
- Add configuration option for whitespace between (sub)plots
- Timeseries Marker as icon (for displaying wind direction as arrow)

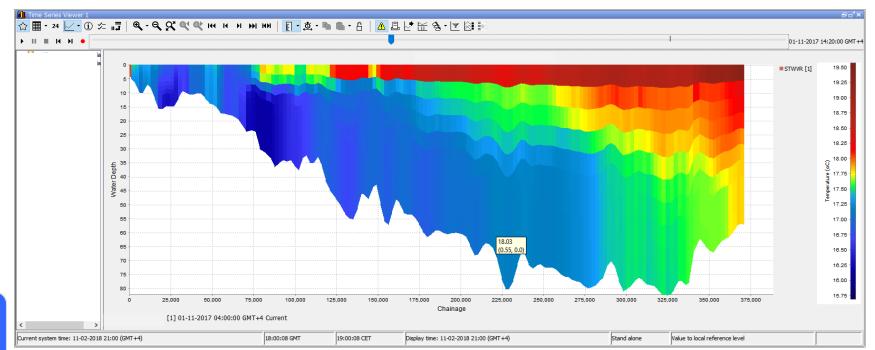






## Timeseries Display: features added....

3D vertical cross section colour plot



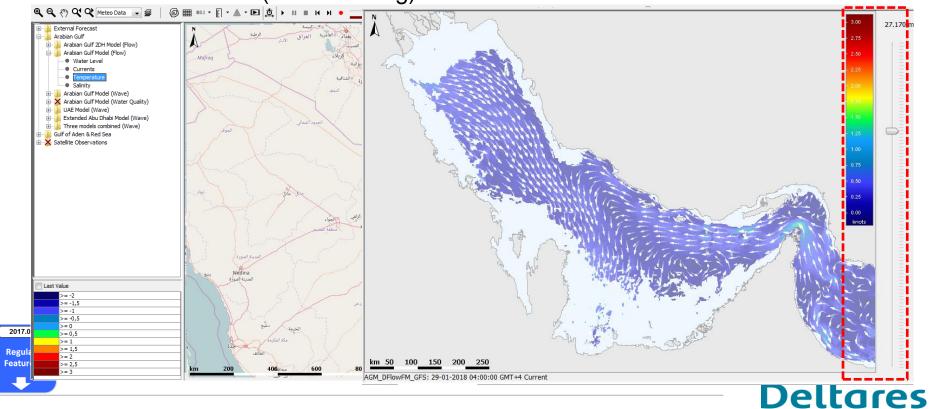




#### DIY

### Spatial Display: features added...

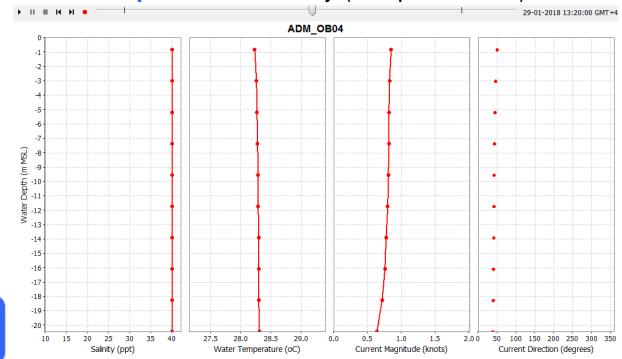
Vertical Slider (3D modelling)



### Spatial Display: features added...



Vertical profiles: on-the-fly (and pre-defined)







#### Explorer improvements...

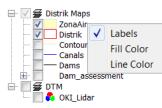


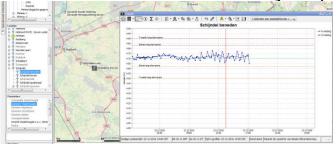
- Smart labeling for line shapelayers
- Improvements to map legend (dockable & shows information on WMS layers)
- Option to make labels (in)visible
- Option to add latest value to label
- Enable classification of point layers
- Menu option "return to default" configuration

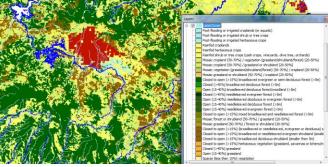


Regular

**Features** 





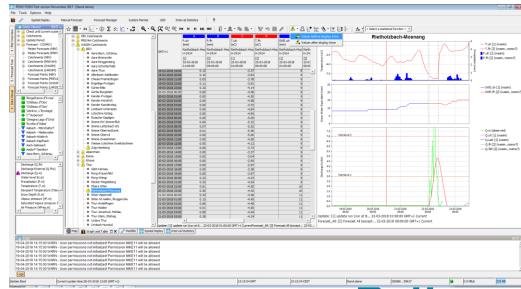




#### Explorer improvements...



- Add feature to disable threshold icons in Filters and Map display
- Add a second icon to the icons of the shortcuts to know if thresholds are crossed before or after the system time









- The admin interface has been extended to support downloading tasks for the current MC only.
- Option to (un)hide One-off tasks in the Admin Interface

#### Delft FEWS - FEWS 2017.02

#### **Forecast Tasks**

#### Scheduled Tasks

- · Schedule New Task
- · Upload Task(s) from File
- Download Scheduled Tasks: All Current MC









CAP Export (MeteoAlarm)

```
Module config file:
        <thresholdExport xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.wldelft.nl/fews" 
        http://fews.wldelft.nl/schemas/version1.0/thresholdExport.xsd">
                                         <exportTypeStandard>CAP-AU</exportTypeStandard>
                                         <folder>$EXPORT_FOLDER$\CAP_Alerts</folder>
                                         <exportFileName>
                                                         <name>_RiverAlert_CAP_%LOCATION_ID%_@STATE@_%THRESHOLD_ID%_.xml</name>
                                                                          <timeZeroFormattingString>yyyyWMddHHmm</timeZeroFormattingString>
                                                         </prefix>
                                                         <suffix>
                                                                          <currentTimeFormattingString>yyyyMMddHHmmss</currentTimeFormattingString>
                                         <eventCodePattern>*_River_Alert.Up</eventCodePattern>
                                         <eventCodePattern>*_River_Minor.Up</eventCodePattern>
                                         <eventCodePattern>*_River_Moderate.Up</eventCodePattern>
                                         <eventCodePattern>*_River_Major.Up</eventCodePattern>
                                         <eventCodePattern>*_River_Alert.Down</eventCodePattern>
                                         <eventCodePattern>*_River_Minor.Down</eventCodePattern>
                                         <eventCodePattern>*_River_Moderate.Down</eventCodePattern>
                                         <eventCodePattern>*_River_Major.Down</eventCodePattern>
                                         <templateFile>CAP_Export_Template</templateFile>
    Template file:
        <?xml version="1.0" encoding="UTF-8"?>
        <alert xmlns="urn:oasis:names:tc:emergency:cap:1.2">
                        <identifier>%IDENTIFIER%</identifier>
                        <sender>%SENDER%</sender>
                        <sent>%EXPORT_TIME(DF1)%</sent>
                        <status>Actual</status>
                        <msgType>%MESSAGE_TYPE%</msgType>
                        <source>@STATE@, STATE_AGENCY</source>
                        <scope>EVENT_SCOPE</scope>
                        <code>urn:oasis:names:tc:emergencv:cap:1.2:profile:CAP-AU:1.0</code>
                        %ALERT HISTORY(DF1)%
                                         <language>en-AU</language>
                                         <category>EVENT_CAT</category>
                                         <event>EVENT_EVENT</event>
                                         <urgency>Unknown</urgency>
                                         <severity>%SEVERITY%</severity>
                                         <certainty>Observed</certainty>
                                                         <valueName>https://govshare.gov.au/xmlui/handle/10772/6495</valueName>
                                                         <value>EVENT VALUE
                                         <expires>%EXPIRY_TIME(DF1)%</expires>
```





- Development of the hydrotel adapter
- Development of the **Kisters Hydstra adapter**
- Option to hide original data when looking at statistics



Option to delete data from the database using the DB Viewer (SA)



Show temporary timeseries also in WorkflowNavigator



Interval Statistics Display shows information in displayUnits



- Seamless integration of forecast series also in PI Webservice
- Ability to configure major and minor gridlines in Report charts
- Seamless integration of forecast scalar timeseries (observed already possible) with Open Archive



Deltares

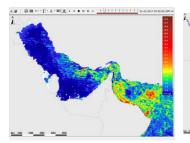


- Optimized sending (threshold events) alerts updates
- Forecast management dialog: add extra columnath rentime of workflow
- Workflow Navigator checks if all reference are available
- Store system time in user\_settings
- SSD: "Save as image" dial@ need to specify file extension
- System Monitor: \(\text{iomg consistent}\) (complete row) in "Import Status tab"
- Add pixel primation to pasted timeseries (from grid-display)



- New imports: CMEMS, MODIS, WIWB
- ...many more







#### Who was where...







**02.05.2018**Delft-FEWS User Days Australia (the 5<sup>th</sup> edition)

07.09.2017
Delft-FEWS User
Day for German
speaking users in
Vienna

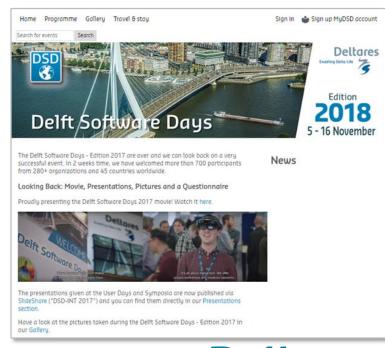
International Delft-FEWS User Days



#### What else is new...?

- FEWS NEWS (2018 edition #2)
- New Course materials
  - WAQ
  - Deltares Open Archive & Delft-FEWS PI Webservice (online soon)
- New Webinars/instruction videos (6)
- www.delft-fews.com renewed
- Community Events







# **Questions & Discussion**



