

Deltares

Deltares



Deltares

Delft-FEWS New Features and more...

Delft-FEWS Remote User Meetings

Delft-FEWS Product Management

Marcel Ververs

Gerben Boot

June 2020

Overview

- Top features...(developer's choices)
- Component highlights...
- Release Details...
- Outlook Delft-FEWS 2020.02...
- Delft-FEWS Vision 2025 & Roadmap(s)...
- New in this presentation...[link to documentation](#) or other relevant information (portal, video)
- Questions...

Search or type a command

Activity
Chat
Teams
Calendar
Calls
Files
Apps
Help

andre
mozhan
onno
orshi
bart
jitka
erik
rudie
camiel

32:37

Postvak IN - Gerben.B...
Agenda - Gerben.Boo...
Total Commander 9.2...
Dash-Boot - Deltares ...
Skype for Business
Ilonka ten Broeke - Kr...
Meeting | Microsoft T...
Presentation1 - Power...

10:01

Jitka's choice ... Link Topology to Threshold Overview

- Link [topology node to other display](#)
- Selecting node will open specific Threshold Display

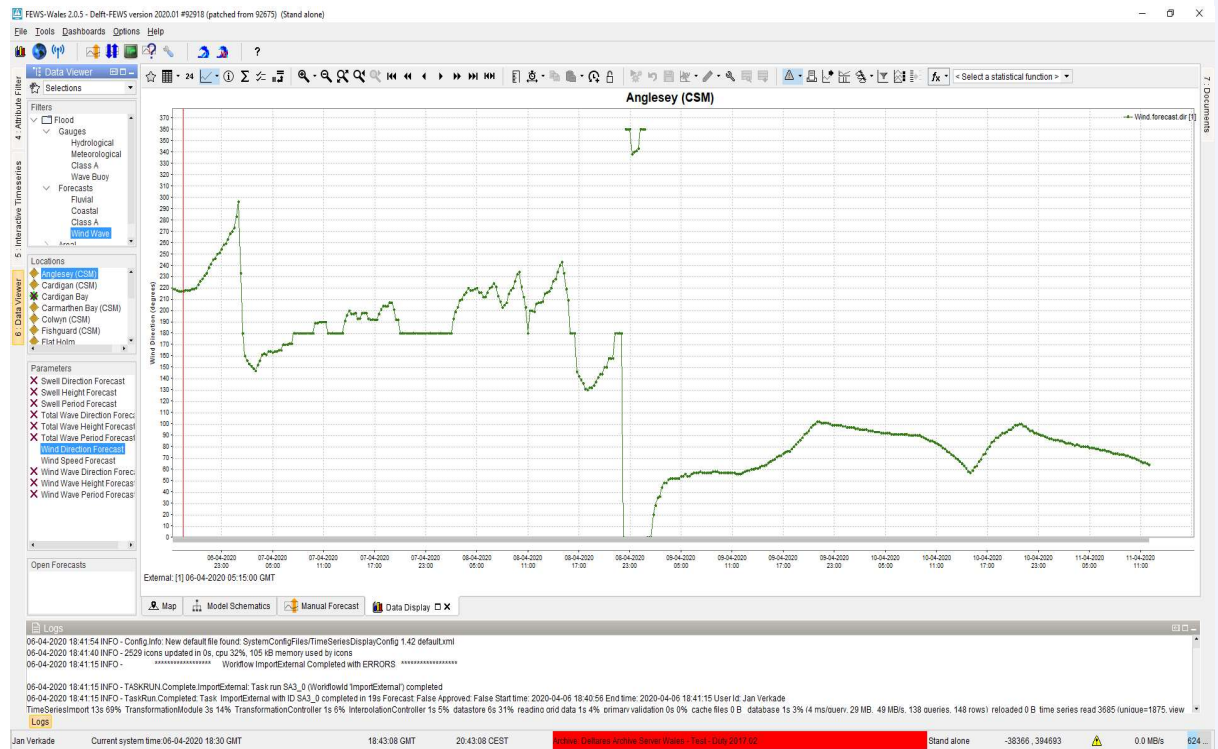
"Link Topology to Threshold Overview Display to directly open this display when selecting node ..."

The screenshot displays the IMFS Delft-FEWS Prototype 07 (June 2020) interface. The main window shows an XML tree structure under 'topologyGroup'. A blue circle highlights a node with 'id' 1 and 'name' 'Worthing_riskdisplay_mvt/MVT', which has a 'displayConfigFileName' of 'CoastaRiskDisplay_MVT_Worthing'. Below the XML tree, a 'Coastal Risk Display (Worthing MVT)' window is open, showing a map of the Worthing area with a green overlay. The bottom status bar shows system time and other details.

Orshi's choice... Display wind direction

- Big spikes in graphs with wind direction changes 360 / 0
- Configure [max value difference](#) in Time Series Display

"Wind direction displays no longer shows jumps when wind varies around 0 or 360 degrees ..."



Rudie's choice ... Admin Interface

- Database information
- Acknowledge logs
- Last Taskrun Dispatch Time Color Code
- [Documentation](#)

"Extend the Admin Interface REST API with useful additional information for monitoring tools ..."

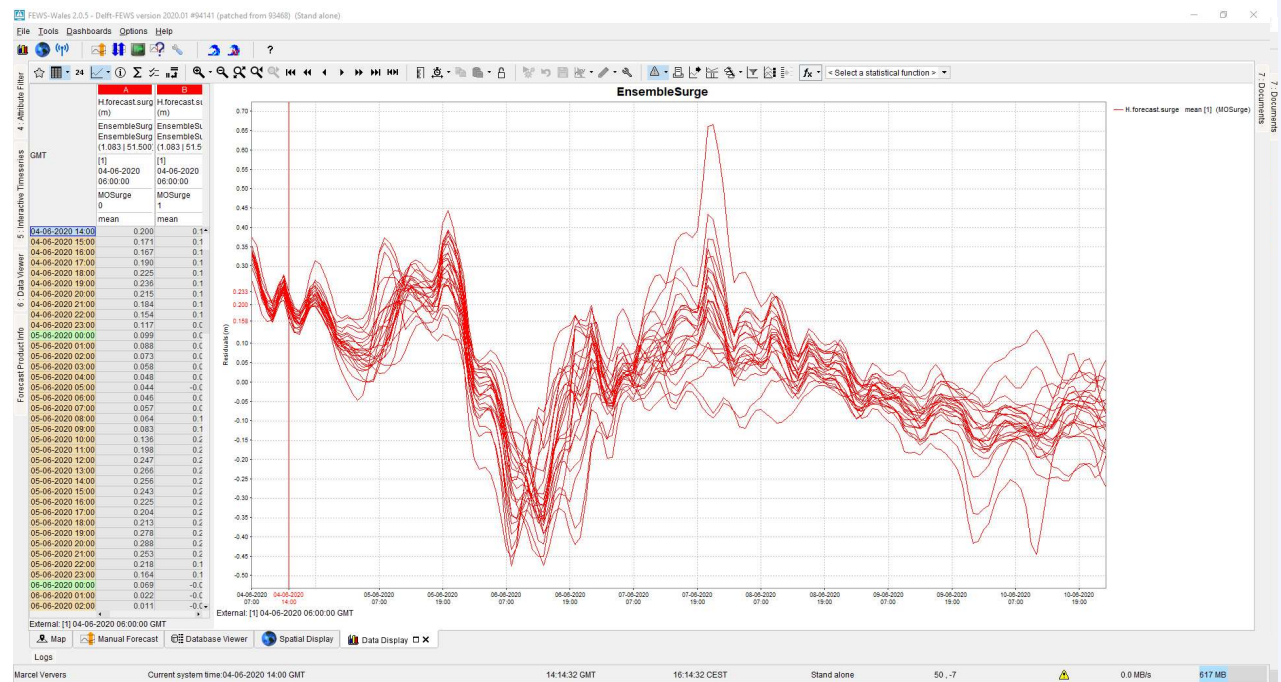
The screenshot displays the Delft-FEWS Admin Interface. The main window shows a list of tasks with columns for status, start time, end time, and completion. A detailed view of a task is shown on the right, including a table of data points and a 'Filter by selection' dialog box.

Status	Start Time	End Time	Completion
Pending	07:05:00	07:00:00	1m 40s
Pending	07:05:00	12:00:00	10m
Pending	06:05:00	13:13:00	8s
Pending	06:05:00	13:10:00	1m 16s
Pending	07:05:00	06:00:00	2s
Pending	07:05:00	06:00:00	2s
Pending	06:05:00	13:15:00	11m 1s
Suspended	2:06:00	12:30:00	
Suspended	06:05:00	17:30:00	
Pending	06:05:00	12:00:00	27m 13s
Suspended	01:05:00	00:00:00	
Pending	07:05:00	01:00:00	Running
Pending	07:05:00	04:50:00	Complete
Pending	07:05:00	04:50:00	Complete
Pending	07:05:00	05:30:00	1m 3s
Pending	06:05:00	16:40:00	Complete
Pending	07:05:00	04:30:00	Complete
Pending	06:05:00	16:00:00	Complete
Pending	06:05:00	17:00:00	Complete
Pending	07:05:00	11:00:00	Complete
Pending	15:05:00	00:00:00	Complete
Pending	06:05:00	13:15:00	Complete
Suspended	2:06:00	12:30:00	
Suspended	06:05:00	17:30:00	
Pending	07:05:00	00:00:00	Running
Suspended	01:05:00	00:00:00	
Pending	06:05:00	13:00:00	Running
Pending	06:05:00	04:50:00	Complete
Pending	06:05:00	05:00:00	Complete
Pending	07:05:00	05:00:00	Complete
Pending	06:05:00	16:15:00	Complete
Pending	06:05:00	17:00:00	Complete
Pending	07:05:00	11:00:00	Complete
Pending	06:05:00	16:30:00	Complete
Pending	07:05:00	04:15:00	Complete
Pending	06:05:00	22:00:00	Complete
Pending	06:05:00	17:00:00	Complete
Pending	07:05:00	03:30:00	Complete
Pending	07:05:00	04:00:00	Complete
Pending	06:05:00	13:10:00	Complete
Pending	06:05:00	13:00:00	Complete
Pending	06:05:00	13:10:00	Complete

Onno's choice... Show all Ensemble members

- All Ensemble members
- High performance due to local caching

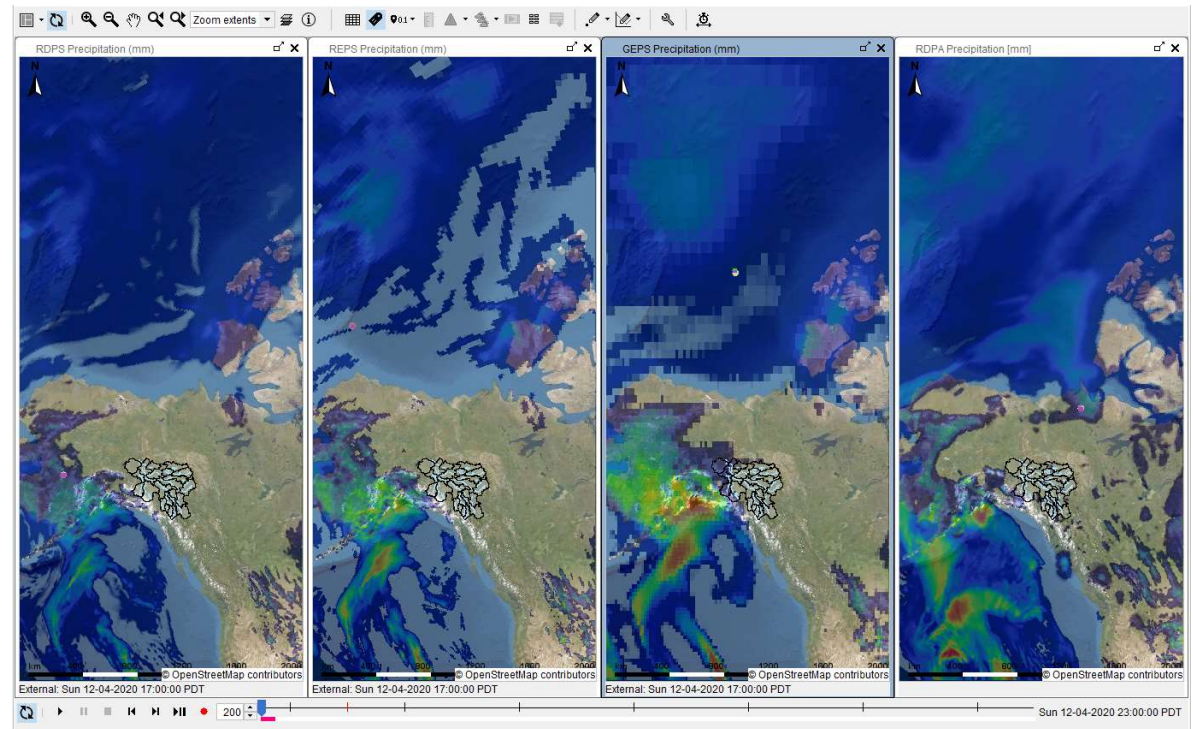
"Show all ensemble members from a gridded ensemble product in one go..."



FEWS-PM's choice ...Dashboards

- Create, customize and modify
- Displays synchronised spatially and in time
- Easily save and shared
- [Documentation](#) and [video](#)

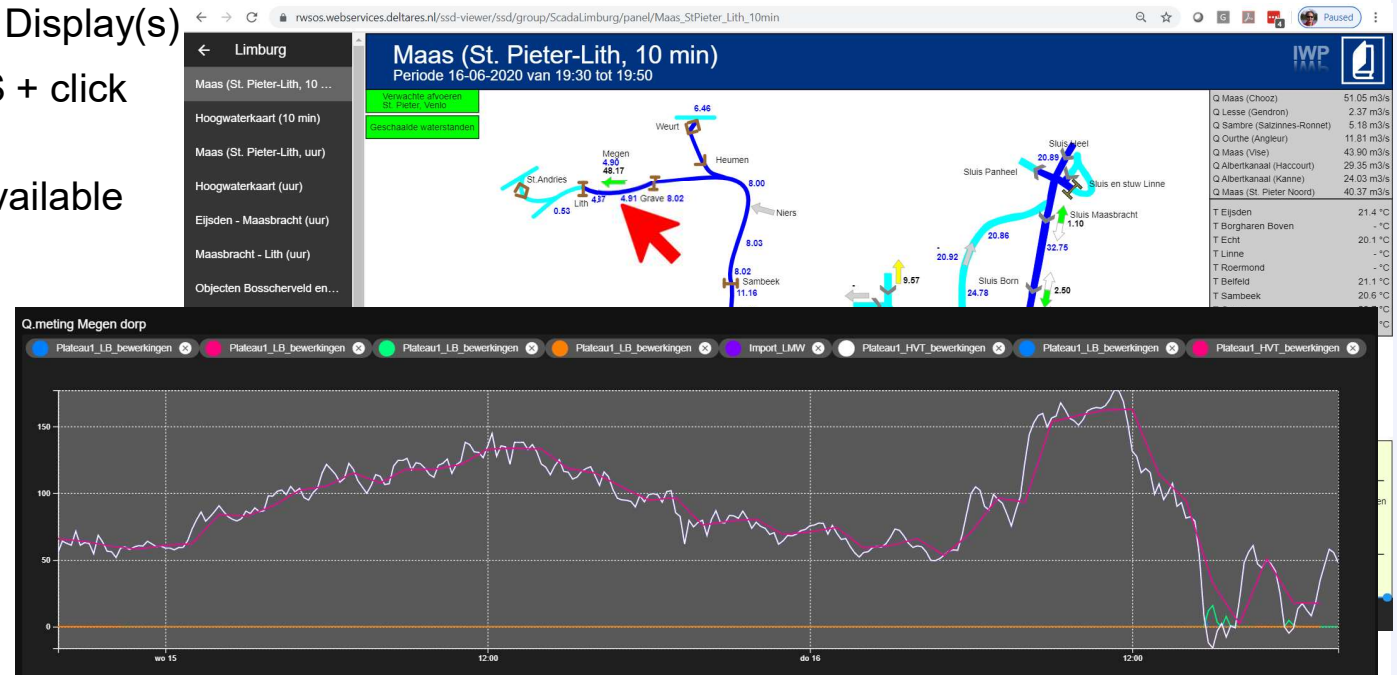
"Dashboards gives user the opportunity to easily view several displays side-by-side..."



Bart's choice...Schematic Status Display web service

- Source: Schematic Status Display(s)
- [SSD Web service](#) → WMS + click actions.
- plot selection & scroller available

"Sharing schematic status displays from the operator client with a much broader audience online..."



Erik's choice...applying automatic 'groupBy' (Filters)

- [GroupBy](#) functionality to automatically generate a filter structure based on location, parameter and qualifier attributes
- Multi-value attributes
- Nested

"Generating a filter structure in a very flexible way..."

Thema-, parameter-, - locatiefilter

- > GroupByNested
- ✓ GroupByNestedCAW
 - > HYB
 - > FYCHEM
 - ✓ KWAN
 - > Blaricum
 - > Boezem
 - > Oost
 - > Test
 - > Amsterdam
 - > Uithoorn
 - > West
 - ✓ Meteo
 - Meetpunt
 - Radar
 - Poldergemeaal
 - Meetstation

Drinkwater

Prinseneiland

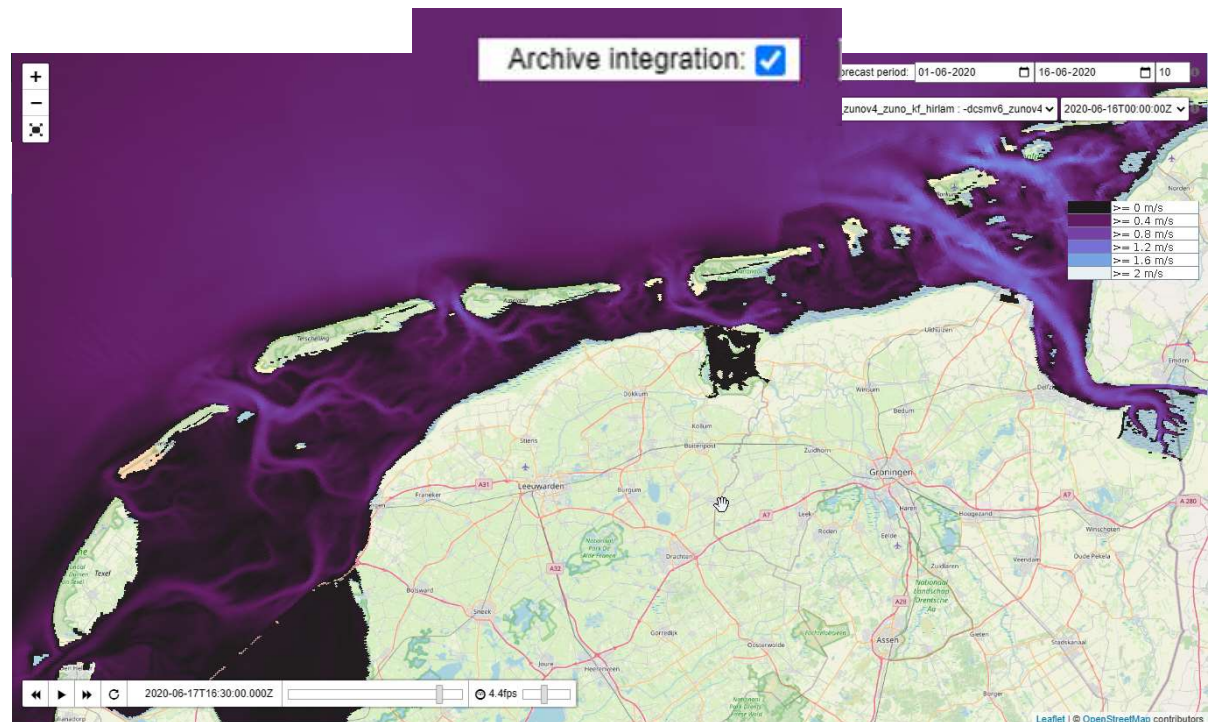
Afvalwater

```
<filter id="GroupByNestedCAW" name="GroupByNestedCAW">  
  <groupBy>  
    <parameterAttributId>Source</parameterAttributId>  
    <locationAttributId>Regio</locationAttributId>  
    <locationAttributId>Type</locationAttributId>  
  </groupBy>  
</filter>
```


Andre's choice...improved seamless integration (archive)

- [WMS](#) services extended (data responses)
- External NetCDF files (not produced by Delft-FEWS) can be added to the Open Archive
- Seamless / [Archive](#) integration

"Externally stored NetCDF files added to the Archive can be queried and its content viewed..."



Camiel's choice...automatically generated database scripts

- 1 source file in code-base describes the database structure (Delft-FEWS version)
- Create, validate, upgrade & rollback scripts (4)
- PostgreSQL, Oracle, MS SQL Server (3)

"Automatically generated database scripts: create, validate, upgrade & rollback scripts for 3 different database brands, so 12 in total..."

```
-----
p://www.delft-fews.com
:ft-FEWS Product Management (fews-pa@deltares.nl)

), by Deltares
   P.O. Box 177
   2600 PH Delft
   The Netherlands
   http://www.deltares.nl

:form for real time forecasting and water
nt. Delft-FEWS is expert data handling and
oftware for Flood forecasting, drought and
ng, and real-time water resources management.

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12001.sql
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), by Deltares

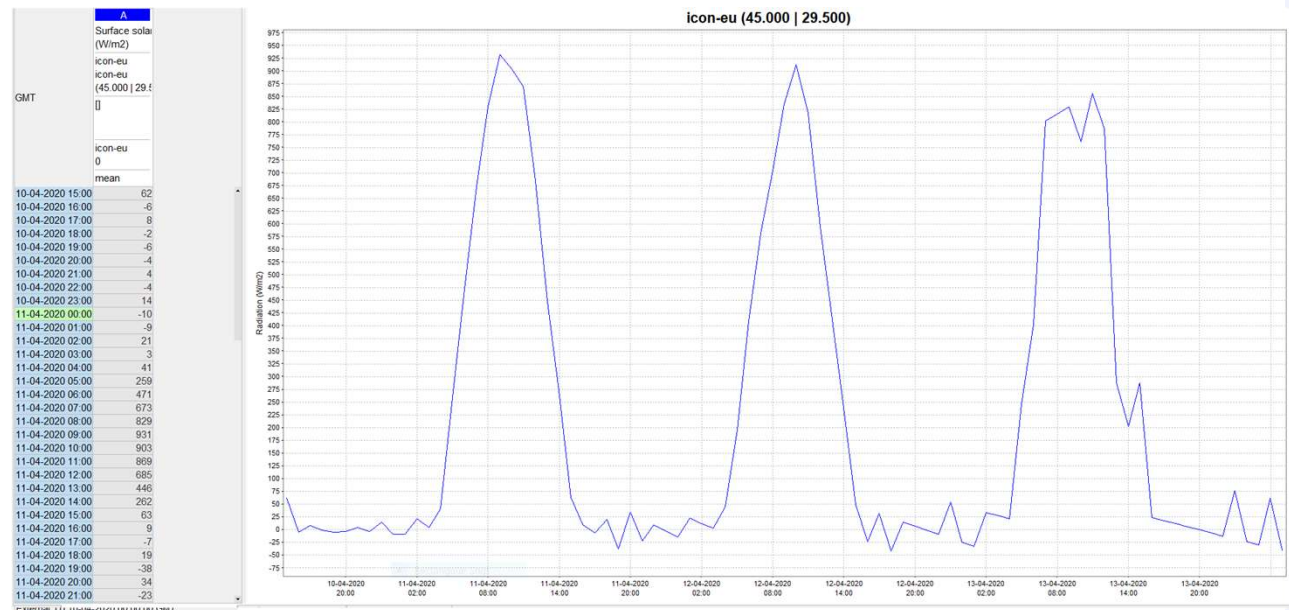
Directory with write permissions.
: executable can be found in your path.
se_schema_202001.sql -d <database> -U <user> -o validation_results_202001.txt
idential of the FEWS schema owner, never of the postgres user.
illy lists the differences with a specific database schema version. when the query yields zero results, this means the database

element_name, expected, actual, expected_element_info, actual_element_info FROM (
element_name IS NULL THEN t2.element_type ELSE t1.element_type END AS element_type,
t1_name IS NULL THEN t2.element_name ELSE t1.element_name END AS element_name, t1.element_content AS expected, t2.element_content
AS element_content, t2.element_info AS actual_element_info FROM (
" AS element_type, "ACCESSKEYHASHES.USERENTRYID#USERS.ENTRYID" AS element_name, "2" AS element_content, "fk_accesskeyhashes" AS
" AS element_type, "ACCESSKEYHASHES.USER#NCID#USERS.NCID" AS element_name, "1" AS element_content, "fk_accesskeyhashes" AS eleme
" AS element_type, "ARCHIVE#TADATA.TASKRUNID#TASKRUNS.TASKRUNID" AS element_name, "1" AS element_content, "fk_archive#tadata"
" AS element_type, "ATTRIBUTE#MODIFIERS.#MODIFIERID#MODIFIERS.#MODIFIERID" AS element_name, "2" AS element_content, "fk_attr#modifi
" AS element_type, "ATTRIBUTE#MODIFIERS.TASKRUNID#MODIFIERS.TASKRUNID" AS element_name, "1" AS element_content, "fk_attr#modifi
" AS element_type, "COMPONENT#LOGFILES#SNAPSHOTS.LOGTASKRUNID#SYSTEMACTIVITIES.TASKRUNID" AS element_name, "1" AS element_content,
" AS element_type, "FEWS#SERVICES.LOGTASKRUNID#COMPONENT#LOGFILES#SNAPSHOTS.LOGTASKRUNID" AS element_name, "1" AS element_content
" AS element_type, "FLOODPERIODS.TASKRUNID#SYSTEMACTIVITIES.TASKRUNID" AS element_name, "1" AS element_content, "fk_periods" AS
" AS element_type, "FORECASTING#SHELLS.FSSGROUP#ENTRYID#FSSGROUPS.ENTRYID" AS element_name, "2" AS element_content, "fk_forecasti
" AS element_type, "FORECASTING#SHELLS.LOGTASKRUNID#COMPONENT#LOGFILES#SNAPSHOTS.LOGTASKRUNID" AS element_name, "1" AS element_cont
" AS element_type, "FORECASTING#SHELLS.NCENTRYID#MASTERCONTROLLERS.ENTRYID" AS element_name, "2" AS element_content, "fk_forecas
" AS element_type, "FORECASTING#SHELLS.NCID#FSSGROUPS.NCID" AS element_name, "1" AS element_content, "fk_forecasting#shells2" AS
" AS element_type, "FORECASTING#SHELLS.NCID#MASTERCONTROLLERS.NCID" AS element_name, "1" AS element_content, "fk_forecasting#shel
" AS element_type, "HISTORICAL#EVENTS.TASKRUNID#SYSTEMACTIVITIES.TASKRUNID" AS element_name, "1" AS element_content, "fk_histori
" AS element_type, "LOGENTRIES.TASKRUNID#SYSTEMACTIVITIES.TASKRUNID" AS element_name, "1" AS element_content, "fk_logentries" AS
" AS element_type, "MASTERCONTROLLERS.LOGTASKRUNID#COMPONENT#LOGFILES#SNAPSHOTS.LOGTASKRUNID" AS element_name, "1" AS element_cont
" AS element_type, "MODIFIERS.TASKRUNID#SYSTEMACTIVITIES.TASKRUNID" AS element_name, "1" AS element_content, "fk_modifiers" AS
" AS element_type, "MODIFIERS.#WHATIFID#WHATIFSCENARIOS.#WHATIFID" AS element_name, "1" AS element_content, "fk_modifiers#whatif"
" AS element_type, "MODULEINSTAN#CERUNS.TASKRUNID#TASKRUNS.TASKRUNID" AS element_name, "1" AS element_content, "fk_moduleinstanc
" AS element_type, "MODULEPARAMETER#MODIFIERS.#MODIFIERID#MODIFIERS.#MODIFIERID" AS element_name, "2" AS element_content, "fk_modu
```


Mozhan's choice...import module improvements

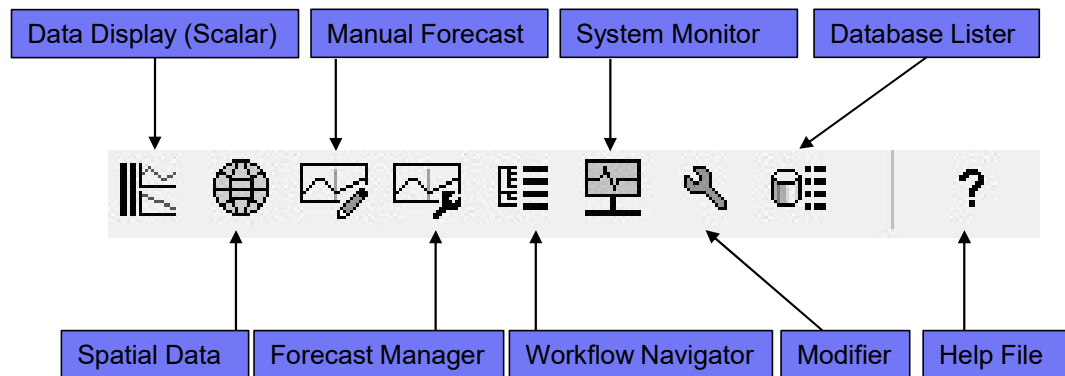
- On import: calculate values for every timestep for cumulative mean timeseries (similar as cumulative sum timeseries)
- New ship track

"Besides calculating the values for every timestep for cumulative summed timeseries, you can now do that for cumulative means as well..."



New Look and Feel

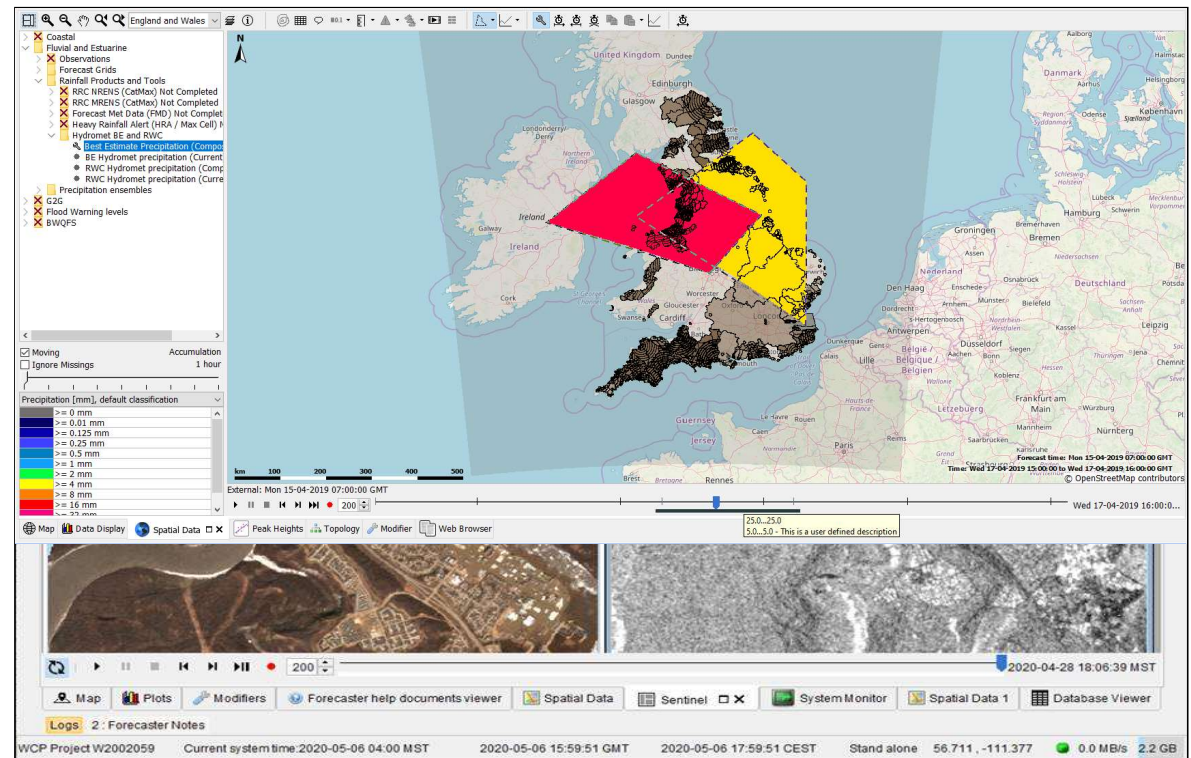
- One consistent look and feel across platforms
- All displays and tool windows have a default icon
- Windows 10 look (or close to it)
- Changes are configurable
- [Video](#)



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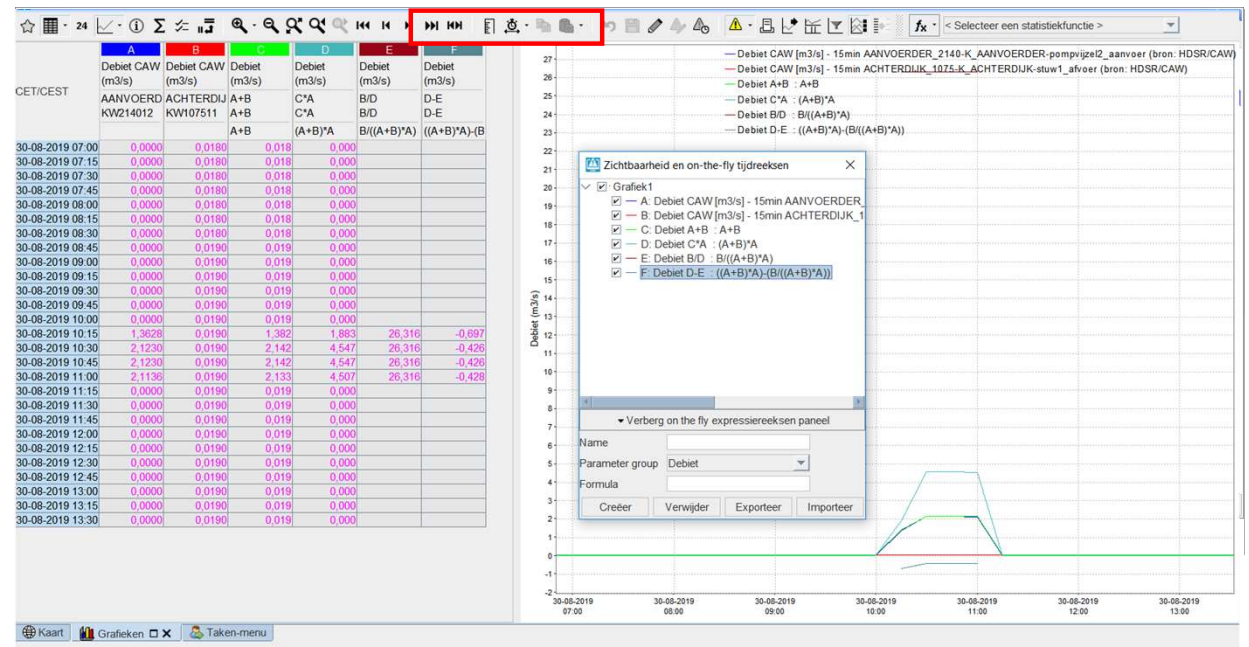
New in Spatial Display

- [Display true color imagery \(3-bands\)](#)
- Double-clicking shows all underlying time series for point
- Seamless integration for external historical grids
- Streaming of grids and only storing references to grids
- [Spatial Modifiers](#)



New in Time Series Display

- [Freeze](#) part of a time series
- Display [differences between two scenarios](#)
- [Jump](#) to first or latest data point available
- Display [observations with rating curves](#)
- Extension of [on-the-fly expression functions](#)



New in de Admin Interface

- [Unmapped workflows](#) easily recognizable
- Show on which FSS-group an unmapped workflow can run
- Upload [multiple event action configurations](#)

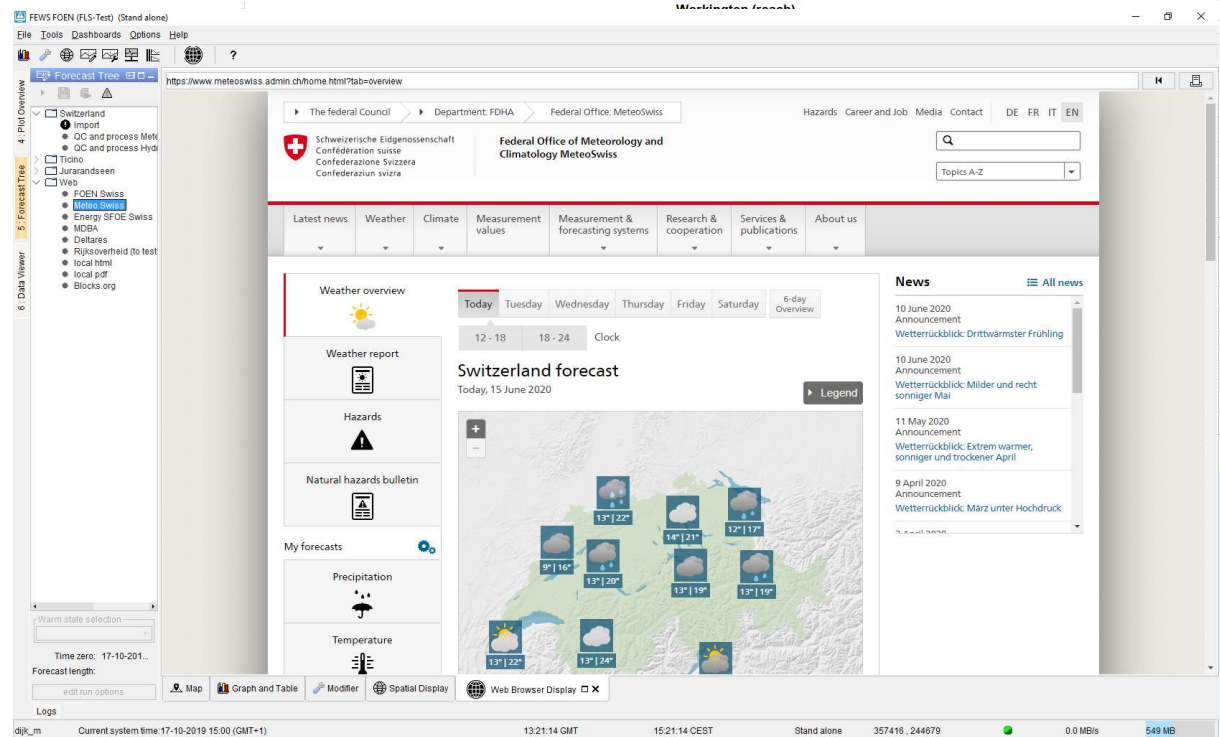
The screenshot displays the 'RDRD (Regge) - Event Actions' admin interface. The left sidebar contains navigation options: System Status, Forecast Tasks, Workflow and FSSs, FSS Groups, Event and Actions, Files, User Administration, System Control, Software Management, Database Analysis, Documentation, and Logout admin. The main content area is divided into two sections: 'Action Configurations' and 'Action Mappings'. In the 'Action Configurations' section, the 'Upload Multiple' button is highlighted with a red box. Below it is a table with 4 entries. The 'Action Mappings' section below it has 'Add Mapping', 'Upload Mappings', and 'Download Mappings' buttons, and a table with 6 entries.

Action Id	Default Version	Description	Creation Time	Created By	Commands
Datastore.NewCurrentRun	RDREMC00:000000000	Datastore.NewCurrentRun	06/11/2012 19:05:41	ADMIN	Versions
SYSMON.Restarting	RDREMC00:163360	mail on MC restart	07/05/2020 16:07:25	Marcel Ververs	Versions
SYSMON:FSSLost	RDREMC00:000000000	FSS lost	31/03/2014 14:30:18	ADMIN	Versions
SYSMON:Restarting	RDREMC00:000000000	mail on MC restart	23/05/2014 06:16:43	ADMIN	Versions

Event Code	Action Configuration ID	Command
DataStore.NewCurrentRun	Datastore.NewCurrentRun	Delete Test
ForecastingShell.Error	SYSMON:FSSLost	Delete Test
Sysmon.Restarting	SYSMON.Restarting	Delete Test
SYSMON:FSSLost	SYSMON:FSSLost	Delete Test
SYSMON:Restarting	SYSMON:Restarting	Delete Test
Sysmon.Restarting	Sysmon:Restarting	Delete Test

New in...Delft-FEWS Explorer

- Selected ensemble member stays selected...
- Option added: only the [visible locations in the map](#) show up in the locations list...
- [Web browser display](#): Chromium package upgrade (JCEF)



General Release Statistics & Benchmarks

	Delft-FEWS 2019.02	Delft-FEWS 2020.01
New features	239	113
All solved bugs (incl. internal testing)	634	179*
Top 5 features	Import (25) Grid Display (23) Admin Interface (16) Web services (14) Archive/TSD (13)	Import (19) Admin Interface (13) Web services (10) Archive (9) TSD (7)

* status: mid June 2020

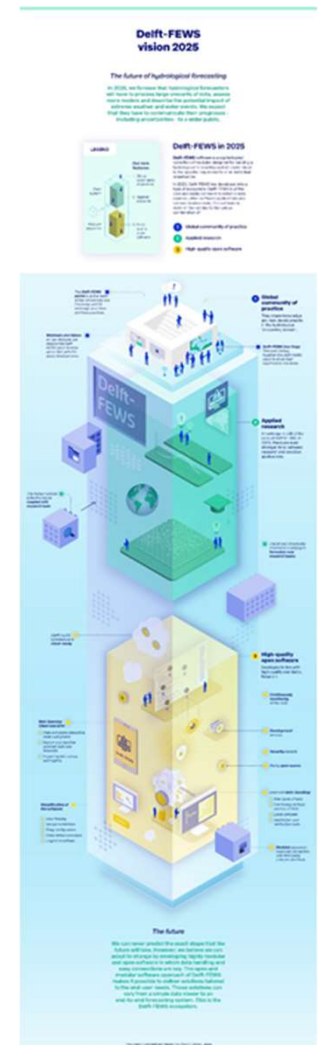
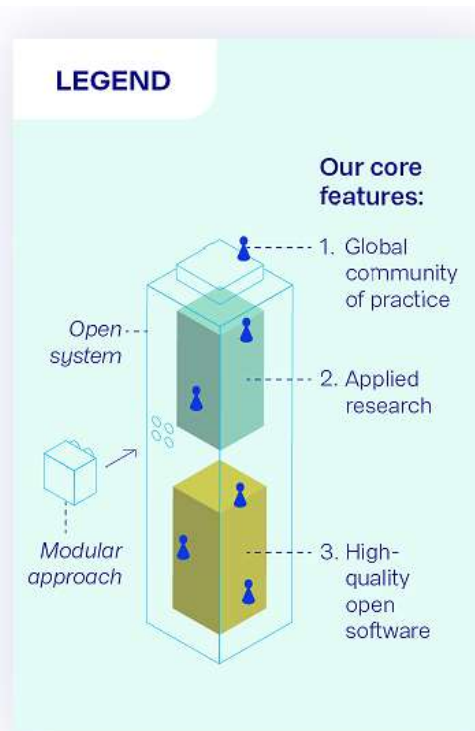
Outlook Delft-FEWS 2020.02...

- Admin Interface API extension (calling AI methods via scripting tools)
- Improve WMS, create WCS service and downloads from the Open Archive
- Backend improvements (1 *patchable* build approach)
- (zipped) Configuration upload via Admin Interface
- Finalizing the new “ComposedWhatIfs” approach (Computation Framework)
- Rating Curve generation tool
- Automatic Parameter Optimization (icw OpenDA)
- TSD improvements (like comparing different runs)
- And of course: imports, model adapters etc.

- **To Do** - share agreed developments on portal (“at the right level of detail...”)

New Delft-FEW Vision 2025 infographic

- 'Story' of Delft-FEWS vision 2025 (Delft-FEWS international user days 2019)
- Infographic design with specialized designer
- Follow the story from top to bottom
- To be shared with community





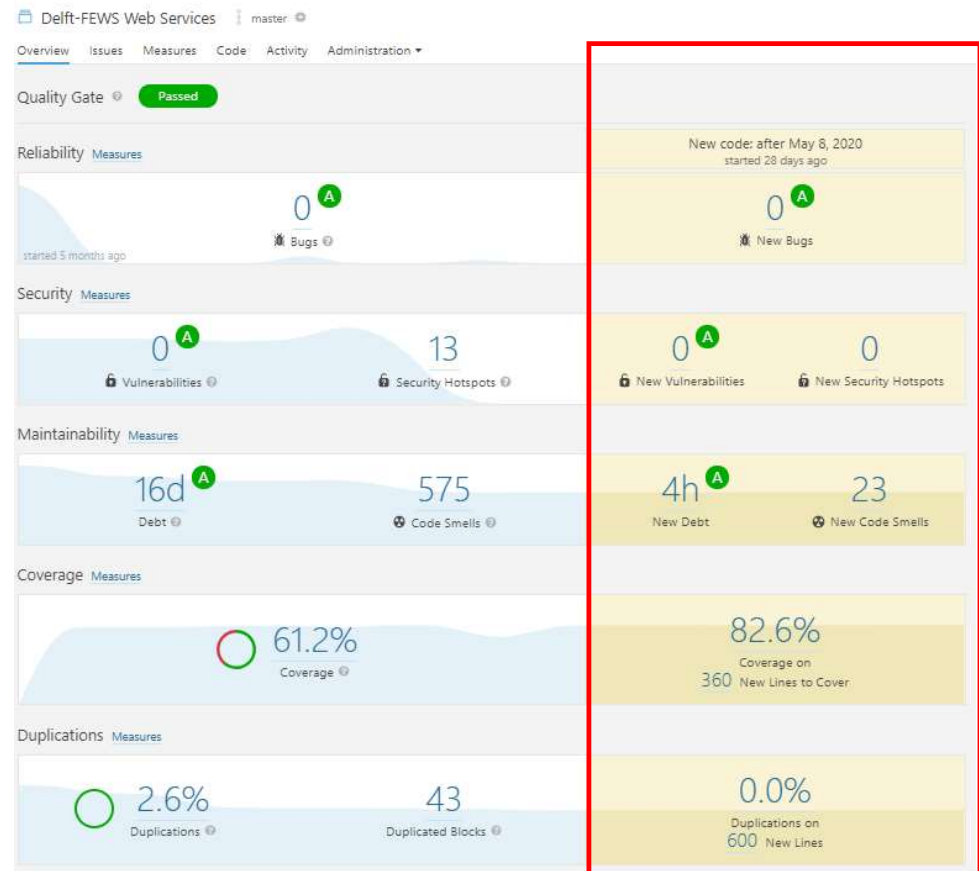


The future

We can never predict the exact shape that the future will take. However, we believe we can adapt to change by developing highly modular and open software in which data handling and easy connections are key. The open and modular software approach of Delft-FEWS makes it possible to deliver solutions tailored to the end-user needs. Those solutions can vary from a simple data viewer to an end-to-end forecasting system. This is the Delft-FEWS ecosystem.

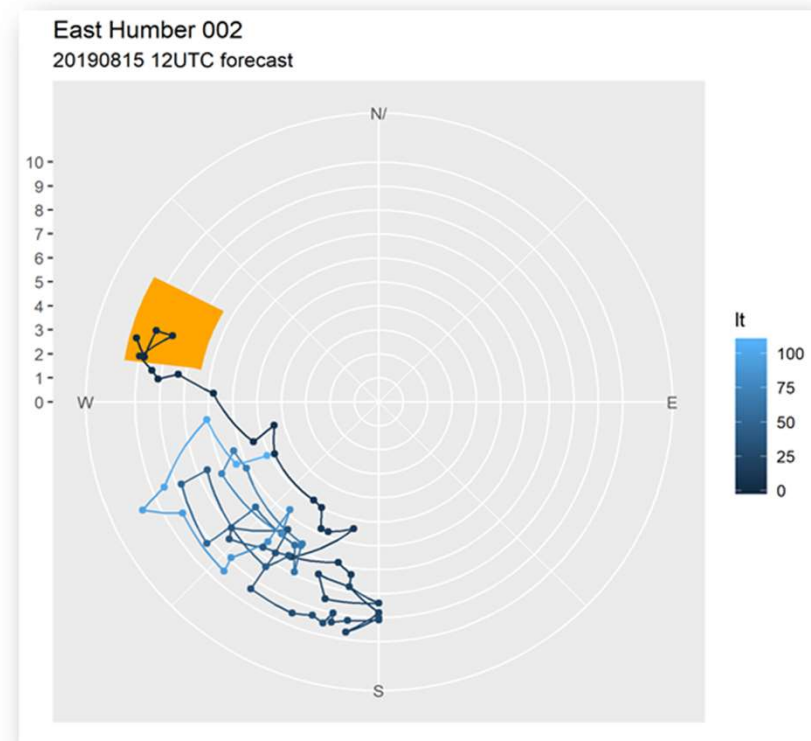
Status – Software Quality Improvements

- Code review process : continuous attention
- Sonarqube iterations 
 - Code ‘splitted’ 12 ‘packages’
 - 2 developers: package ‘owners’
 - Focus on ‘new’ code
 - Maintain A – score
- SYSQA involvement (Test strategy) 
 - Product Risk Analysis (end of June)
 - Test process improvements (July)



New Ideas (on [Portal](#))

- 5 concrete ideas
 - Extend Dashboard to TimeSeries Display and Schematic Status Display (Deltares, BPA)
 - Extend Temporary Import to CSV and NetCDF formats (NL Waterboard Aa & Maas)
 - Open Archive Admin GUI: align style with Delft-FEWS Admin Interface + add API access (Deltares)
 - Share Thresholds Events via the Delft-FEWS webserver (NL Consultants)
 - Polar Wind Plots (NRW)
- DSD-NL: separate session (30.06.2020)



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Delft-FEWS Webinar 2019.02 features (29.04.2020)

- Very positive experience
- 260 participants (50 countries)
- Combination pre-recorded videos and live-broadcasting/interactions
- [Complete recording](#) and pre-recorded videos are available for [review](#)
- [Blog/news item \(portal\)](#)
- Planned for September 2020: Webinar on the 2020.01 Features



Delft-FEWS 2019.02 New Features Webinar
29th of April 2020 – 4 PM CEST
[Click here to join!](#)

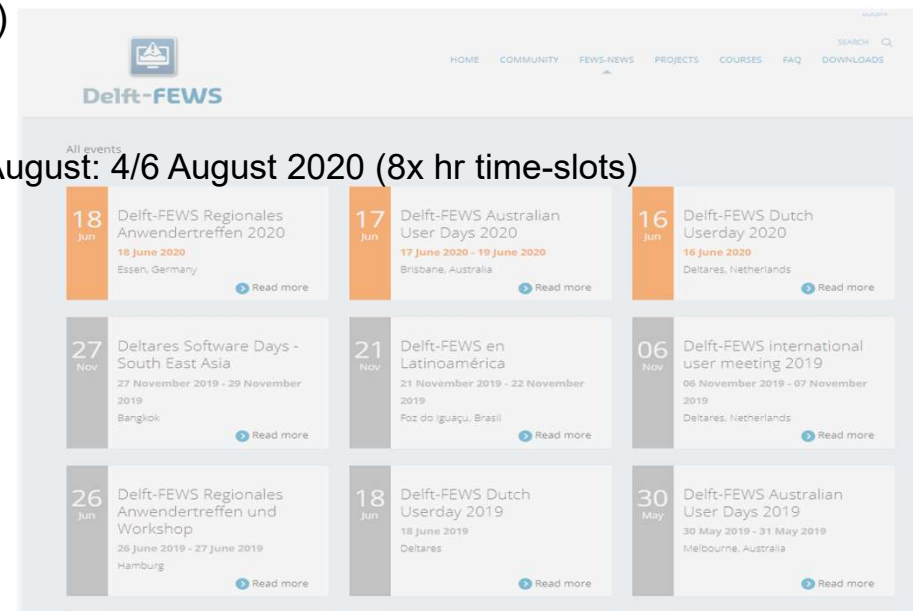


by Dave Casson (Deltares)

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Other Delft-FEWS Community news...

- Development of **Online Training** materials
 - Modular components
 - Hosting via online training / e-learning environment ([a new spring...](#)NL based)
 - First edition planned for group of Canadian participants (end of June/early July), Australian User meeting is next
- Upcoming (and past) **Community Meetings** (remote)
 - Netherlands: (June: 16/23/30, 3x 2hr timeslots)
 - Germany: Anwendertreffen (June: 18)
 - Australian User Meetings (July: 14/16/21/23/28/30 and August: 4/6 August 2020 (8x hr time-slots))
- **International Delft-FEWS User Days**
 - Dates: 4th and 5th of November 2020
 - To be decided...



Community Strategy Board

New Standardized S&M Service Packages:

- Basic
- Full Advanced
- Professional
- Intermediary

Minutes CSB meetings on [Delft-FEWS portal](#)



Questions... 

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Contact

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