enabling delta life

Delft-FEWS Product Management Update

Regionales Delft-FEWS Anwendertreffen 2026, LANUK Duisburg (D)

Delft-FEWS PMT – Feb 2026

Overview

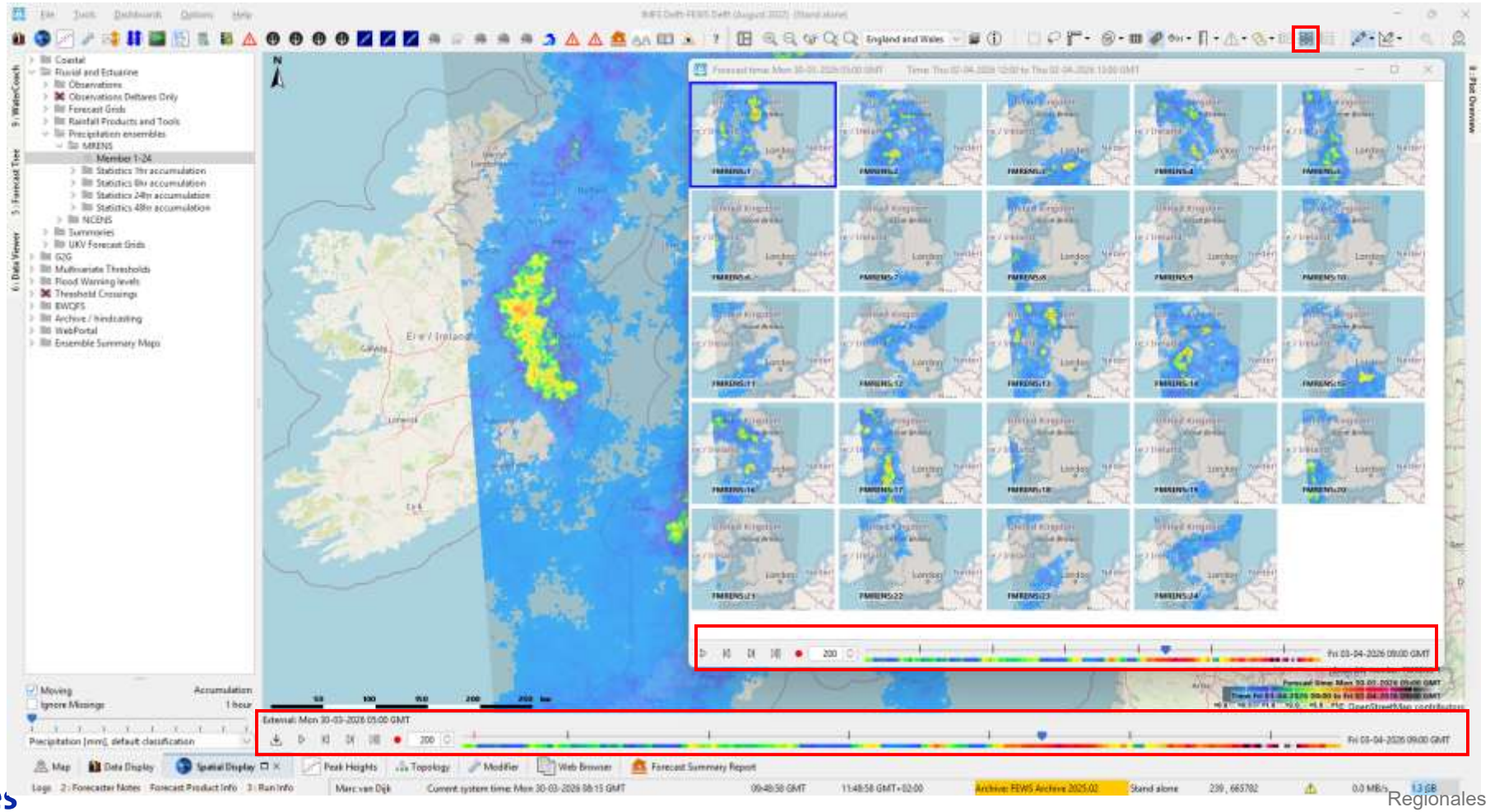
1. Welcome & introduction
2. New in 2026.01
3. Other software improvements & roadmap 2026
4. Community events & outreach
5. Organisational aspects

Delft-FEWS 2026.01 Benchmarks

- **± 100** new features
- **± 80** bugs reported and fixed
- **Replaced** NOAA GFS importer
- Improved **certificate handling**
- **Timeslider** in Spatial Display
  scaling option for **low values**
- **Web OC:** 1.4.0 official release – Hydrotec collaboration
- Moved to **SonarQube Cloud**
- Many updates to the **WebServices**
- First steps in **Open archive** database solution
- Configurable **button visibility** in TimeSeriesDisplay

Improvements to Spatial Display Ensemble Thumbnails

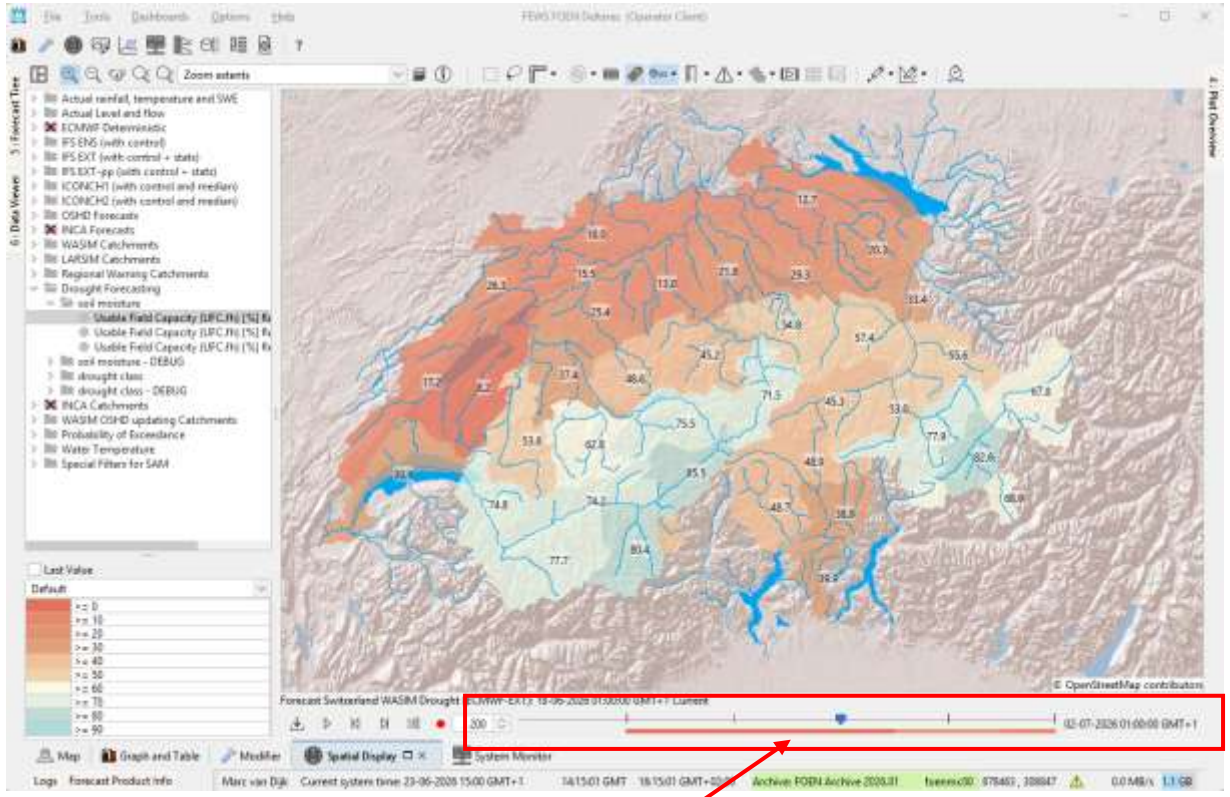
Time slider added to thumbnail display. Selecting ensemble members and navigating through time in thumbnail display and synchronised with Spatial Display



No configuration needed

Improvements to Spatial Display Legends

For some variables, like for drought, the lower values are more severe than the higher values. In this case it would be nice to be able to have the option to configure the time slider bar colour coding to be based on minimum values.



```
<gridPlot id="WASIM_Drought_ECMWF_EXT_UFC_WarnReg_10"
    <timeSeriesSet>
        <moduleInstanceId>WASIM_Statistics_ECMWF_EXT_Swiss
        <valueType>scalar</valueType>
        <parameterId>UFC.fh</parameterId>
        <qualifierId>10</qualifierId>
        <locationSetId>Regional_Warnings_All</locationSetId>
        <timeSeriesType>simulated forecasting</timeSeriesType>
        <timeStep id="week_block"/>
        <readWriteMode>read complete forecast</readWriteMode>
    </timeSeriesSet>
    <timeSliderColor>minimum</timeSliderColor>
</gridPlot>
```

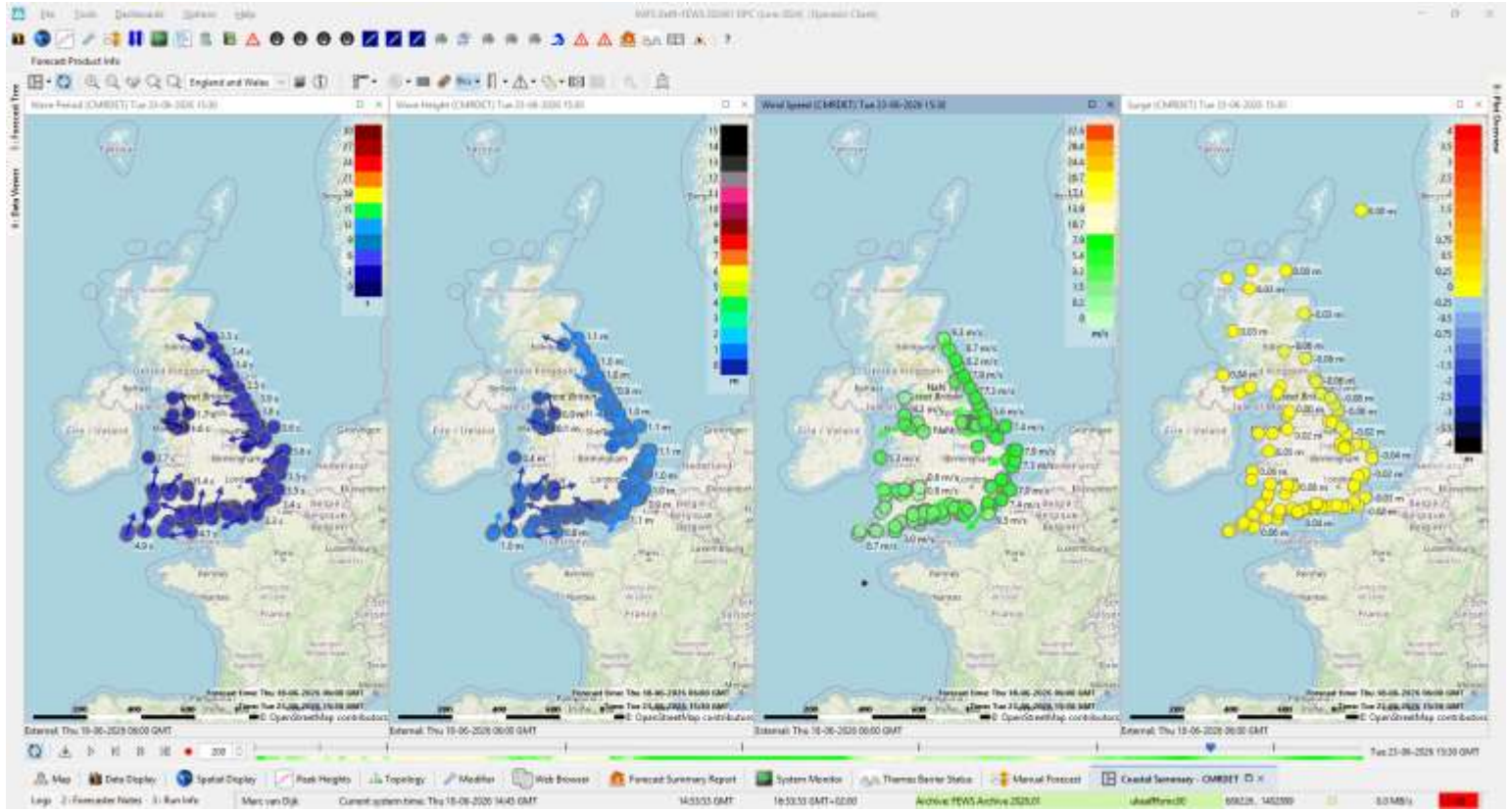
Slider colour are based on the minimum value per timestep instead of maximum value

Improvements to Spatial Display Legends

The bar legends (classbreaks) that can be placed on the map have been improved.

Legends can be placed on the right (default), top, bottom or left of the display

The same bar legends are also used on the Dashboards



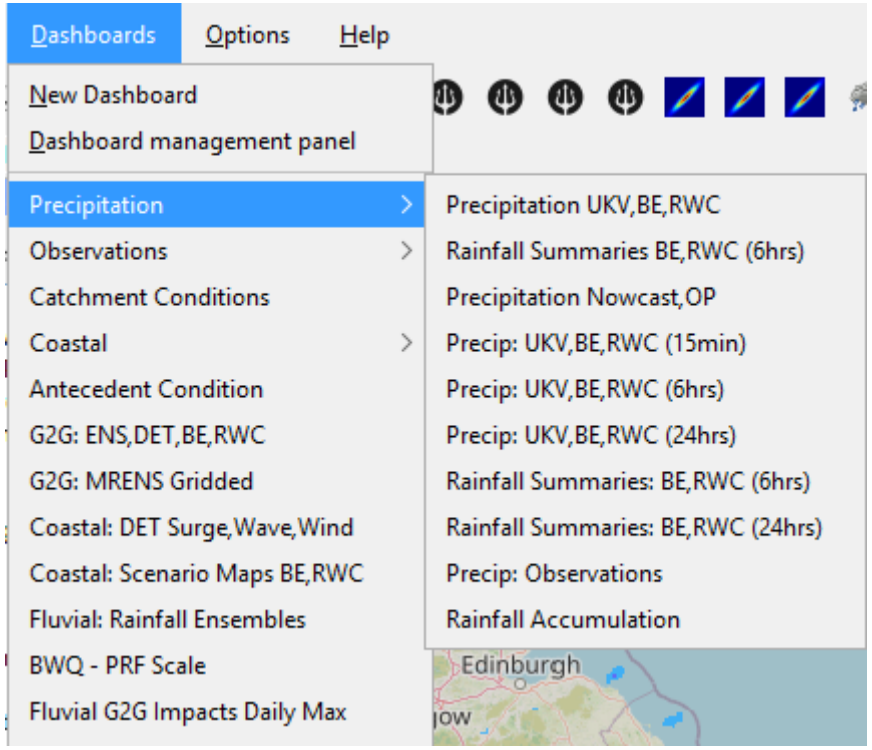
```
<barLegend>
    <position>right</position>
    <width>40</width>
    <length>200</length>
    <labelsInside>false</labelsInside>
    <labelsColor>black</labelsColor>
    <labelsBackgroundColor>white</labelsBackgroundColor>
    <labelsBackgroundOpaquenessPercentage>30</labelsBackgroundOpaquenessPercentage>
    <colorSmoothingEnabled>false</colorSmoothingEnabled>
    <logarithmic>false</logarithmic>
</barLegend>
```

Improvements to Dashboards

Dashboards in the Stand Alone or Operator Client can be organised in folders

The Dashboard.ini file can be edited and dashboards organised in folders.

Folders can be multiple layers deep

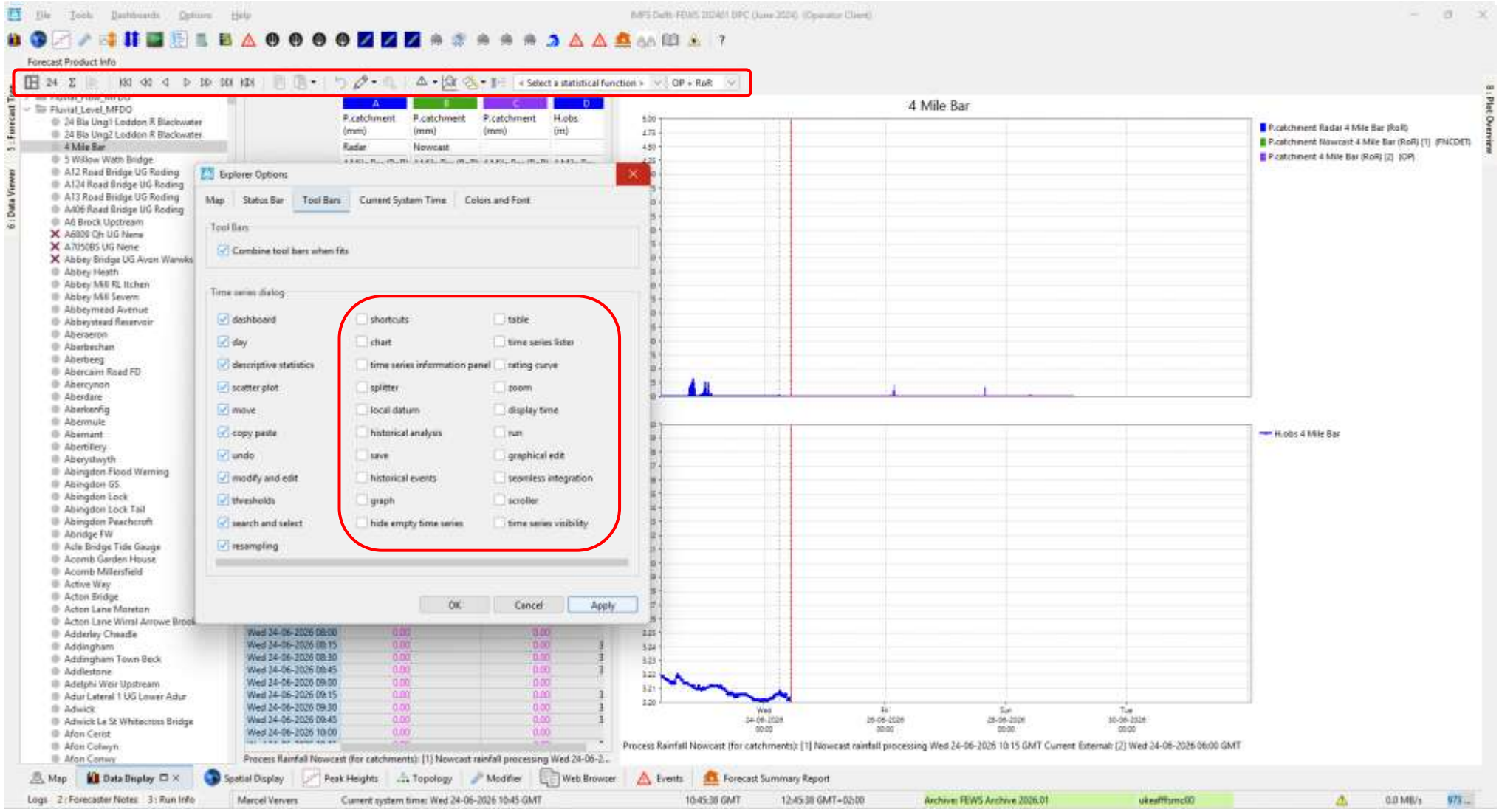


dashboards.ini

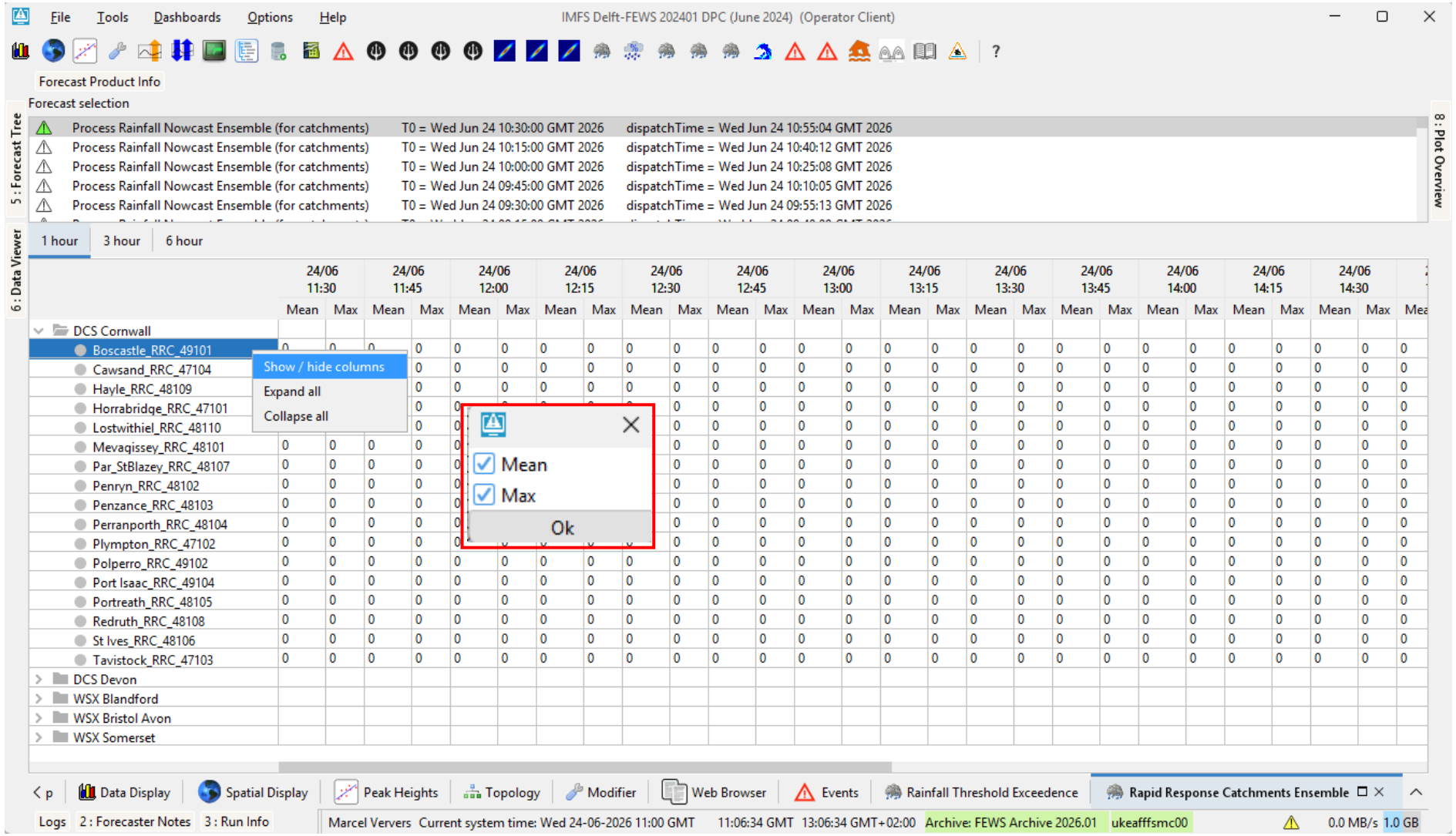
```
1  ;INI File: C:\FEWS_Systemen\FEWS_201802_EA\FFFS_SA\dashboards.ini
2  [Dashboard_1]
3  name=Precipitation/Precipitation UKV,BE,RWC
4  bounds_x=2
5  bounds_y=4
6  bounds_width=1485
7  bounds_height=631
8  synchTimes=true
```

To add a folder, use the "/" character in the name. It is possible to have multiple levels of folders by adding another "/" character in the name "Level1/Level2/DashboardName"

Customizable toolbars



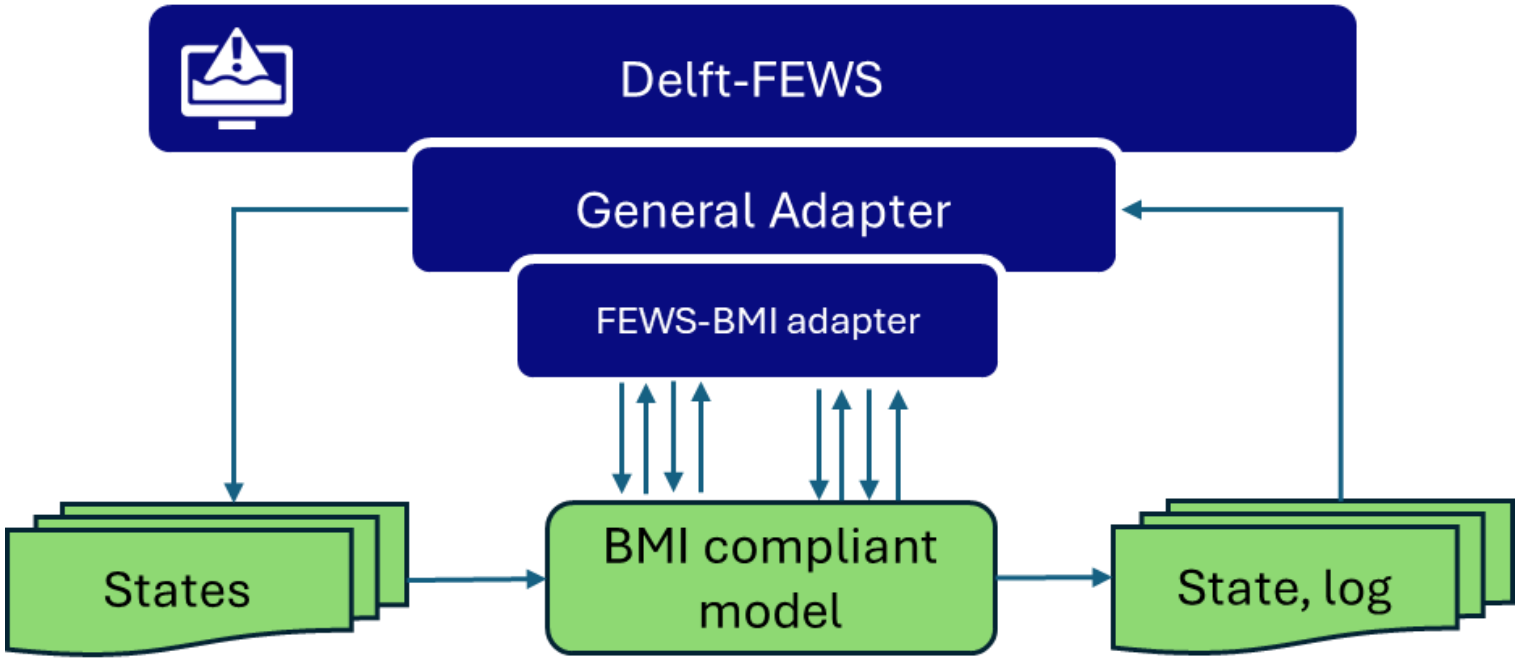
Hide columns in timeSeriesTableDisplay



- Hide columns
- Expand all
- Collapse all

BMI compliancy

- Basic Model Interface is a model interface developed by the Community Surface Dynamics Modeling System
- Consists of standard control and query functions
- Easier to couple with other software packages
- Supported model languages:
  - Java
  - C
  - Fortran
  - Python



Webservices

New endpoints for PI REST webservices:

- Endpoint to get certain statistics from a grid

min, max, sum, average

- Add taskRunId to following endpoints:

get-/timeseries/grid/maxvalues

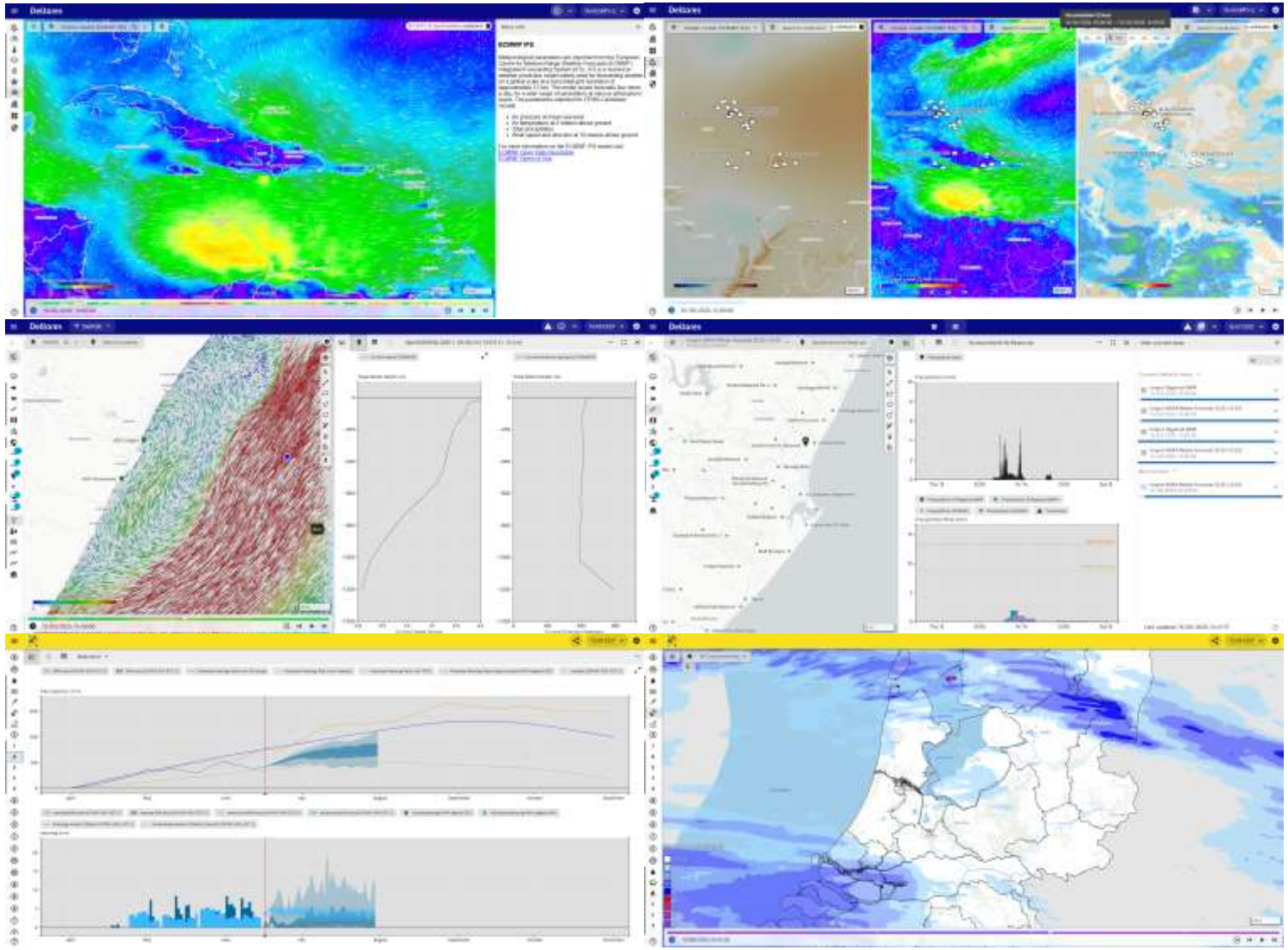
get-/timeseries/grid/actions

- Endpoint archive/products has been extended with search for products within a certain creation time range
- Endpoint get whatifscenarios is extended with the property name

- Basic Authentication based on users and access keys from FEWS Database

Web-OC release 1.4.0

- Side panel
  - Task overview
  - Import status
  - Non-current data
  - Run Tasks
  - More info
- Thresholds
- Logging
- Dashboards
- Static layers
- Data analysis & aggregation
- Reports



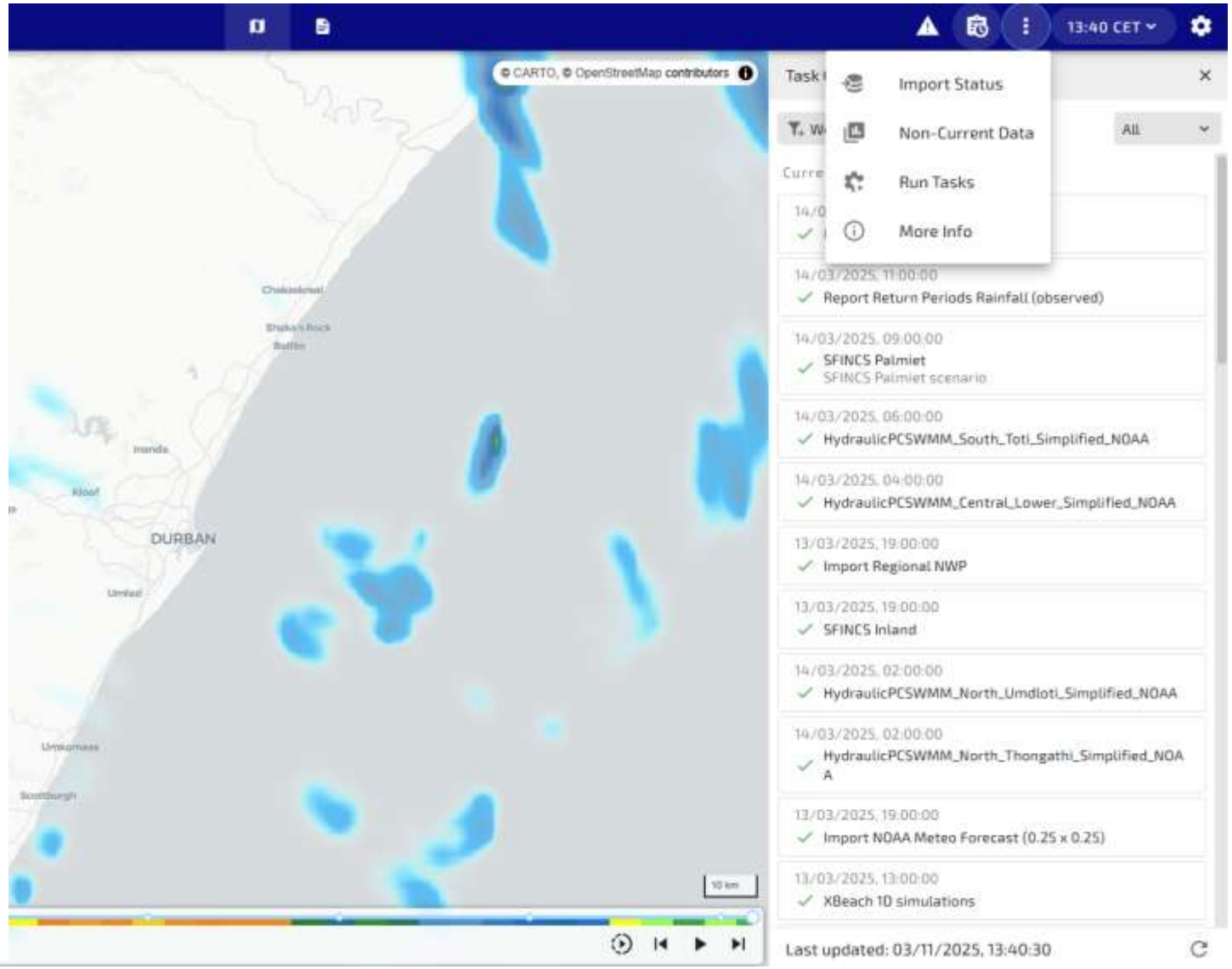
Web-OC Side Panel

Side panel

- Task overview
- Import status
- Non-current data
- Run Tasks
- More info

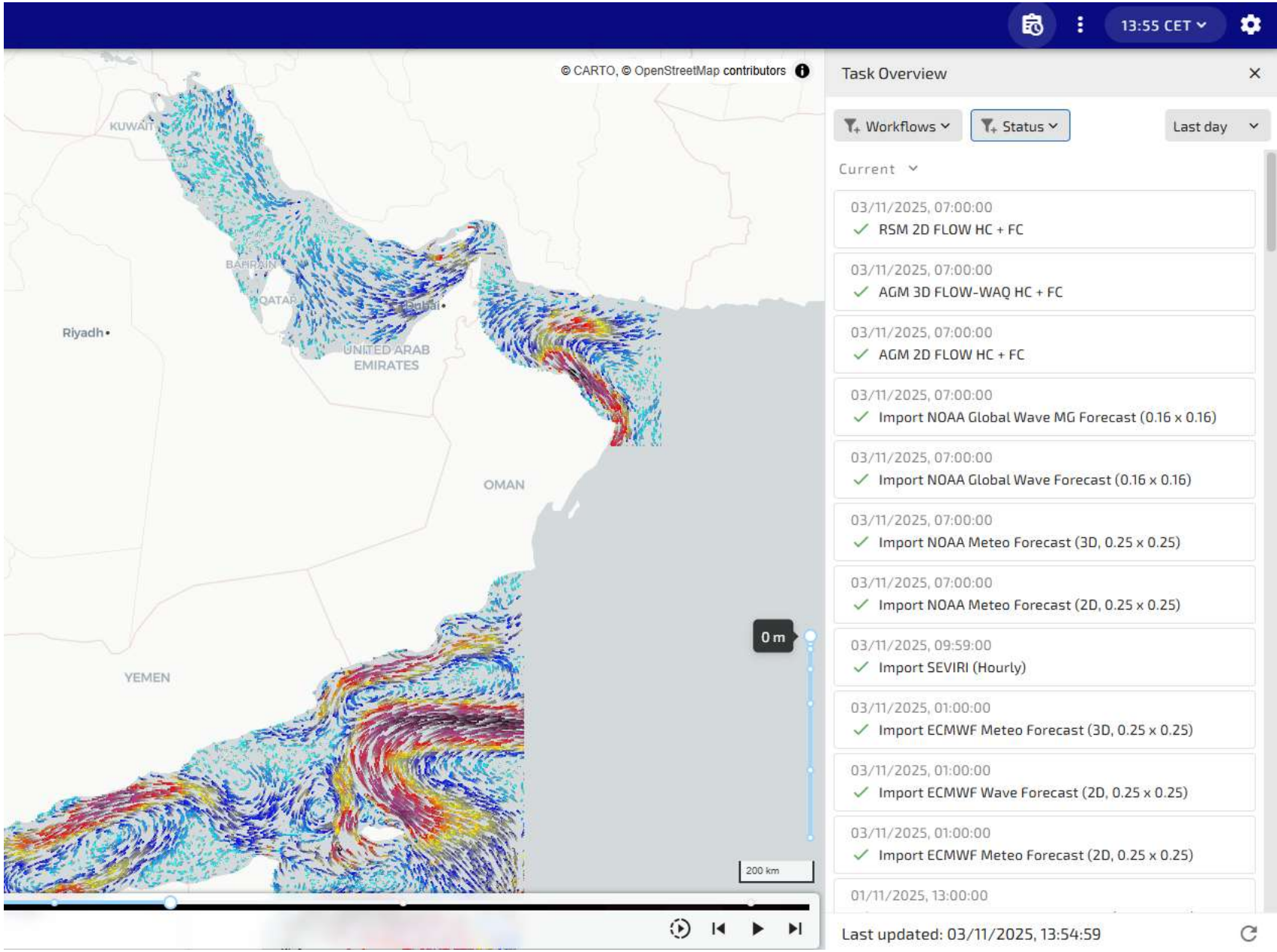
- Configured in WebOperatorClient.xml
- Optional configuration of permissions

- Documentation: https://deltares.github.io/fews-web-oc/configuration/#web-oc-side-panel

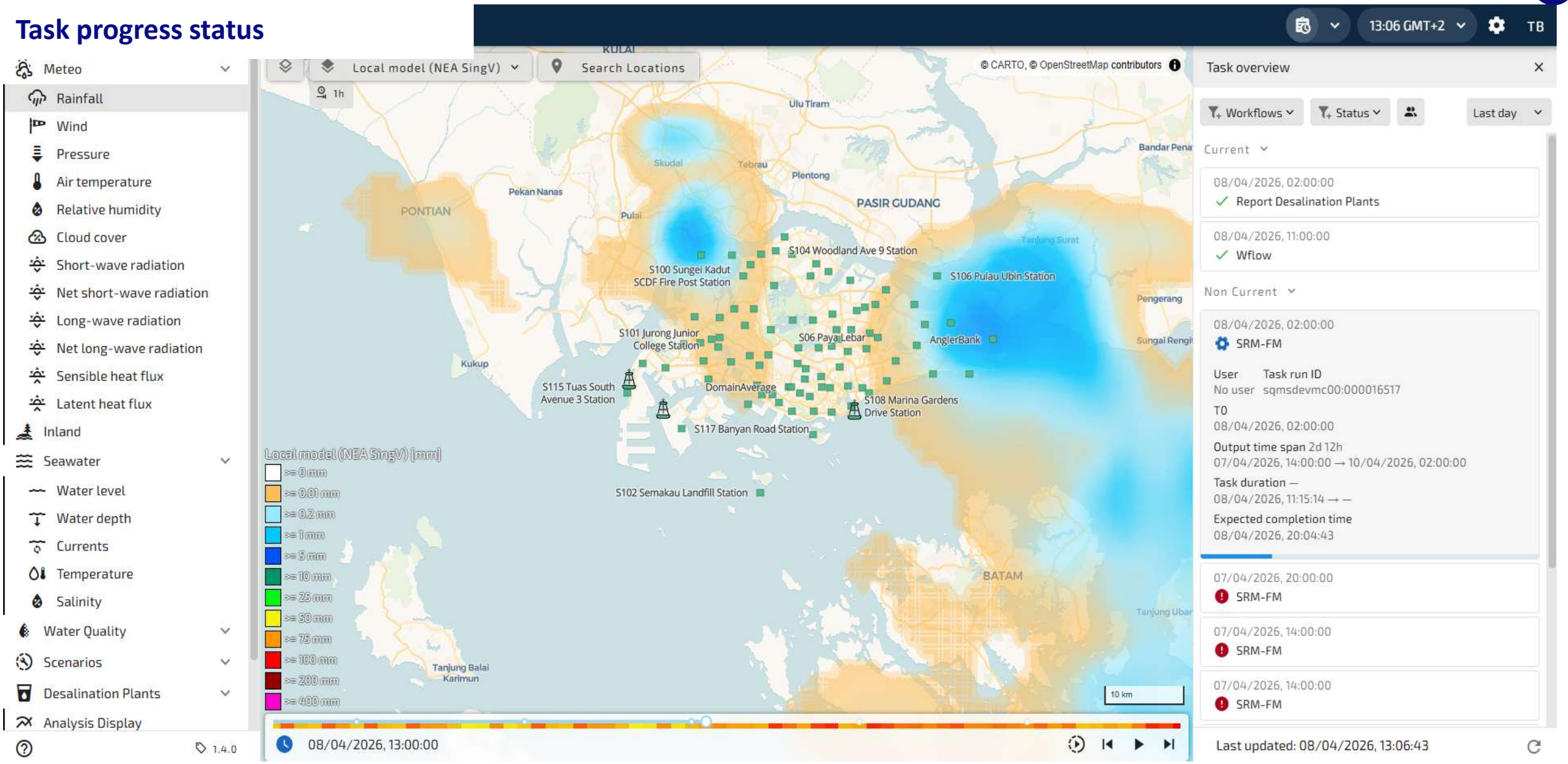


Task overview

- Overview of system tasks
- Filter by workflow & status
- Expected completion time when <updateModuleRunTimesOnCompletion> = true in ModuleInstanceDescriptors.xml

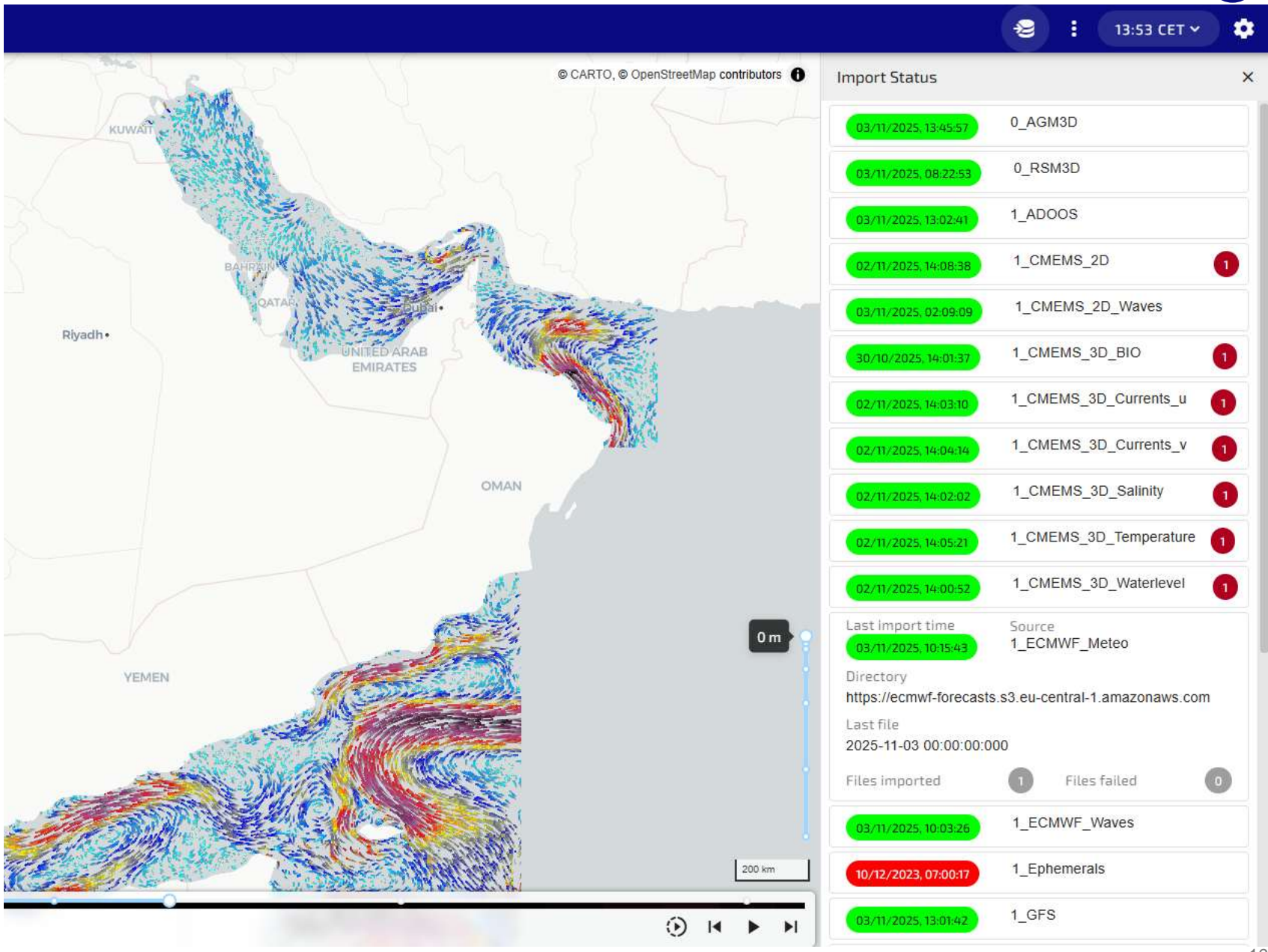


Task progress status



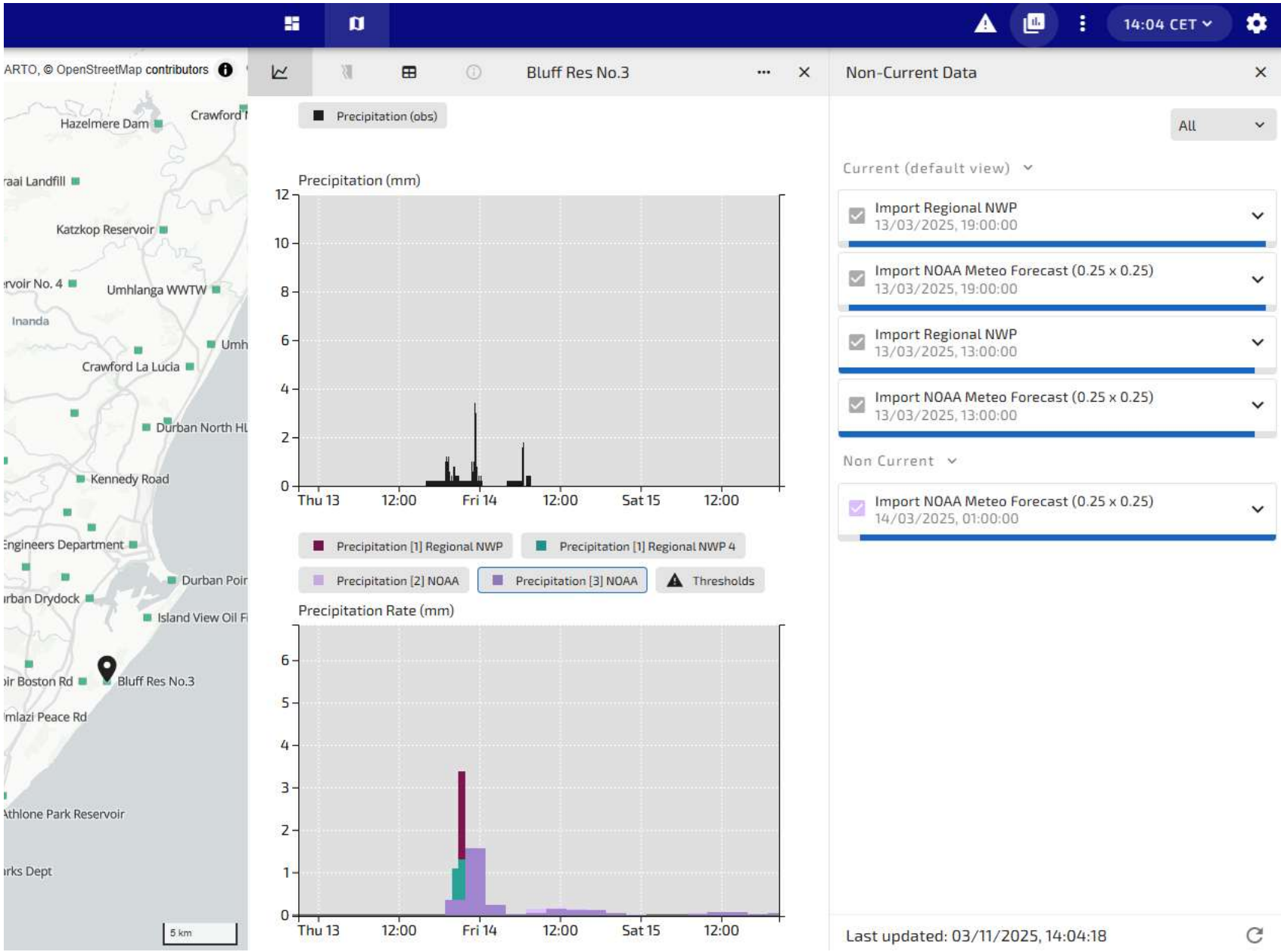
Import status

- Similar to Desktop OC and Admin Interface
- No extra config required

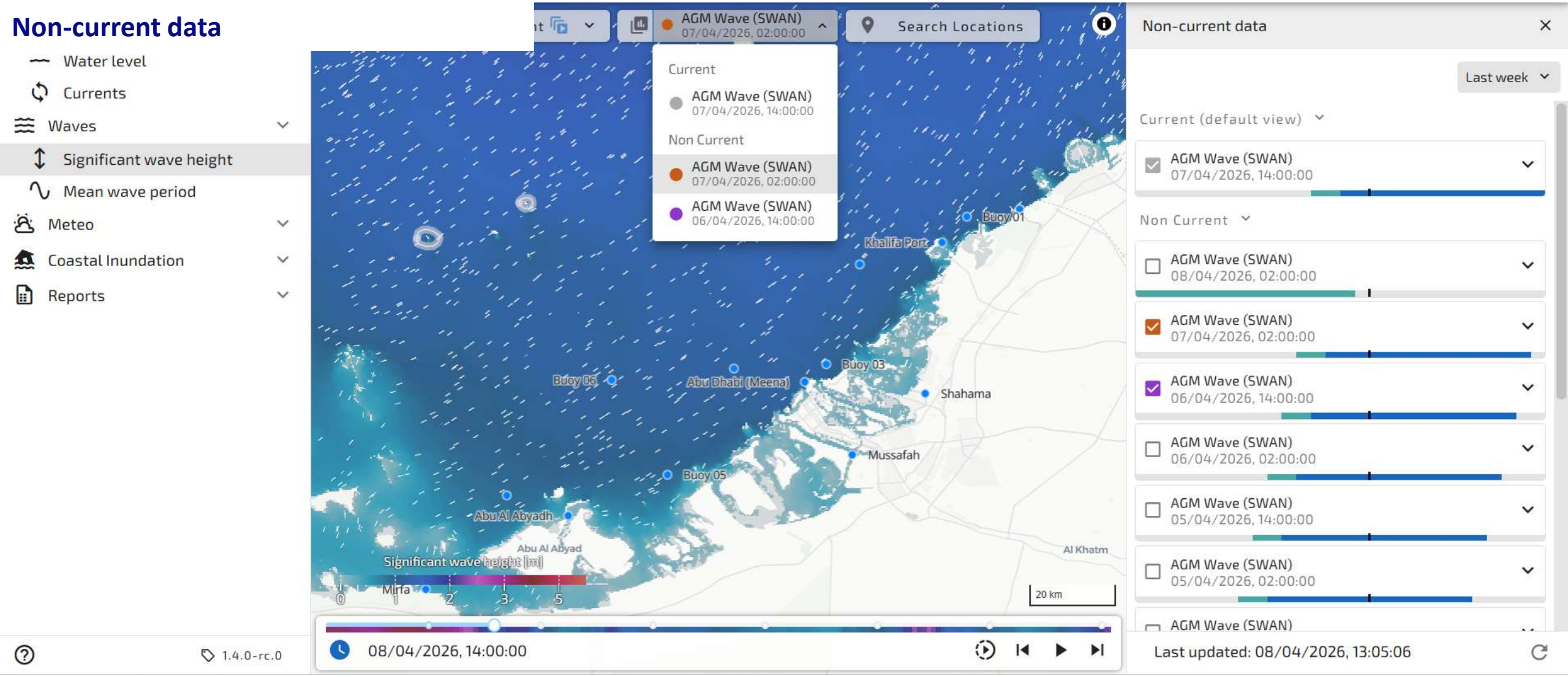


Non-current data

- By default current forecast data will be shown in Web OC
- Add non-current forecast data to charts
- Non-current spatial data



Non-current data



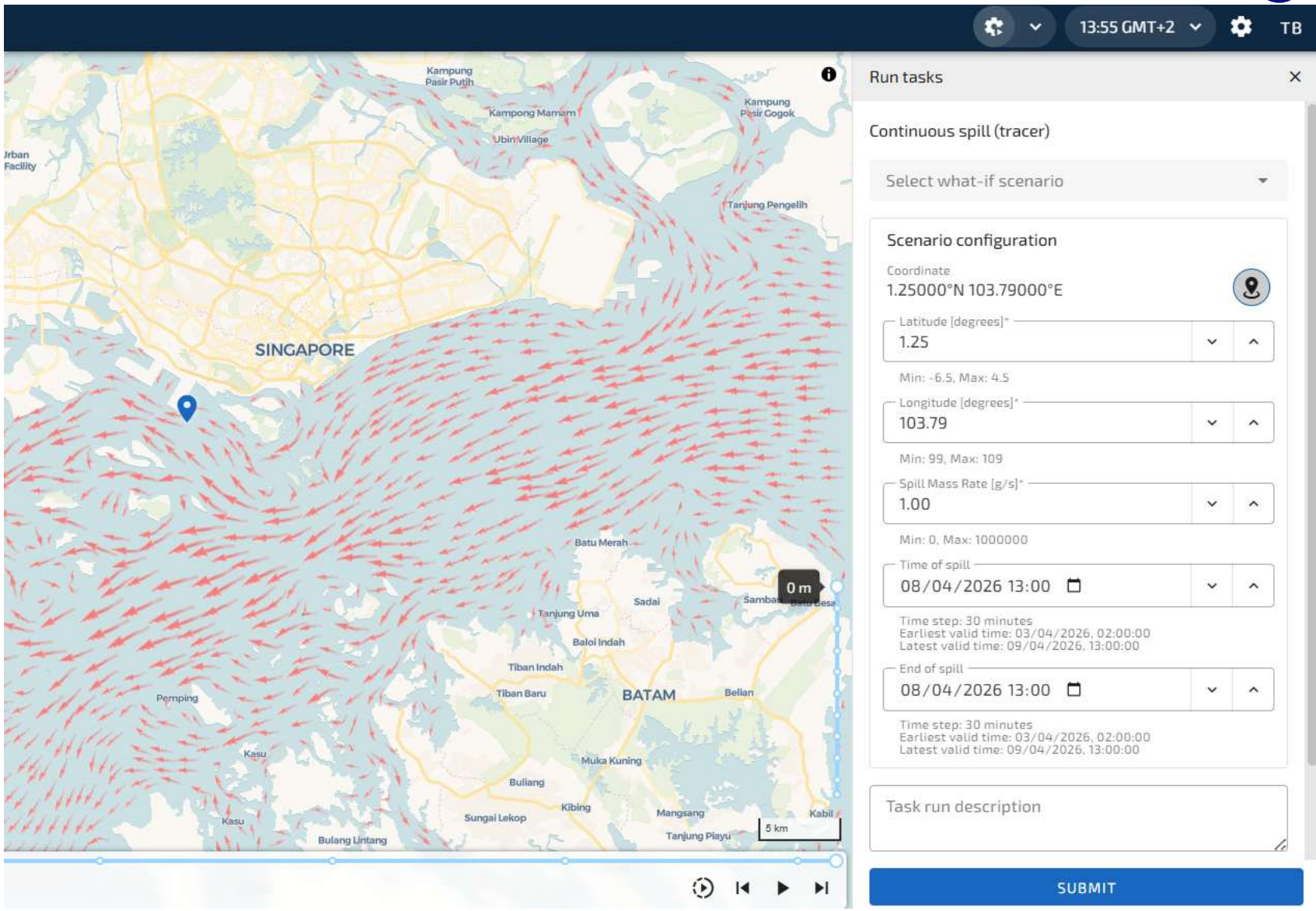
Run tasks

- Submit a task to the Delft-FEWS back-end by configuring a <workflowId> or <secondaryWorkflowId> in Topology.xml.
- At the moment only workFlows with a whatIfTemplateId can be submitted.
- You have to explicitly allow tasks to run from Web OC by configuring <runTask enabled="true"/> in WebOperatorClient.xml

- Visualize results using “non-current data panel”

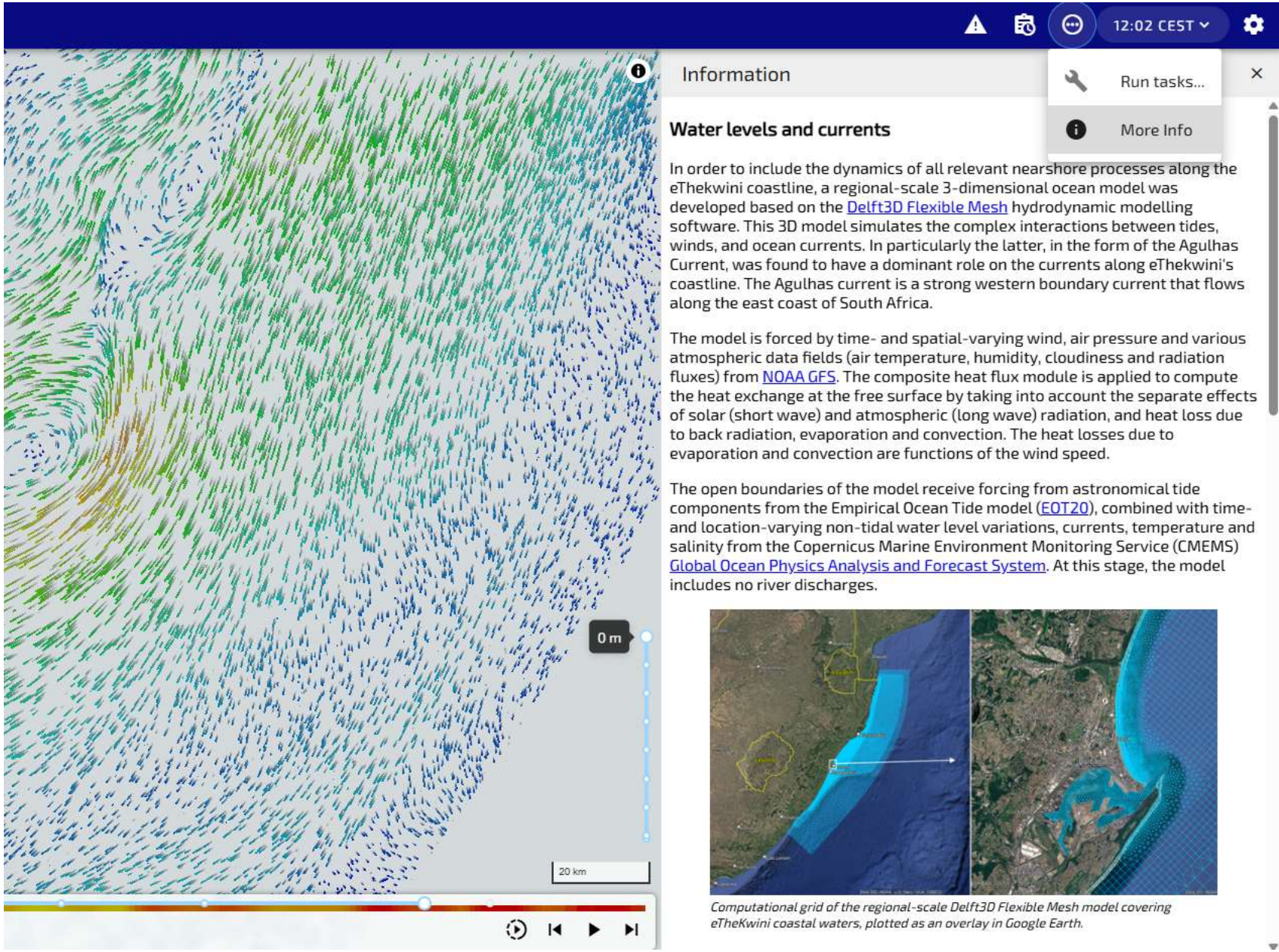
- Approve runs IN PROGRESS

- Documentation: https://deltares.github.io/fews-web-oc/configuration/#web-oc-navigation-using-topology

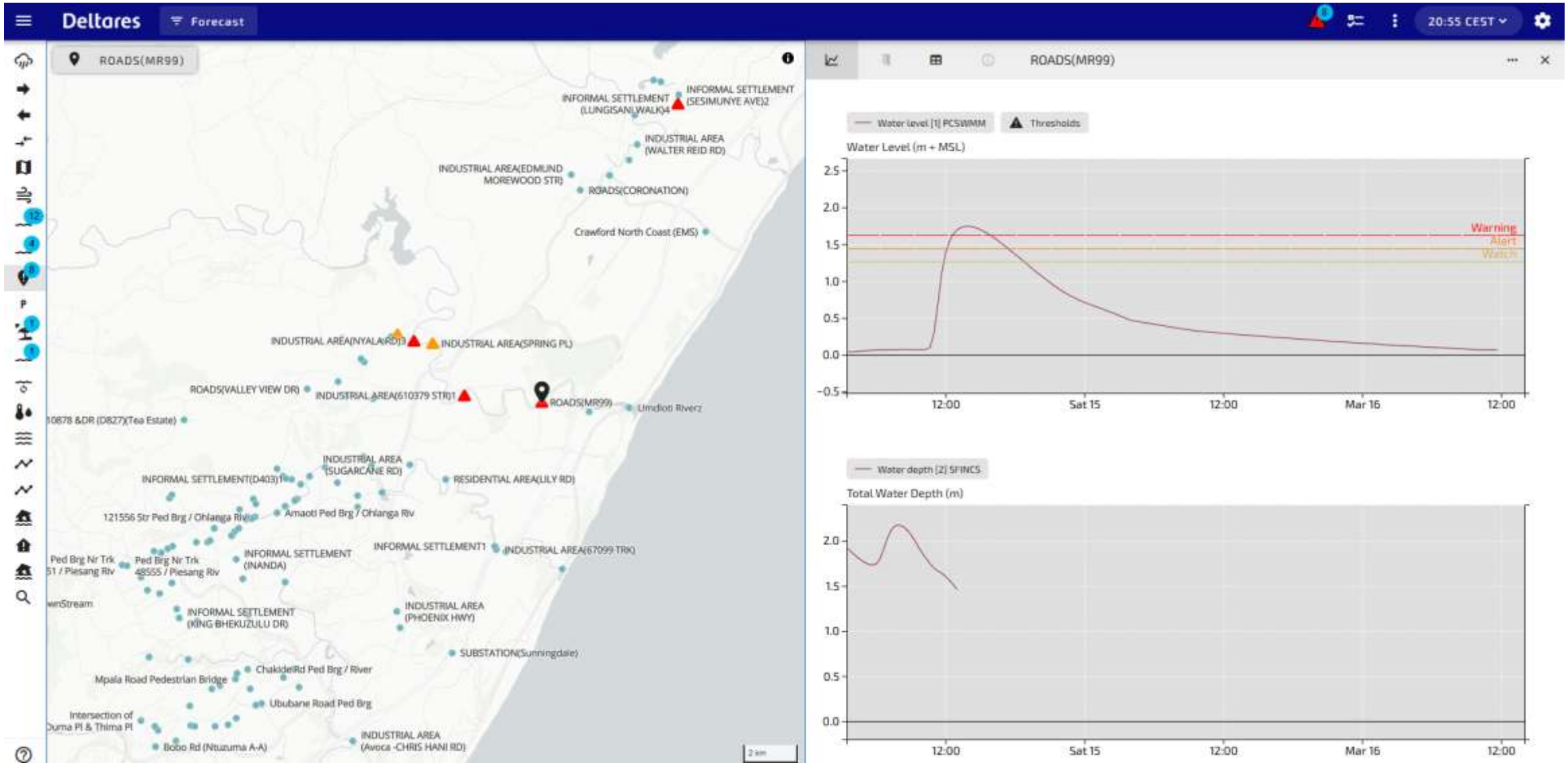


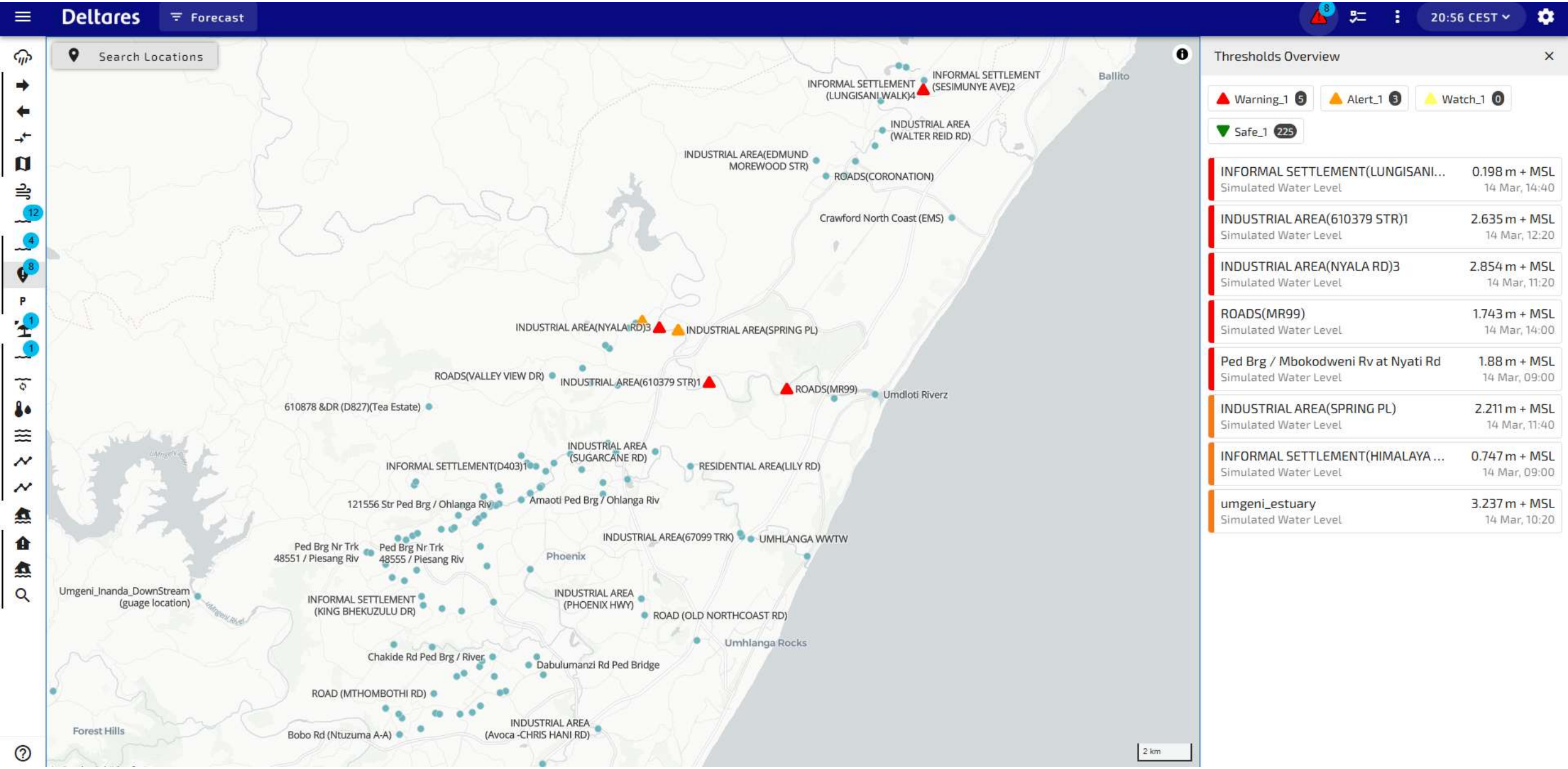
Help / background information

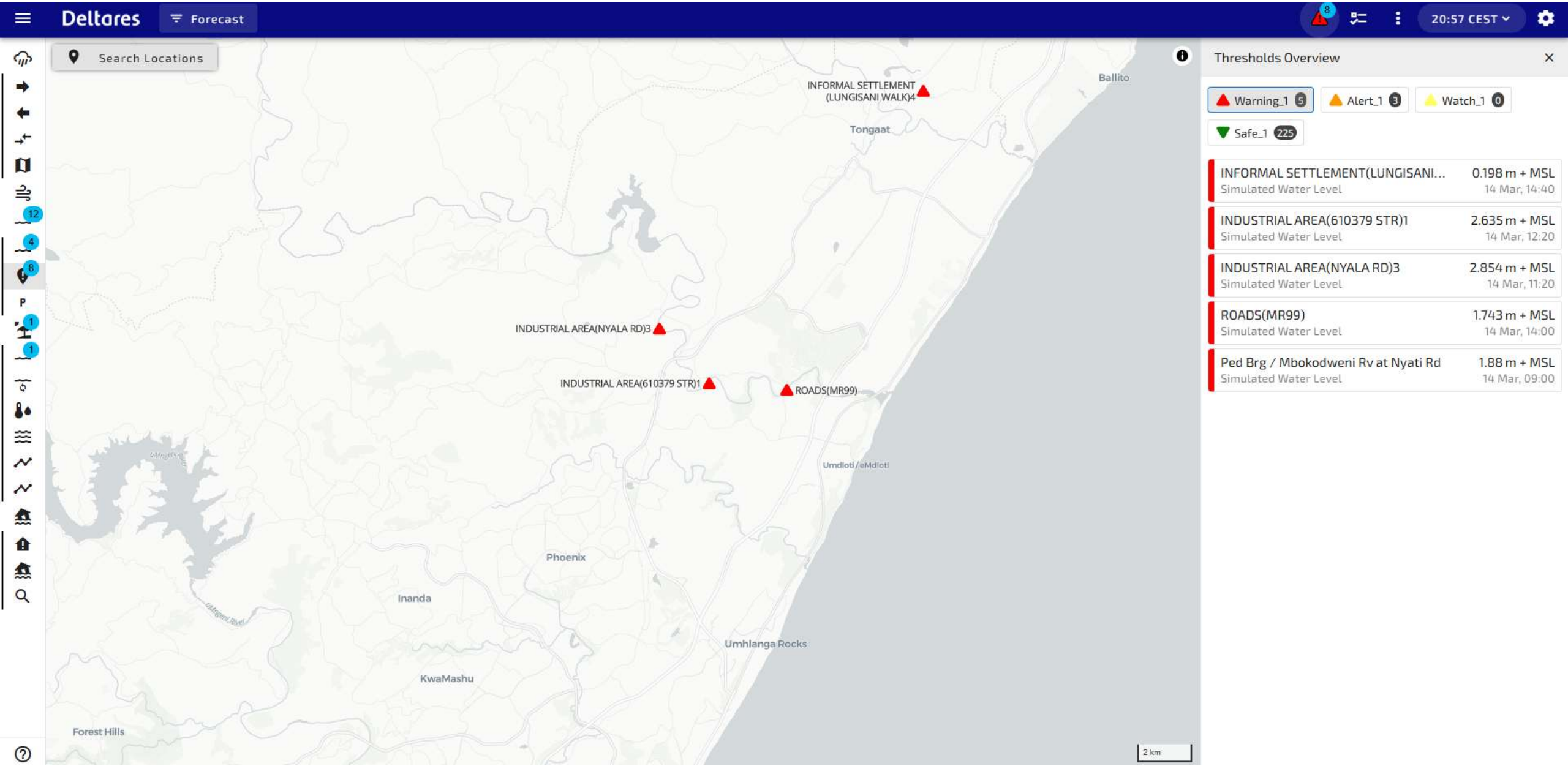
- Node specific information panel



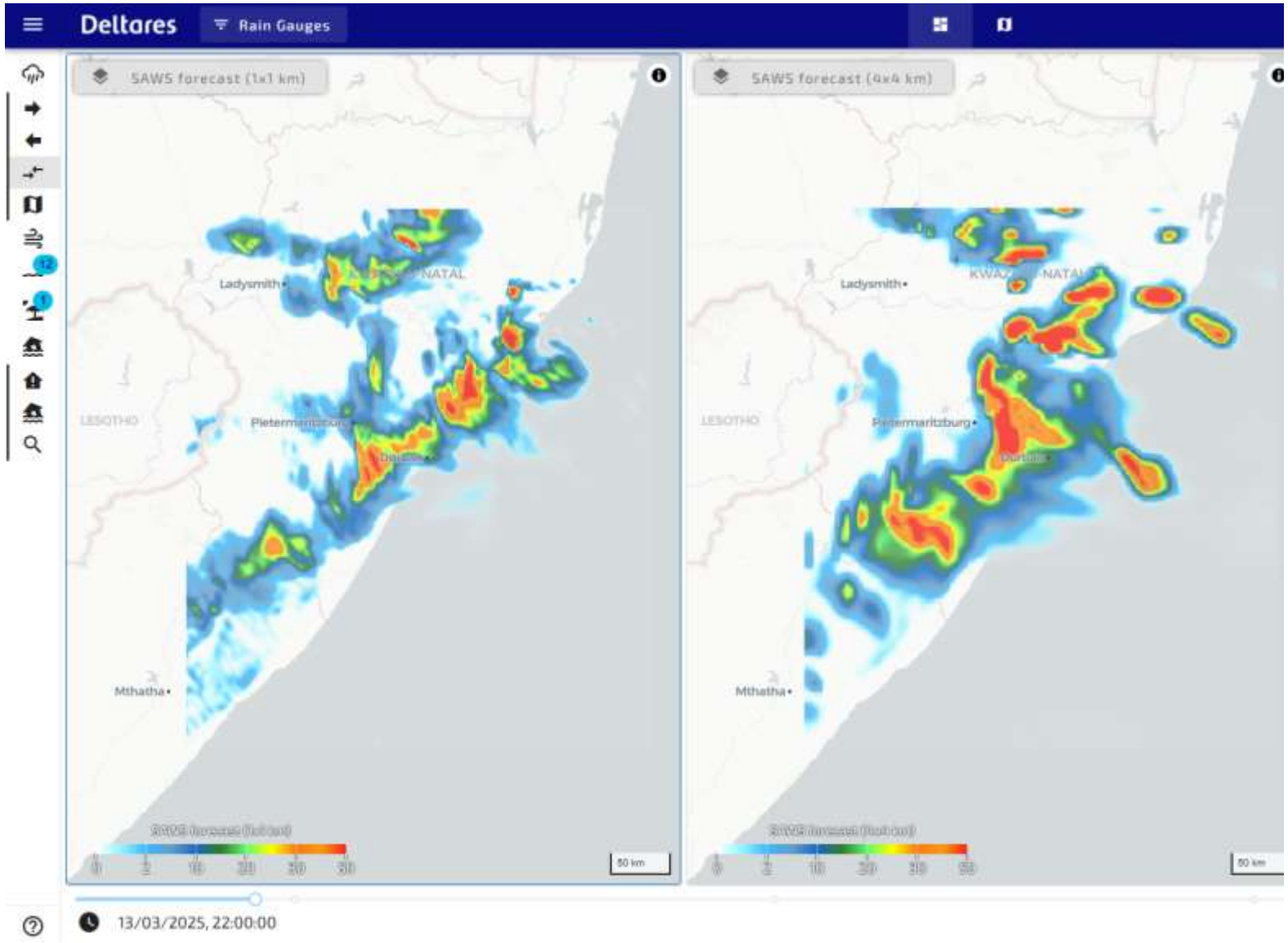
Web-OC - Thresholds




Deltares
Forecast
20:56 CEST
Search Locations
Thresholds Overview
Warning_1 5
Alert_1 3
Watch_1 0
Safe_1 225
INFORMAL SETTLEMENT(LUNGISANI... 0.198 m + MSL
Simulated Water Level 14 Mar, 14:40
INDUSTRIAL AREA(610379 STR)1 2.635 m + MSL
Simulated Water Level 14 Mar, 12:20
INDUSTRIAL AREA(NYALA RD)3 2.854 m + MSL
Simulated Water Level 14 Mar, 11:20
ROADS(MR99) 1.743 m + MSL
Simulated Water Level 14 Mar, 14:00
Ped Brg / Mbokodweni Rv at Nyati Rd 1.88 m + MSL
Simulated Water Level 14 Mar, 09:00
INDUSTRIAL AREA(SPRING PL) 2.211 m + MSL
Simulated Water Level 14 Mar, 11:40
INFORMAL SETTLEMENT(HIMALAYA ... 0.747 m + MSL
Simulated Water Level 14 Mar, 09:00
umgeni_estuary 3.237 m + MSL
Simulated Water Level 14 Mar, 10:20
INFORMAL SETTLEMENT (LUNGISANI WALK)4
INFORMAL SETTLEMENT (SESIMUNYE AVE)2
Ballito
INDUSTRIAL AREA (WALTER REID RD)
INDUSTRIAL AREA(EDMUND MOREWOOD STR)
ROADS(CORONATION)
Crawford North Coast (EMS)
INDUSTRIAL AREA(NYALA RD)3
INDUSTRIAL AREA(SPRING PL)
ROADS(VALLEY VIEW DR)
INDUSTRIAL AREA(610379 STR)1
ROADS(MR99)
Umdloti Riverz
610878 &DR (D827)(Tea Estate)
INDUSTRIAL AREA (SUGARCANE RD)
INFORMAL SETTLEMENT(D403)1
RESIDENTIAL AREA(LILY RD)
121556 Str Ped Brg / Ohlanga Riv
Amaoti Ped Brg / Ohlanga Riv
INDUSTRIAL AREA(67099 TRK)
UMHLANGA WWTW
Ped Brg Nr Trk 48551 / Piesang Riv
Ped Brg Nr Trk 48555 / Piesang Riv
Phoenix
Umgeni_Inanda_DownStream (guage location)
INFORMAL SETTLEMENT (KING BHEKUZULU DR)
INDUSTRIAL AREA (PHOENIX HWY)
ROAD (OLD NORTHCOAST RD)
Umhlanga Rocks
Chakide Rd Ped Brg / River
Dabulumanzi Rd Ped Bridge
ROAD (MTHOMBOTHI RD)
Forest Hills
Bobo Rd (Ntuzuma A-A)
INDUSTRIAL AREA (Avoca -CHRIS HANI RD)
2 km


Deltares
Forecast
20:57 CEST
Search Locations
Thresholds Overview
Warning_1 5
Alert_1 3
Watch_1 0
Safe_1 225
INFORMAL SETTLEMENT(LUNGISANI... 0.198 m + MSL
Simulated Water Level 14 Mar, 14:40
INDUSTRIAL AREA(610379 STR)1 2.635 m + MSL
Simulated Water Level 14 Mar, 12:20
INDUSTRIAL AREA(NYALA RD)3 2.854 m + MSL
Simulated Water Level 14 Mar, 11:20
ROADS(MR99) 1.743 m + MSL
Simulated Water Level 14 Mar, 14:00
Ped Brg / Mbokodweni Rv at Nyati Rd 1.88 m + MSL
Simulated Water Level 14 Mar, 09:00
INFORMAL SETTLEMENT (LUNGISANI WALK)4
INDUSTRIAL AREA(NYALA RD)3
INDUSTRIAL AREA(610379 STR)1
ROADS(MR99)
Ballito
Tongaat
Umdloti / eMdloti
Phoenix
Inanda
Umhlanga Rocks
KwaMashu
Forest Hills
2 km

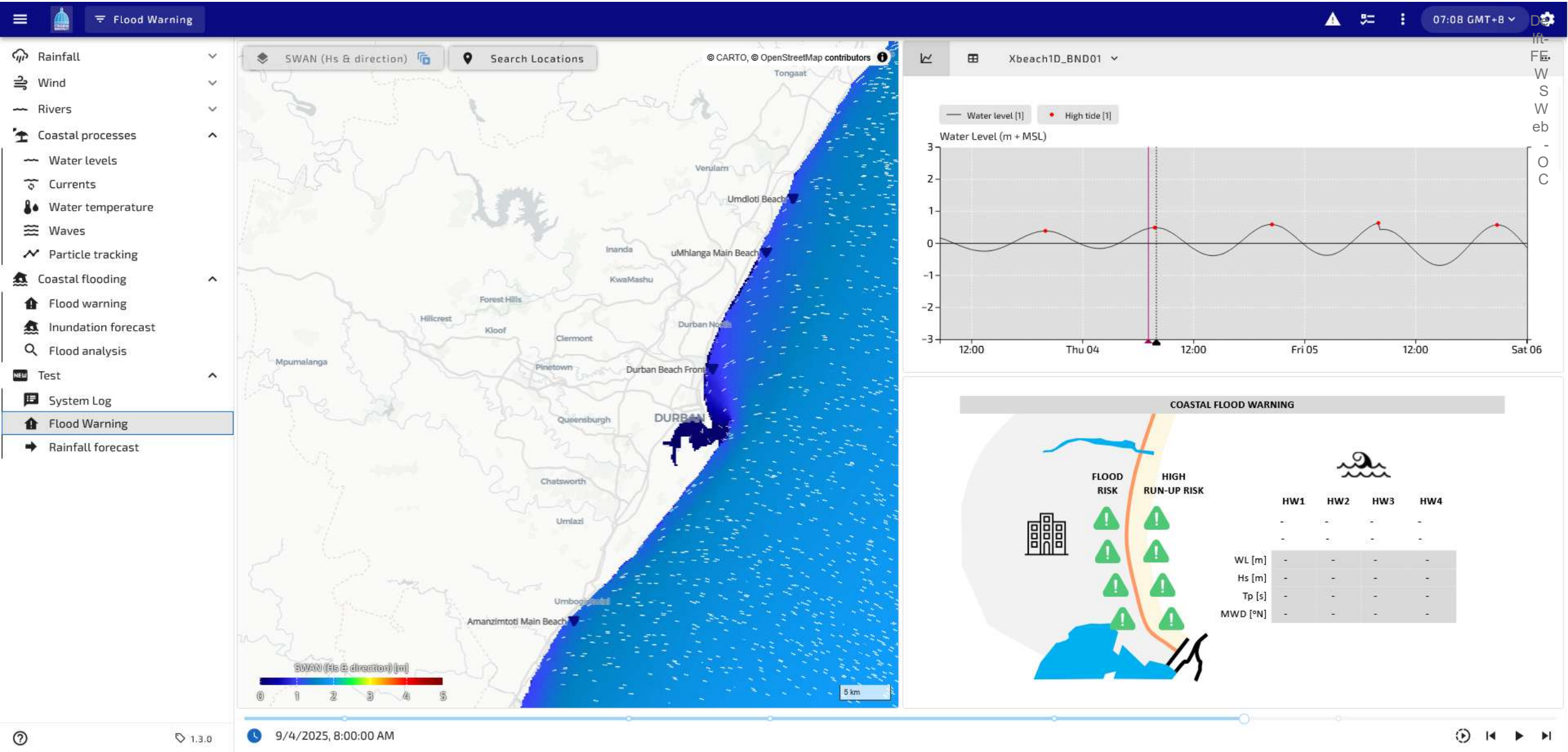
Web-OC Dashboards

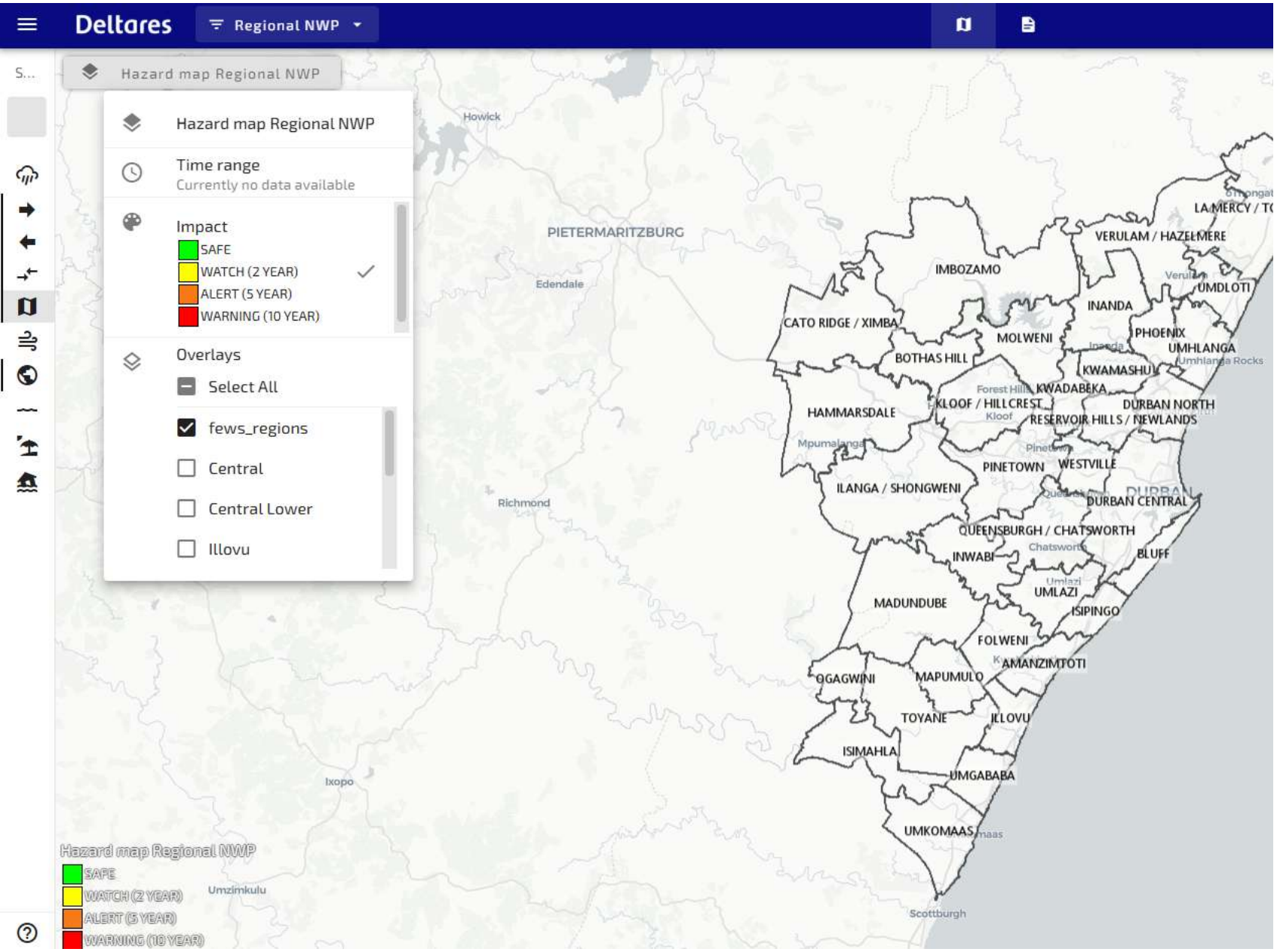


WebOC Dashboards

- The functionality of Web OC essentially consists of a number of components that can be linked to topology nodes.
- Within a Web OC dashboard, several of these components can be displayed together on a single screen.

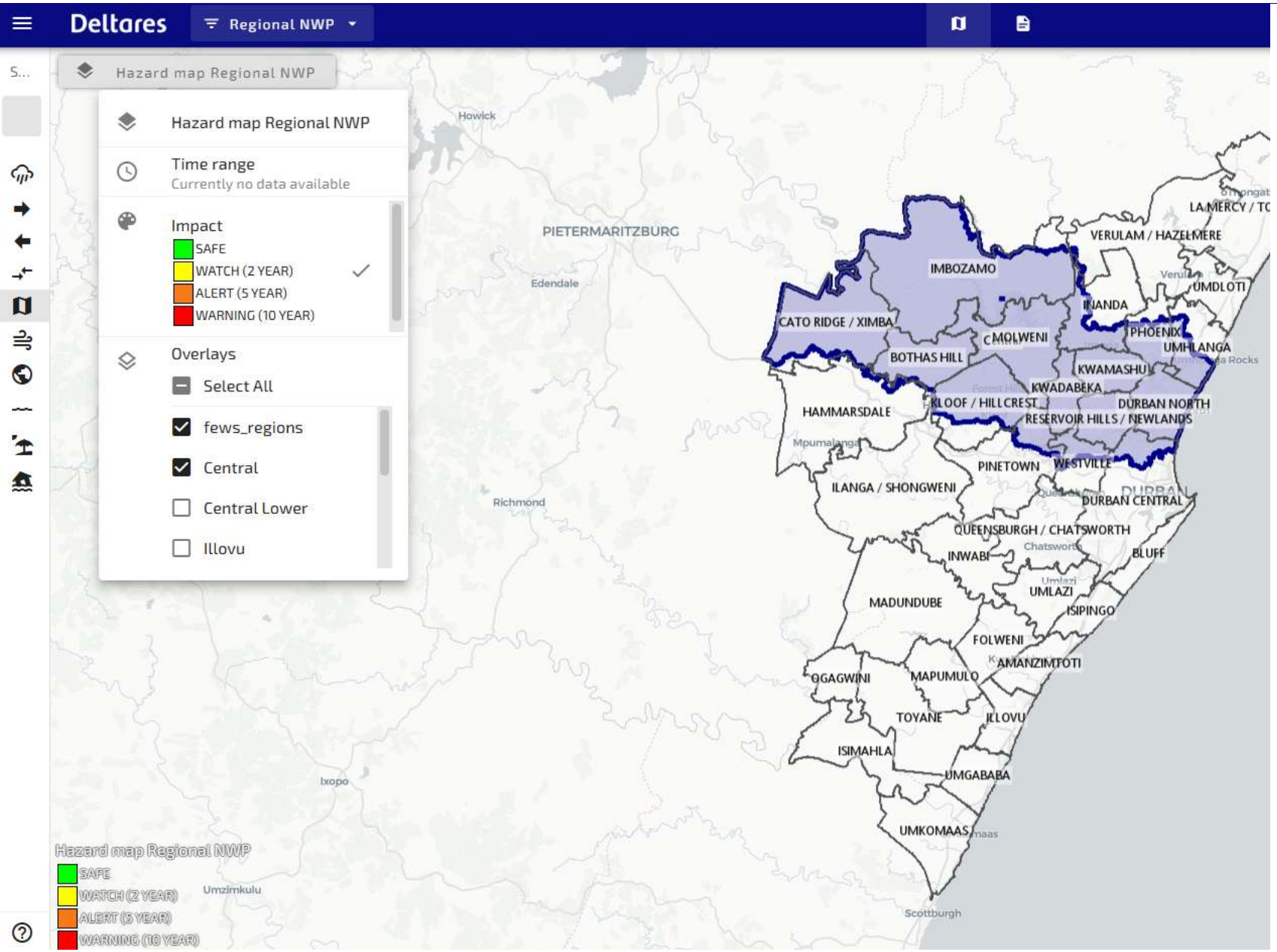
- Documentation: https://publicwiki.deltares.nl/spaces/FEWSDOC/pages/356779153/38+Web+OC+Dashboards


Flood Warning
07:08 GMT+8
Rainfall
Wind
Rivers
Coastal processes
Water levels
Currents
Water temperature
Waves
Particle tracking
Coastal flooding
Flood warning
Inundation forecast
Flood analysis
Test
System Log
Flood Warning
Rainfall forecast
1.3.0
SWAN (Hs & direction)
Search Locations
© CARTO, © OpenStreetMap contributors
Tongaat
Verulam
Umdloti Beach
Inanda
uMhlanga Main Beach
KwaMashu
Forest Hills
Hillcrest
Kloof
Clermont
Durban North
Mpumalanga
Pinetown
Durban Beach Front
Queensburgh
DURBAN
Chatsworth
Umlazi
Amanzimtoti Main Beach
SWAN (Hs & direction) [m]
0 1 2 3 4 5
5 km
Xbeach1D_BND01
Water level [1]
High tide [1]
Water Level (m + MSL)
3 2 1 0 -1 -2 -3
12:00 Thu 04 12:00 Fri 05 12:00 Sat 06
COASTAL FLOOD WARNING
FLOOD RISK
HIGH RUN-UP RISK
HW1 HW2 HW3 HW4
WL [m]
Hs [m]
Tp [s]
MWD [°N]
9/4/2025, 8:00:00 AM



Static WMS overlays

- Static layers configured in Explorer.xml can be displayed as an overlay on the map.
- Styling is configured in Explorer.xml.
- Which layers are visible per topology node is configured in WebOCComponentSettings.xml.
- At the moment, overlays are shown above the grid data layer. In the future, we will provide the option to choose whether a static layer is displayed below or above the data.



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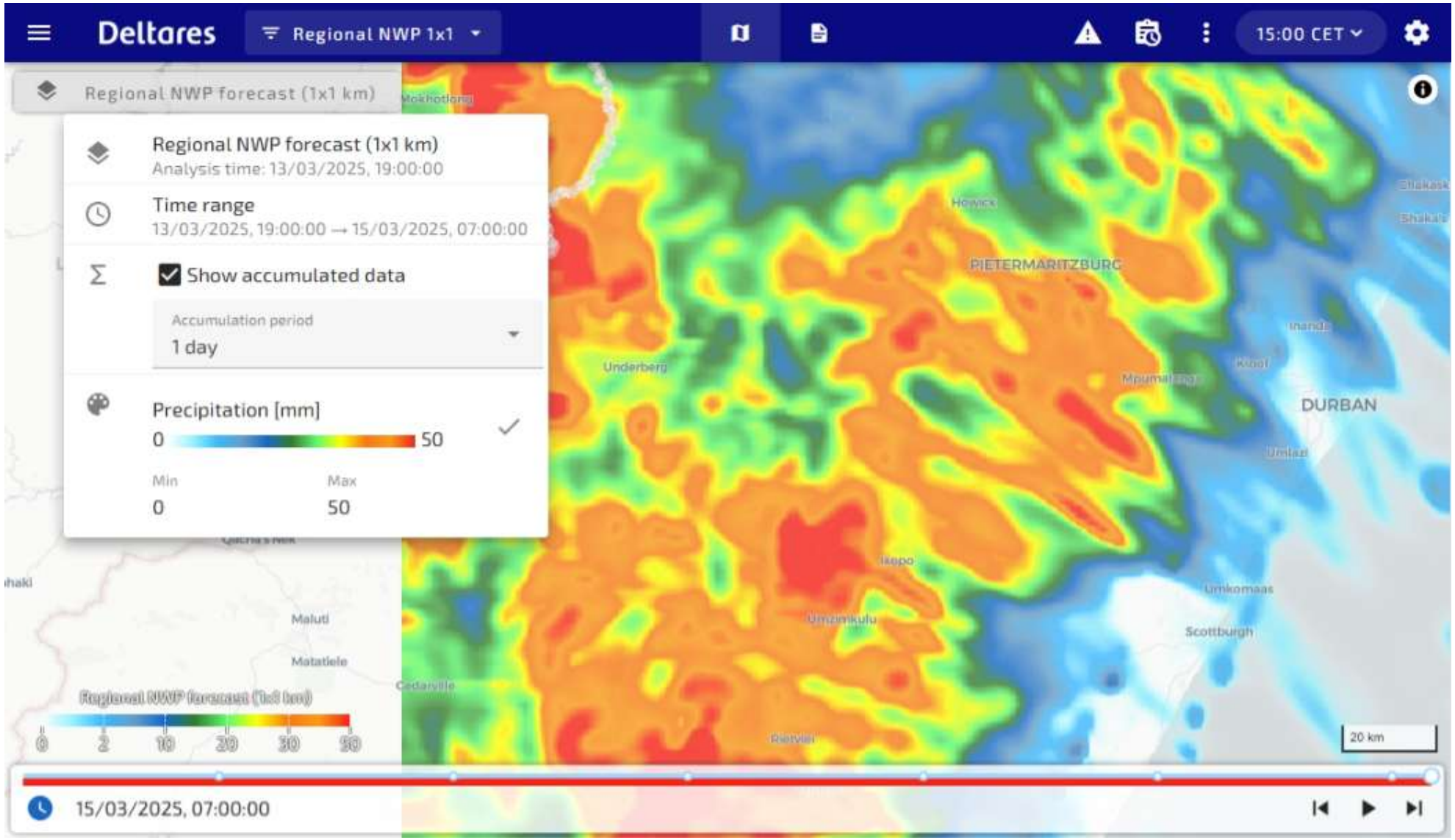
Web-OC Data analysis & aggregation




Deltares
17:55 GMT+8
TB
Correlation
Time Resampling
Time Series
Current speed at Hoek van Holland
Water levels
Current speed, Current direction at Hoek van Holland
Curr.speed.sim [1]
Curr.dir.sim [1]
Resampling Methods
Minimum
Maximum
Mean
Mean (time weighted)
Sum
Instantaneous
Time Steps
1 hour
6 hours
12 hour
1 day
1 week
one_month
one_year
Include original time series
+ CREATE NEW CHARTS
ADD TO CHART
Collection
New Feature Demo
Current speed at Hoek van Holland
Edit
Download
Save as Image
Remove
Curr.speed.sim [1]
Curr.speed.sim [1] - mean 1 day
Curr.speed.sim [1] - maximum 1 day
Curr.speed.sim [1] - minimum 1 day
Current speed (m/s)
0.12
0.10
0.08
0.06
0.04
0.02
0.00
September
Wed 03
Fri 05
Sep 07
Tue 09
Thu 11
Correlation between H.obs HOEK and H.obs Rotterdam
Logarithmic Regression f(x) = 59.72587 + 8.54792 * ln(x) with r² = 0.007
H.obs WS-05
99.3
99.2
99.1
99.0
98.9
98.8
98.7
98.7
98.8
98.9
99.0
99.1
99.2
H.obs WS-02

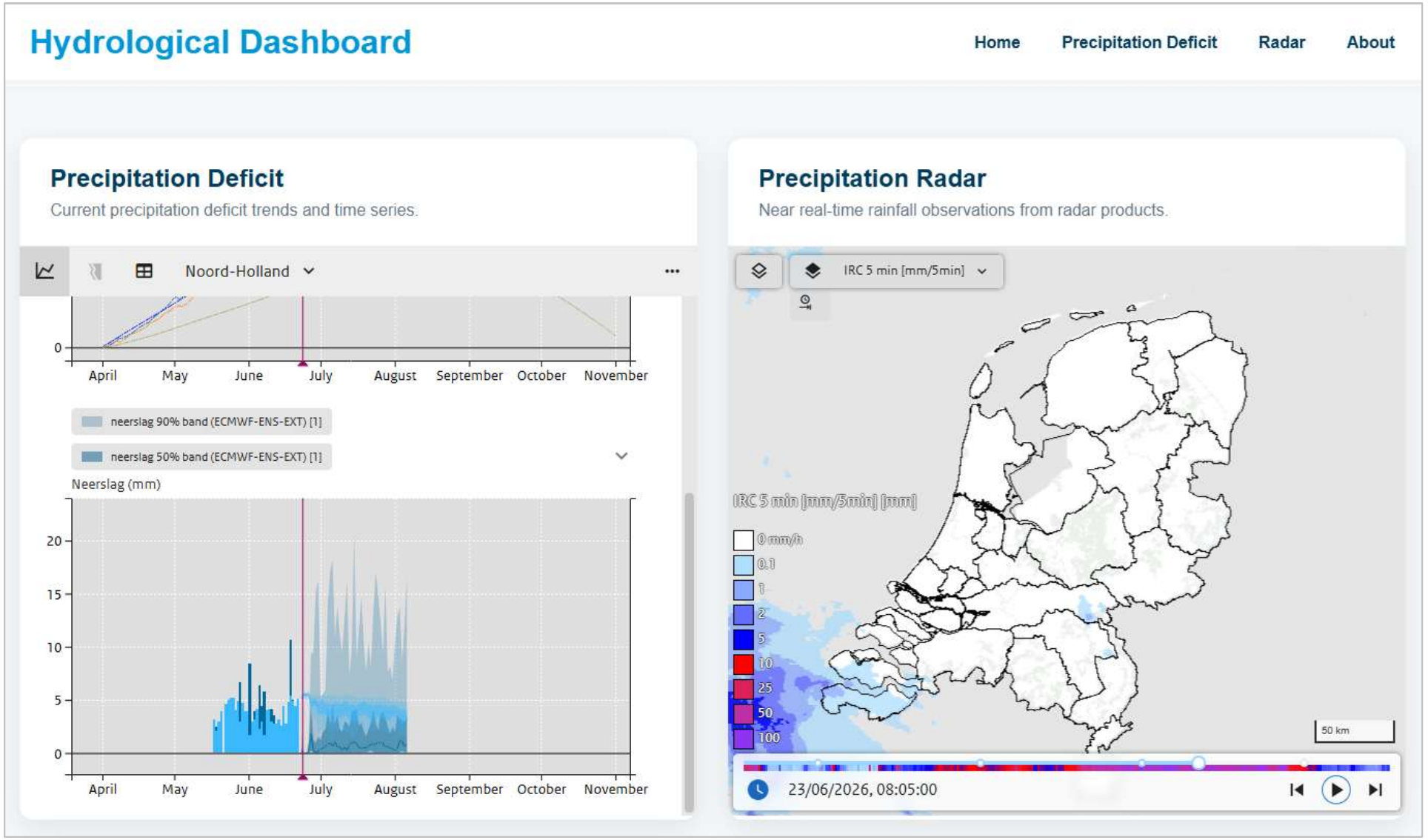
Web-OC Reports

Dynamic report

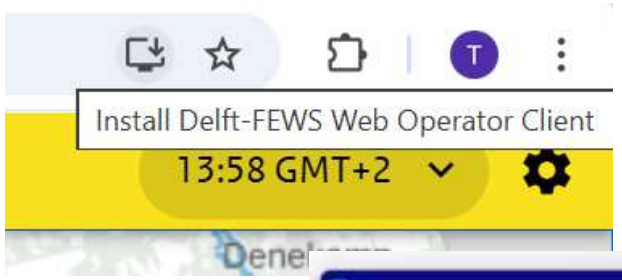
- The dynamic report module provides the ability to dynamically generate a report based on a template configured in FEWS. This typically involves time- and/or location-dependent data displayed in tabular format.

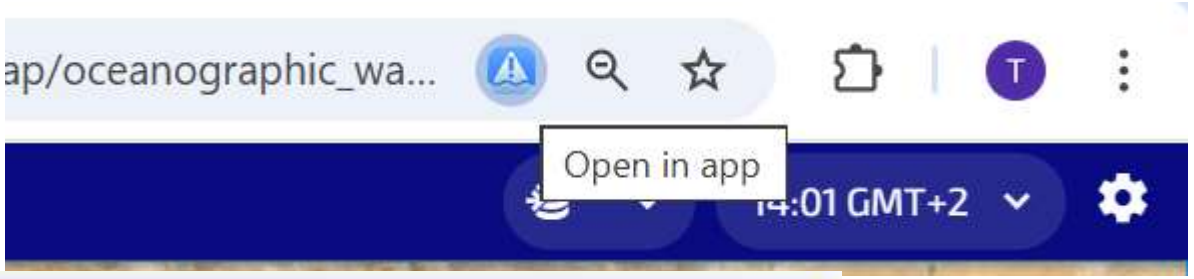
- Documentation: https://publicwiki.deltares.nl/spaces/FEWSDOC/pages/352944402/37+Dynamic+Report+Displays+Web+OC+only

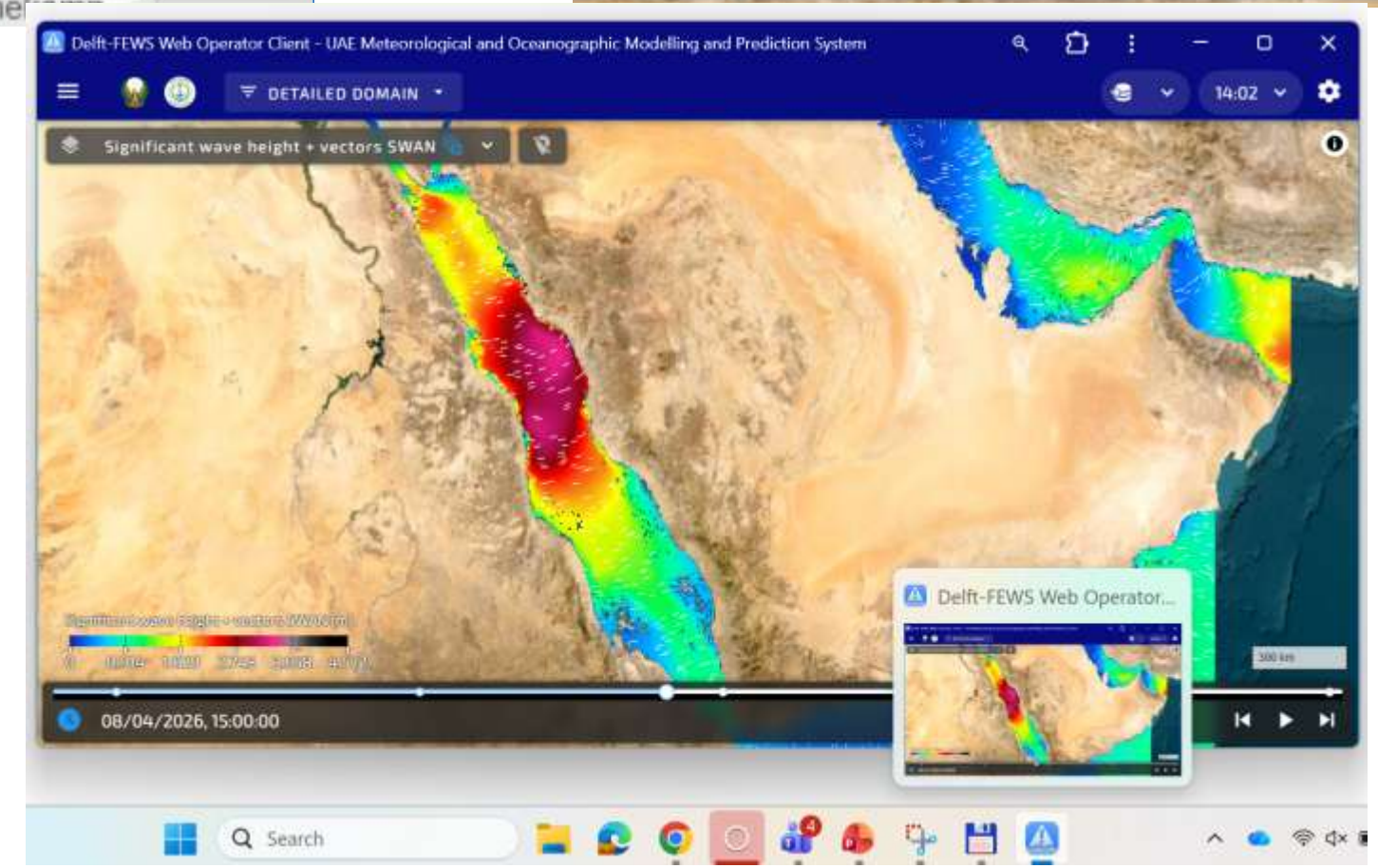
Web-OC Embedded



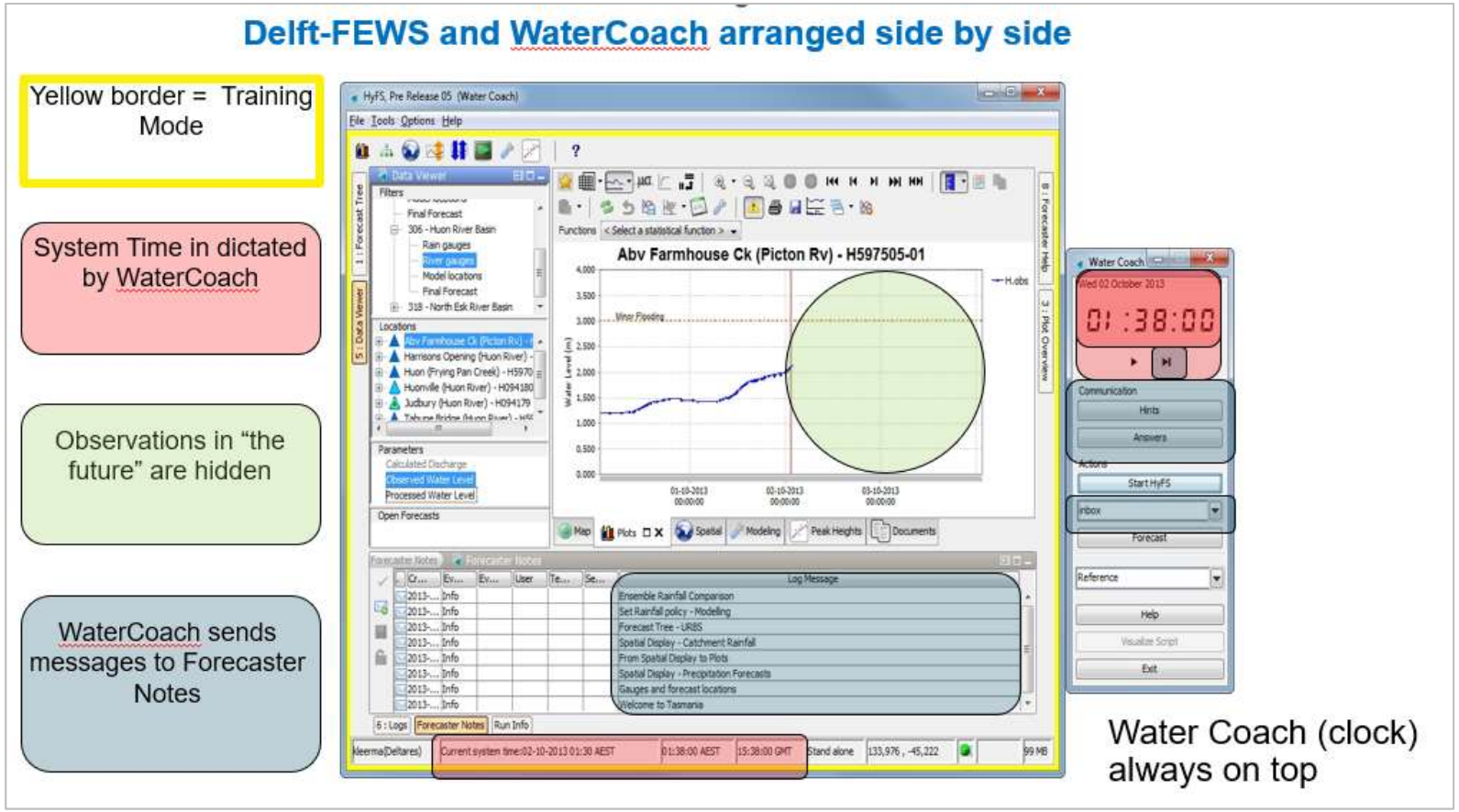
Web-OC on mobile phone







WaterCoach



WaterCoach ➔ Serious game to train forecasters

- Scenario – weather and water conditions
- Script - storyline that can be adjusted to aid the learning objective

Now also available as client connected to centrally hosted database

Overview of roadmap 2026 activities

Generic Product Management | Structural Maintenance | Worldwide Community | Software Innovations

- Writing New Product Vision 2026-2029

- Streamlined releases, security improvements and -tooling
- Releasing 2 stable versions of Delft-FEWS client-server
- Making the Open Archive more robust and easy to install
- Web OC OGC compliant and enabling co-creation
- Making OpenDA releases more frequent and simple.

- Interactions with our Community Strategy Board (CSB)
- Feeding our community via portal blogs & news updates
- Organizing onsite and online user events
- SLA based support to our clients worldwide

- Application of AI in operational Forecasting
- Experimenting with LLMs and developing AI agents
- Embedding AI assistance in our software development process
- End-to-end archive solution for both forecasters and data scientists
- Deltares ISO-27001 certified in 2026
- Implementing Kubernetes for FEWS web services load testing and balancing.
- Expanding FEWS-Conform
- Delft-FEWS and SFINCS
- BMI compliant and FEWS-Python wrapper
- WebOC: embracing micro-frontend, improving display time management and testing publicly accessible Web OC applications
- Exploring Google Flood Hub
- Investigating sustainable business models for Forecasting as a Service (FaaS)

Spotlighted (1) - New Delft-FEWS Product Vision

- Status: Writing process has started

Writing Team:

- Product Management: Ilonka, Marcel, Gerben



- Product Owners: Dave, Tom


- Solution Architect: Lo

- Department representation: Marc

CSB will be involved (review role) → input is already available(!)

Planning: draft/contours (AUS user days, early Sept), final version: International User Days (Nov)

Spotlighted (1) - New Delft-FEWS Product Vision

- External orientation: **key messages from strategic client documents and CSB**
  - **Forecasting Excellence**: strong focus on improving flood, drought, hydrological, probabilistic, and impact-based forecasting with modernized models and extended forecast horizons.
  - **AI, Machine Learning & Data Science Rapidly Expanding**: AI-driven modelling, verification, downscaling, anomaly detection, and operational optimisation embedded in hybrid environments with ML augmentation.
  - **Operational & IT resilience becoming mission-critical**: 99.99% system uptime, IT simplification, Life Cycle Management, cloud/platform choices, and cyber security threats while modernizing infrastructure for continuous service delivery.
  - **Community Engagement & Communication Improvements:** Clear dedication to public safety, warning systems, improved interfaces, and transparent communication with a growing need for trust rebuilding and data transparency.
  - **Data Integration, Interoperability & Modernisation:** Movement toward API-based data exchange, containerisation of software & models where Delft-FEWS is increasingly used as a central operational integration hub.
  - **Workforce Capacity & Skills Development:** Need for technical expertise, especially in AI, modelling, FEWS configuration, and operational forecasting.

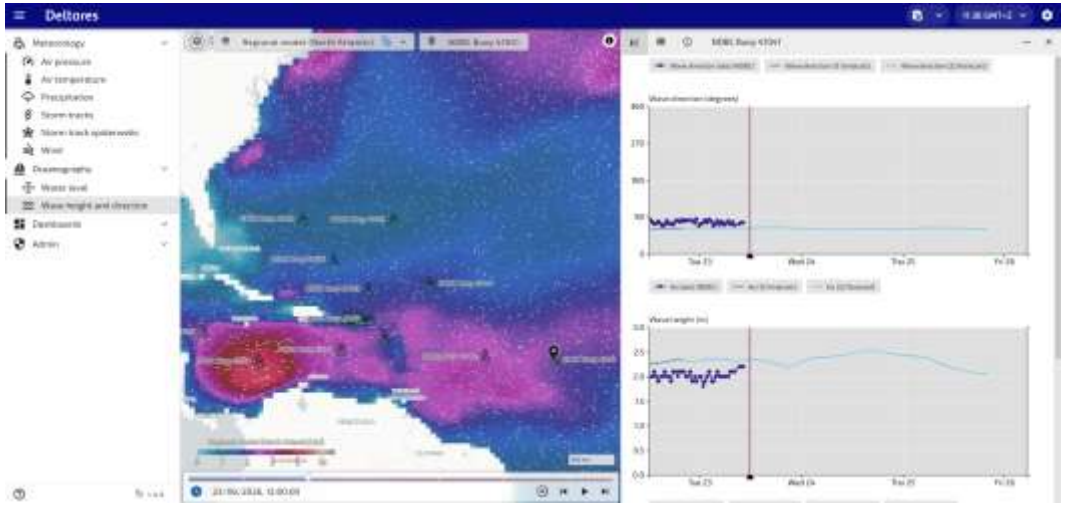
Spotlighted (1) - New Delft-FEWS Product Vision

- Internal orientation: **Deltares' ambitions and (historic) foundation and successes of Delft-FEWS concepts & choices**
  - Deltares: Strategic Agenda 2026-2029: sustainable business models for all software products, enabling API interactions and clear life cycle management
  - Departments: OWM strategic pillars, HAF ambitions on forecasting skills, adopting AI in forecasting operations.
  - (keep) embracing and stressing **historic** and **successful key concepts & choices**: data driven, configurability, open to all data formats and modelling software (adapter concept), short time-to-realization, community-powered innovation, timeline(s) & topics for co-creation with strategic partners

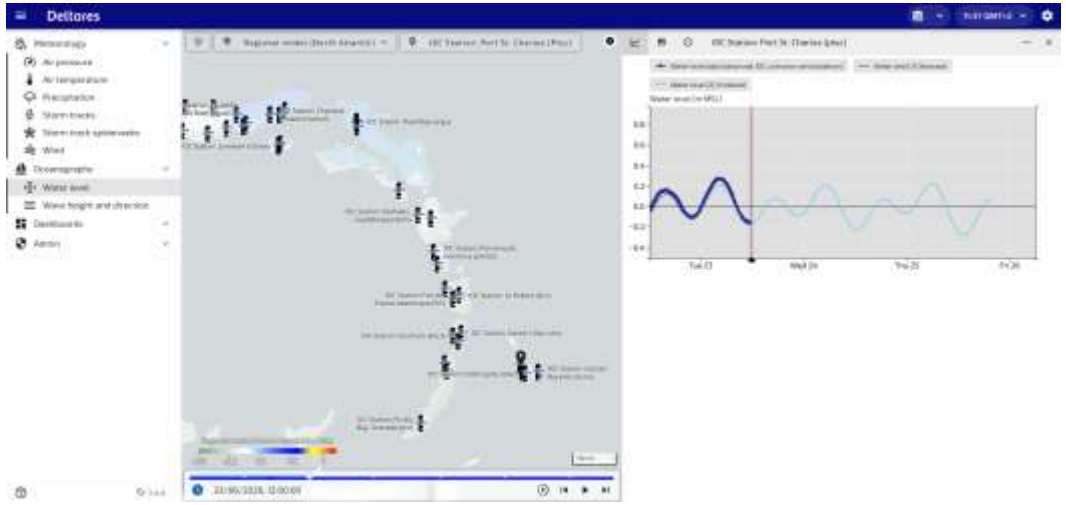
Across all regions, the community shares a clear trajectory: Modernise forecasting, strengthen resilience, embrace AI, integrate data, and invest in people. This provides a strong foundation for collaborative priorities and future strategic planning with our stakeholders.

Spotlighted (2): Delft-FEWS & SFINCS

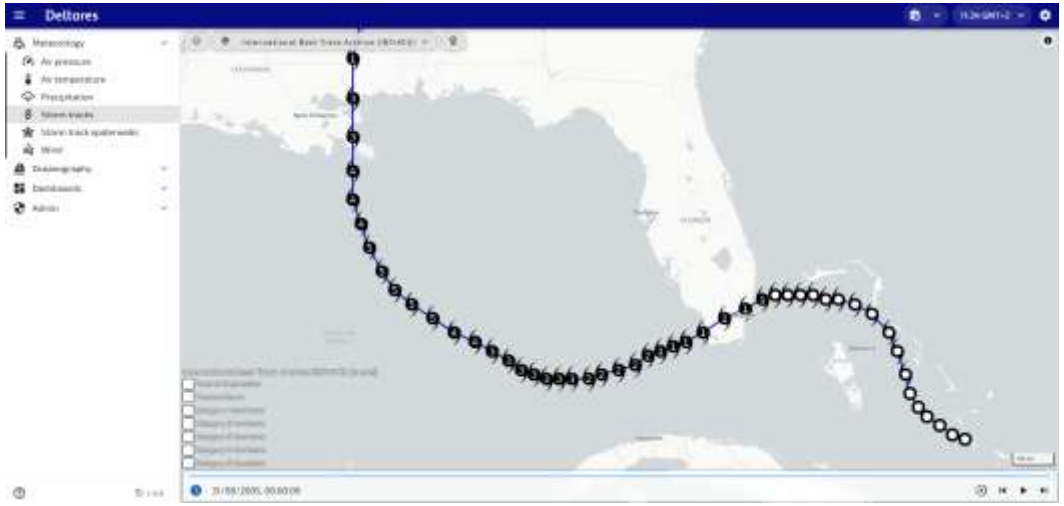
- SFINCS: Super Fast INundation of CoastS - Deltares' open-source flood model
- Use Case: 'Dutch' Caribbean area: weather, waves & water level observations and forecasts including 2D inundation modelling using SFINCS.
- WebOC application for demo and research purposes (KNMI, Ministry of Infra & Water Management)



waves



water level

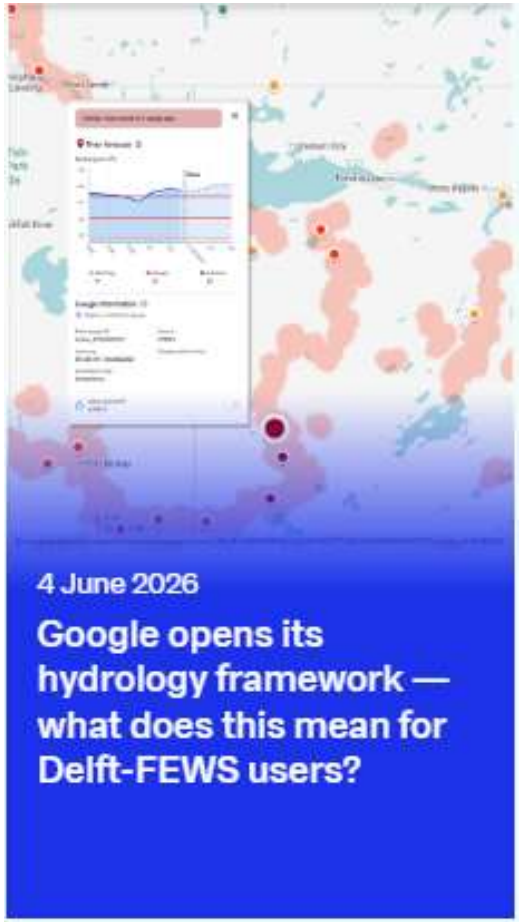


storm/cyclone tracks

Spotlighted (3) – Exploring Google Flood Hub

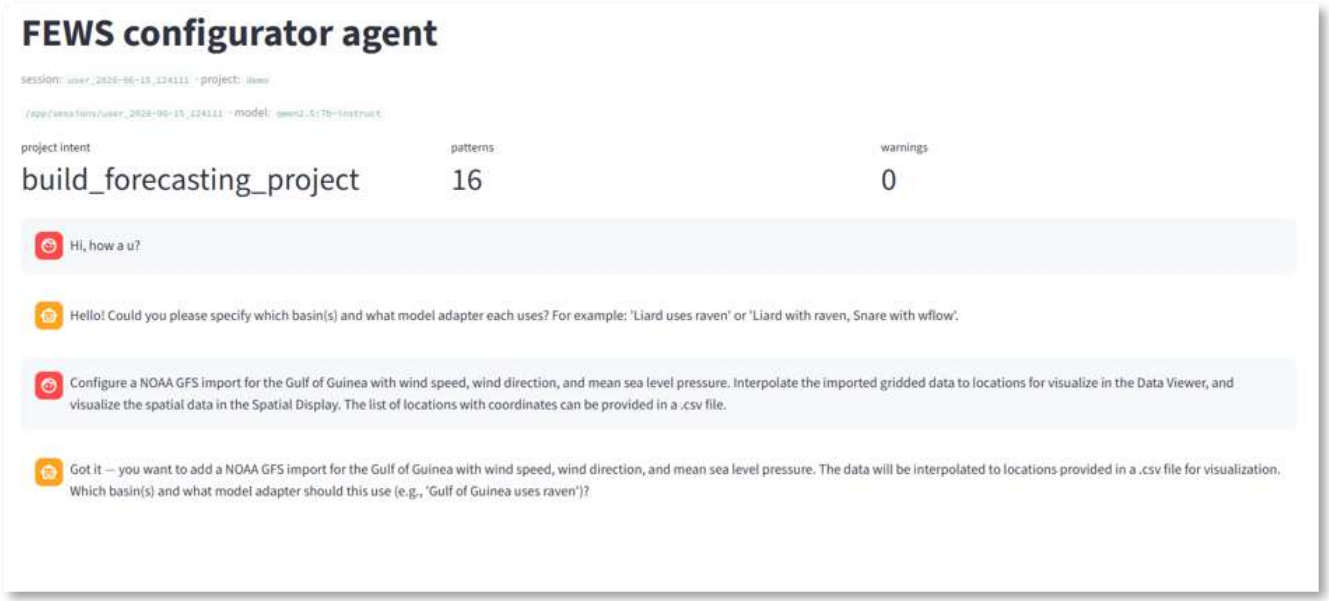
- Original idea was to explore and assess the quality of Google Flood Hub data and models

- 2nd of June Google's announcement → access to their AI open-source hydrological model/framework
- 3rd of June: Delft-FEWS PM response (portal)
- Current status (planned developments)
  - Contract
  - **Import**: API to flood hub data
  - **Model adapter** for flood hub models
- Near future promotion
  - London Climate Action Week (20-28 June) → announcement + Deltares video message
  - More during the International Delft-FEWS User Days



Spotlighted (4) – LLMs for Delft-FEWS

- Also known as: Talk-With-FEWS (“TWF”) experiments → together with HKV (NL consultant)
- TWF → continued: plan for “TKI” project including more (market) parties from NL: submission Sept ‘26
- Deltares continues developments of Config Agent
  - Based on **FEWS-Conform** configuration
  - Agent/Chat design with ‘efficient token’ usage: template approach. Python code generates the XML files based on user’s input. LLM is only used for ‘intelligence’ (not for writing XML files line by line)
  - Generates complete **new (and valid)** config from scratch, next: add/edit existing configurations



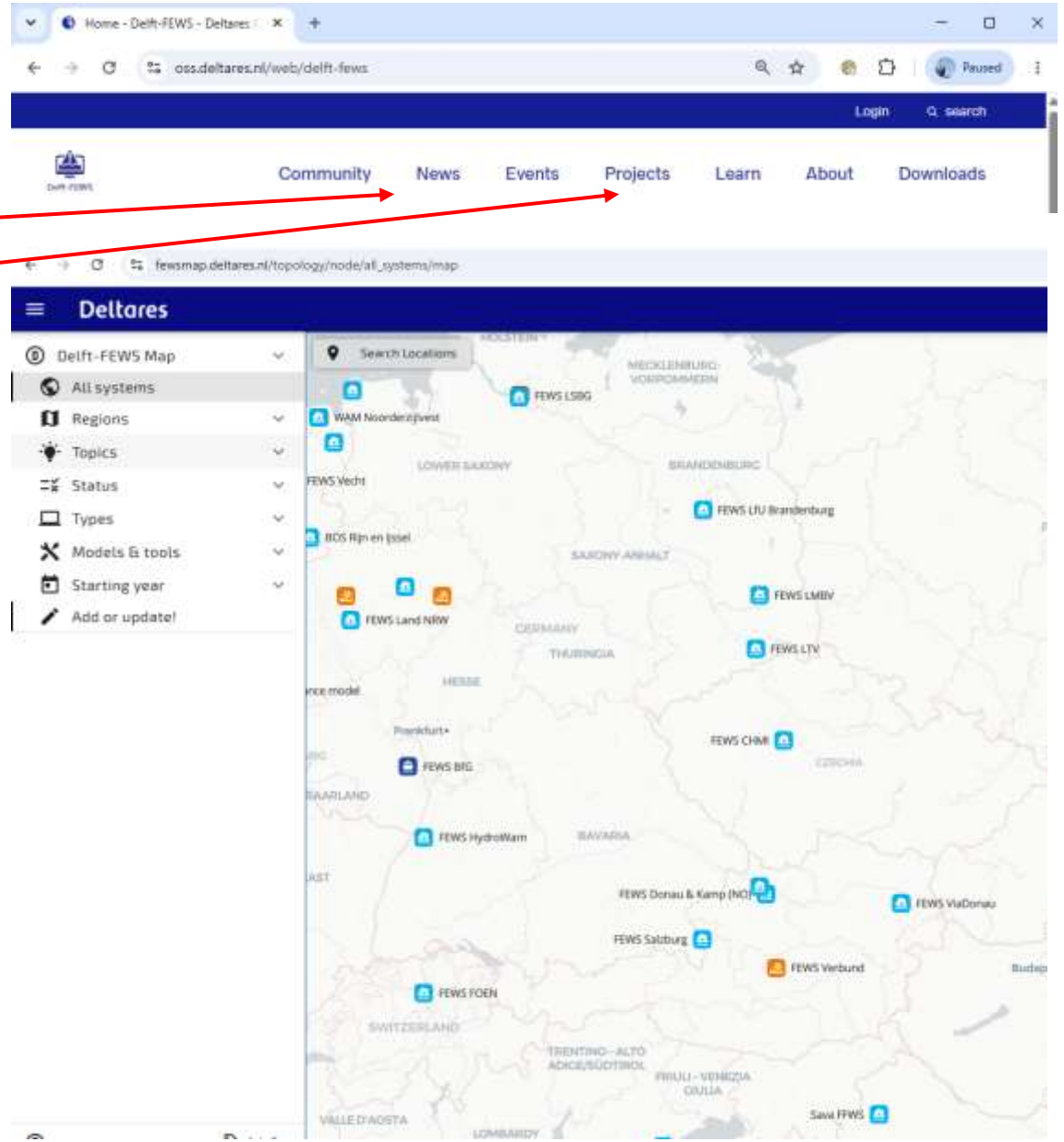
typical prompt

'Configure a NOAA GFS import for the Gulf of Guinea with wind speed, wind direction, and mean sea level pressure. Interpolate the imported gridded data to locations for visualize in the Data Viewer, and visualize the spatial data in the Spatial Display. The list of locations with coordinates is provided in the .csv file. (attach the file)'

Community

- Open **invitation** for all of you to contribute to:
  - Regional news & blogs
  - Project descriptions
  - Your application(s) on the **Worldmap**

FEWS-moderators@deltares.nl



Past events in 2026 …

NL Delft-FEWS User Day (6th April 2026)

Delft-FEWS 2025.02 New Features Webinar

Canadian Delft-FEWS User Day (15th of June 2026)

FEWS Community Talks

Clickable overview of all webinars…(1)

Webinar	Date	Topics+video link
Delft-FEWS in the cloud	07.02.2022	Delft-FEWS in the cloud
2021.02 Features	25.04.2022	How to apply auto-calibration (with OpenDA). (click breakpoint at 5:53) How to improve and polish your output in spatial/timeseries plots / how to make attractive GUI icons. (click breakpoint at 16:16) Spotlight: the Import module. (click breakpoint at 30:19)
2022.01 Features	13.10.2022	Spatial Display and Spatial Transformations (click breakpoint at 6:45) Map and Explorer improvements (click breakpoint at 19:15) Spotlight on the Schematic Status Display (click breakpoint at 40:08)
2022.02 Features	23.03.2023	Running Workflows from Spatial Display (click breakpoint at 5:12) Running the FEWS web services locally (click breakpoint at 16:10) Delft-FEWS and the links to GIS systems (click breakpoint at 30: 48)
2023.01 Features	14.09.2023	Using the 'What-if'-functionality (topics starts at: 10:15) Using WaterCoach on-the-fly (topics starts at: 22:00) The Delft-FEWS Web Operator Client (WebOC) (topics starts at: 44:30)
2023.02 Features	07.03.2024	How to configure the Topology to organize your (daily) forecasting or data analysis process (topic starts at: 09:30) The integrated reservoir module (topic starts at: 30:30) Security: how to deploy Delft-FEWS components using OpenID Connect (topic starts at: 45:30)
2024.01 Features	27.11.2024	Display for metadata management completed (topic starts at: 05:20) Open Archive improvements (topic starts at: 20:40) Web OC version 1.1.0 (topic starts at: 37:00)
2024.02 Features	14.05.2025	Value Property Entry Display (topic starts at: 05:54) Spatial Display & on-the-fly grid interpolation (topic starts at: 19:30) Hidden gems (topic starts at: 35:00)

Clickable overview of all webinars…(2)

Webinar	Date	Topics+video link
2025.01 Features	24.09.2025	What-if Scenarios (part 2) – topic starts at 05:26 Interval Statistics Dialog – topic starts at 20:30 Web OC 2025.01 preview – topic starts at 34:00
2025.02 Features	02.04.2026	World map of Delft-FEWS applications – topic starts at 05:10 New ECMWF AI and GFS data imports – topic starts at 25:00 Water Coach – topic starts at 32:10 Workflow Navigator – topic starts at 43:45
2026.01 Features	24.09.2026	

Organisation changes **NEW..!!**

Product Management Team

- Product Managers

 **Gerben**

 **Marcel**

- Product Owners

 **Dave**

Delft-FEWS & Open Archive

 **Tom**

Web OC

- Community Manager

 **Ilonka**

Product Development Team

- Solution Architect (& domain lead)

 **Lo**

- Delft-FEWS development team

 **Bart**

 **Onno**

 **Magali**

 **Orshi**

 **Rudie**

 **Andre**

 **Mike**

 **Anass**

 **Erik**

- Web OC development team

 **Werner**

 **Shomaila**