

WaterCoach Hands-on at FEWS Anwendertreffen

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 - (Get a Stand Alone ready for WaterCoach)
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 - Testing the scenario
- WaterCoach-on-the-fly
- Q & A

Questions welcome – anything, any time



What will you not learn today?

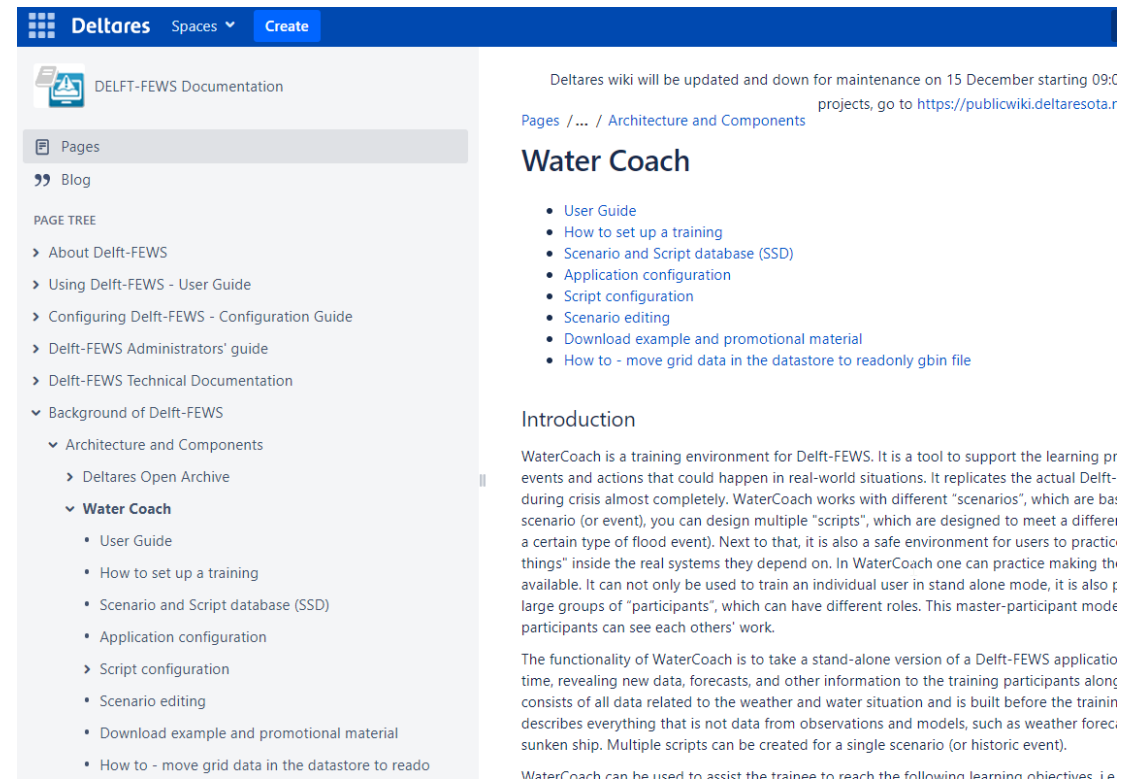
What you will not learn today about WaterCoach

- How to set up participant mode (multiple users playing simultaneously)
- How to set up multi system mode (connecting WaterCoach sessions of multiple FEWS systems)
- Interactive scripts (call/messages/questions appearing as e.g. pop-ups)
- Adapt script to [learning objectives](#)
- Adapt scenario to [learning objectives](#) (e.g. by changing forecasts, observations or simulation results)
- Adding a [dictionary](#) that participants can look up words in
- Other features and use of the Open Archive

Online references

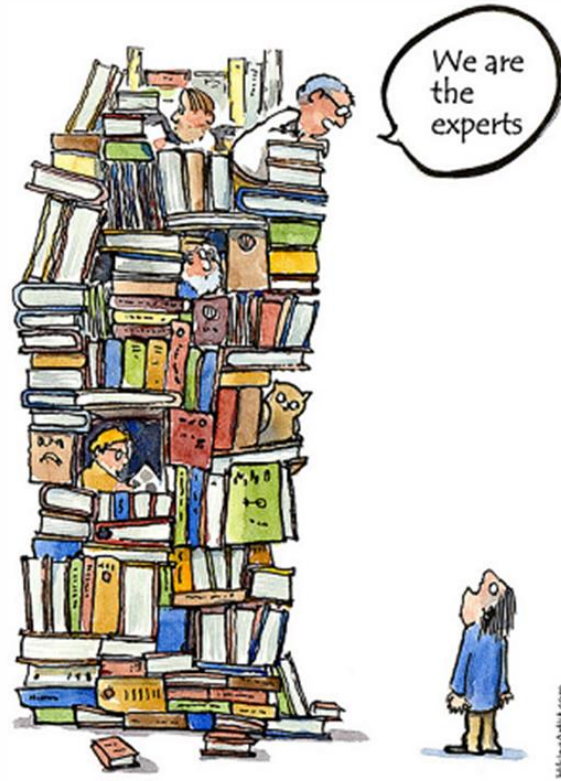
1. Full documentation of all WaterCoach features
2. Conference papers on the WaterCoach
3. Description of WaterCoach used in a Dutch national exercise
4. Full 2 day training

[Water Coach - DELFT-FEWS Documentation - Deltares Public Wiki](https://publicwiki.deltaresota.nl/wiki/Water_Coach_-_DELFT-FEWS_Documentation_-_Deltares_Public_Wiki)

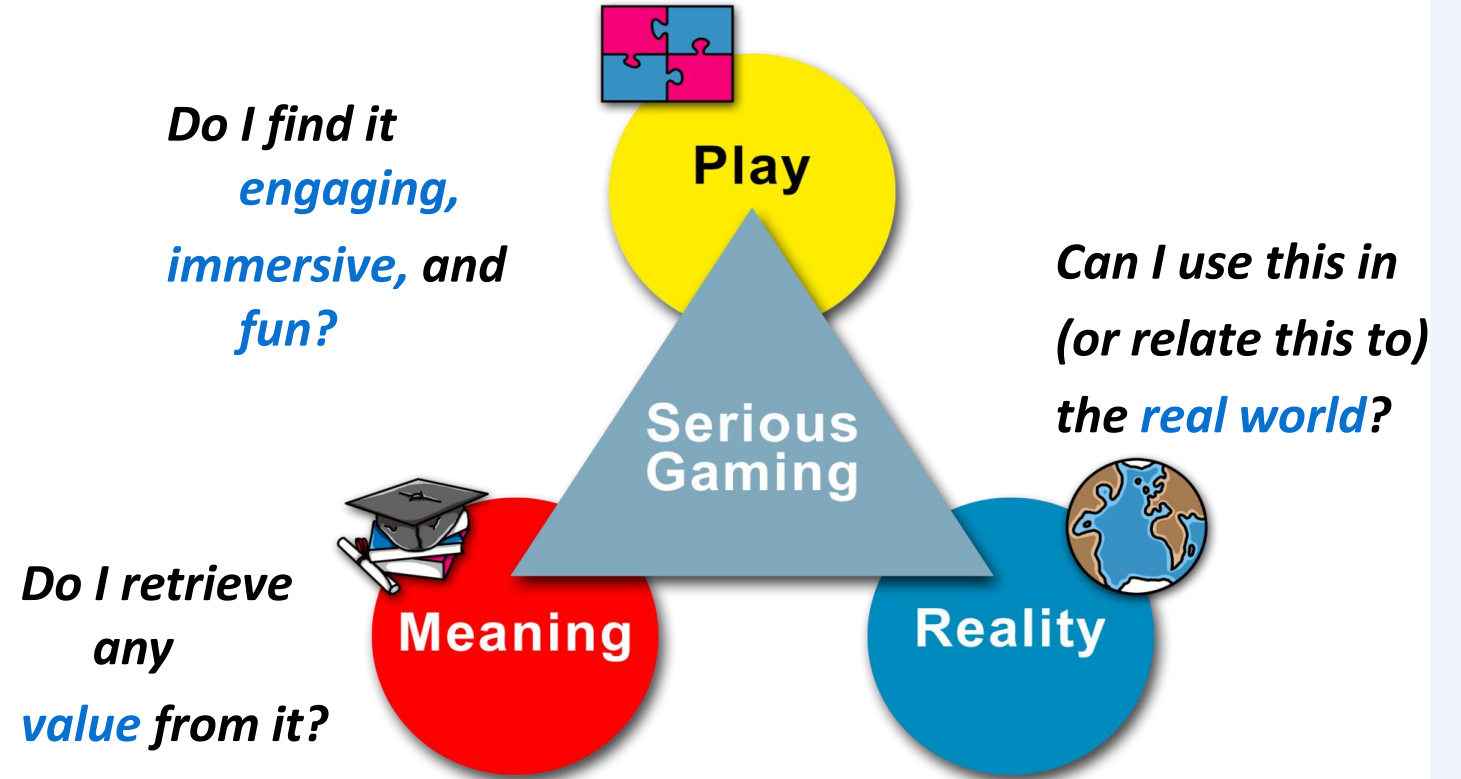


The screenshot shows the Deltares Public Wiki interface. The top navigation bar includes 'Deltares', 'Spaces', and 'Create'. The main content area is titled 'DELFT-FEWS Documentation' and features a sidebar with a 'PAGE TREE' listing various documentation sections. The 'Water Coach' section is expanded, showing a list of links: 'User Guide', 'How to set up a training', 'Scenario and Script database (SSD)', 'Application configuration', 'Script configuration', 'Scenario editing', 'Download example and promotional material', and 'How to - move grid data in the datastore to readonly gbin file'. The main content area displays the 'Water Coach' title and a list of these same links. Below the links, there is an 'Introduction' section with text describing WaterCoach as a training environment for Delft-FEWS, used for simulating crisis events and training participants. A maintenance notice at the top right states: 'Deltares wiki will be updated and down for maintenance on 15 December starting 09:00. For more information on the projects, go to https://publicwiki.deltaresota.nl'.

WaterCoach - a FEWS serious game



WaterCoach - a FEWS serious game



Detailed info and course material: <https://publicwiki.deltares.nl/display/FEWSDOC/Water+Coach>

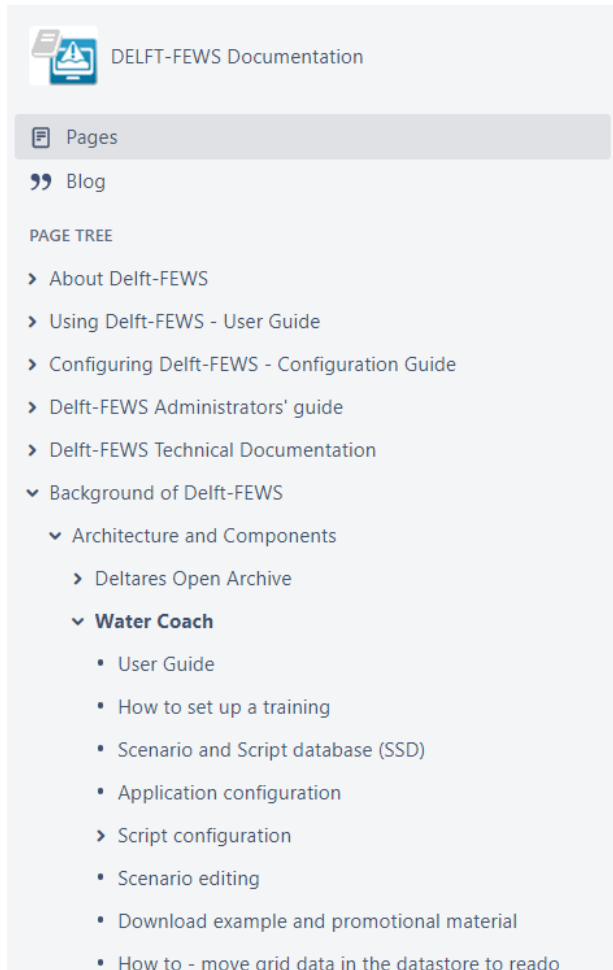
WaterCoach – use cases

- **Train staff on using FEWS**
(a.k.a. 'buttons course', as 1 person possible)
- **Practice forecasting in crisis situations**
(flood events, follow procedures, discuss with others)
- **Event analysis**
(‘watch’ an event to see what happened and learn from it)



What is a WaterCoach?

Detailed on the FEWS wiki; <https://publicwiki.deltares.nl/display/FEWSDOC/Water+Coach>



The screenshot shows the left-hand navigation menu of the Delft-FEWS Documentation website. At the top is the logo and the text 'DELFT-FEWS Documentation'. Below this are several menu items: 'Pages', 'Blog', and 'PAGE TREE'. Under 'PAGE TREE', there is a list of categories with expandable arrows. The 'Architecture and Components' category is expanded, showing a sub-menu where 'Water Coach' is also expanded, listing various guides and materials.

- DELFT-FEWS Documentation
- Pages
- Blog
- PAGE TREE
 - About Delft-FEWS
 - Using Delft-FEWS - User Guide
 - Configuring Delft-FEWS - Configuration Guide
 - Delft-FEWS Administrators' guide
 - Delft-FEWS Technical Documentation
 - Background of Delft-FEWS
 - Architecture and Components
 - Deltares Open Archive
 - Water Coach**
 - User Guide
 - How to set up a training
 - Scenario and Script database (SSD)
 - Application configuration
 - Script configuration
 - Scenario editing
 - Download example and promotional material
 - How to - move grid data in the datastore to reado

Pages / ... / Architecture and Components

Water Coach

- User Guide
- How to set up a training
- Scenario and Script database (SSD)
- Application configuration
- Script configuration
- Scenario editing
- Download example and promotional material
- How to - move grid data in the datastore to readonly gbin file

Introduction

WaterCoach is a training environment for Delft-FEWS. It is a tool to support the learning process and train users of Delft-FEWS for events and actions that could happen in real-world situations. It replicates the actual Delft-FEWS (operational) environment used during crisis almost completely. WaterCoach works with different "scenarios", which are based on real data for historic events. For each scenario (or event), you can design multiple "scripts", which are designed to meet a different training goals (such as how to respond to a certain type of flood event). Next to that, it is also a safe environment for users to practice with Delft-FEWS without fear of "breaking things" inside the real systems they depend on. In WaterCoach one can practice making the right forecasts with the information that is available. It can not only be used to train an individual user in stand alone mode, it is also possible to organize training sessions with large groups of "participants", which can have different roles. This master-participant mode emulates an operational system, where participants can see each others' work.

The functionality of WaterCoach is to take a stand-alone version of a Delft-FEWS application and automatically move that through time, revealing new data, forecasts, and other information to the training participants along the way. The scenario used for the training consists of all data related to the weather and water situation and is built before the training. A script is added to the scenario, which describes everything that is not data from observations and models, such as weather forecast updates or a news bulletin concerning a sunken ship. Multiple scripts can be created for a single scenario (or historic event).

WaterCoach can be used to assist the trainee to reach the following learning objectives, i.e. to demonstrate the ability to:

- Collect, analyze, and interpret data, and to formulate and support conclusions. This concerns the results of hydrological,

WaterCoach standalone and participant mode

Standalone mode	Participant mode
Individual, independent parties	Dependent parties: master and participants
No general control	Changes in the master (e.g. next task) are automatically followed by participant
Forecasts are always only visible for the individual user	All forecasts made by the participants are visible to the master and vice versa
	All local runs (run from Forecasts -> Run segment Locally) are visible only to the participant, never to others.
Forecaster notes are always only visible for the individual user	All forecaster notes made by the participants are visible to the master and the other participants. Messages that are marked as read in one client will be marked as read in all clients.

What is a WaterCoach?

Delft-FEWS and WaterCoach arranged side by side

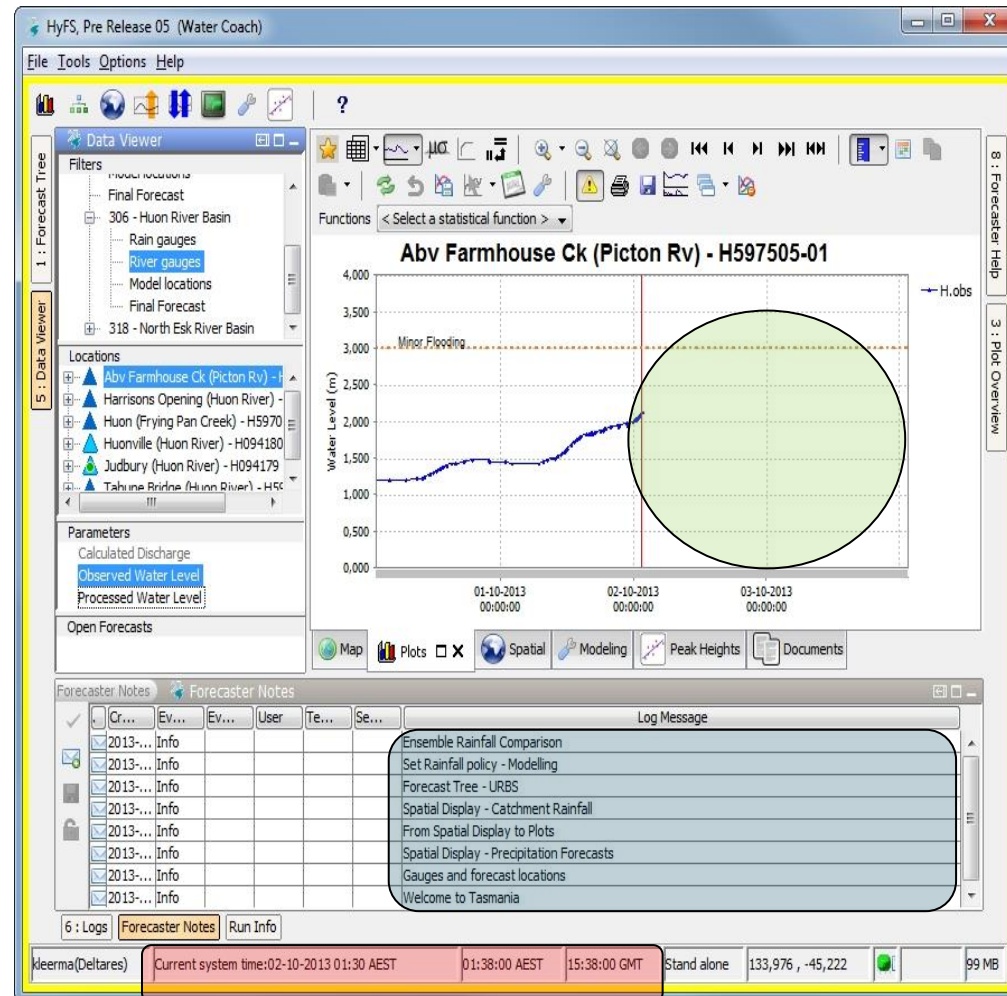
Yellow border = Training Mode

System Time is dictated by WaterCoach

Observations in “the future” are hidden

WaterCoach sends messages to Forecaster Notes

•Water Coach ‘clock’ always on top



Water Coach

02 October 2013

01:38:00

Communication

- Hints
- Answers

Actions

- Start HyFS

inbox

Forecast

Reference

- Help
- Visualize Script
- Exit

What is a WaterCoach?

WaterCoach consists of

- Scenario - weather and water
 - “Delft-FEWS localDataStore”
 - Change the weather? (requires dedicated tooling; not part of this course)
- Script - storyline that can be adjusted to aid the learning objective
 - Communication log
 - Published forecast
 - Interactive script? (not part of this course)



Making a WaterCoach scenario + script

Details on wiki:

<https://publicwiki.deltares.nl/display/FEWSDOC/How+to+set+up+a+training>

1. Set up training environment folder (if not yet available); the so called [Scenario and Script Database](#) (SSD).

*“The scenario/script database for the Water Coach is a directory containing an arbitrary number of scenarios/scripts. A scenario consists of a FEWS database (the so-called local data store) that contains measurement data and model data, and **one or more script directories**. Each one of these script directories uses the same scenario (i.e. the local data store).”*

*“A **script is the story line and consists of all events that happen during the game**. Each subdirectory of the scenario directory that contains a file named script_config.xml is considered a script and will automatically appear in the list of scripts that can be selected by the user of the Water Coach.”*

Evaluation of exercise results

Learning will be based on feedback, not on a scoring system

Base feedback on

- comparison of player's forecast to
 - actual forecast
 - forecasts from previously or simultaneously played games
- choices made and conditions that were triggered
 - proper communication (via buttons)
 - no/proper use of reference manual
- All actions of the player within WaterCoach are logged!

Evaluation of exercise results – Log messages

Log messages in <root_folder>\WaterCoach\WaterCoach_log\

```
22-06-09 14:35:02 GMT 2020-06-23 08:25:00 GMT FEWS message: <html><b>Hint (Q2 - Precipitation accumulation):</b> Go to Worl
22-06-09 14:35:02 GMT 2020-06-23 08:25:00 GMT FEWS message: <html><b>Answer (Q2 - Precipitation accumulation):</b> The loca
22-06-09 14:35:05 GMT 2020-06-23 08:25:00 GMT Jumping to next event; setting simulation time to 2020-06-23 08:35:00 GMT
22-06-09 14:35:07 GMT 2020-06-23 08:35:00 GMT Jumping to next event; setting simulation time to 2020-06-23 08:40:00 GMT
22-06-09 14:35:08 GMT 2020-06-23 08:40:00 GMT Jumping to next event; setting simulation time to 2020-06-23 08:45:00 GMT
22-06-09 14:35:09 GMT 2020-06-23 08:45:00 GMT Jumping to next event; setting simulation time to 2020-06-23 08:55:00 GMT
22-06-09 14:39:46 GMT 2020-06-23 08:55:00 GMT Forecast frame activated.
22-06-09 14:40:40 GMT 2020-06-23 08:55:00 GMT Forecast frame activated.
22-06-09 14:40:50 GMT 2020-06-23 08:55:00 GMT Forecast column 'Answer' for row '3' published: yes.
22-06-09 14:40:50 GMT 2020-06-23 08:55:00 GMT Forecast column 'Answer' for row '4' published: yes.
22-06-09 14:41:28 GMT 2020-06-23 08:55:00 GMT Forecast frame activated.
22-06-09 14:41:45 GMT 2020-06-23 08:55:00 GMT Forecast frame activated.
```

Demo time!



Make a WaterCoach

Stand Alone

Making a FEWS configuration – Augment with WaterCoach configuration

Full details are provided here: <https://publicwiki.deltares.nl/display/FEWSDOC/Application+configuration>

For a simple setup, the following steps are relevant.

- 1. Required:** Adapt Explorer config in ..\config\SystemConfigFiles\Explorer.xml
 - 1. Required:** Add WaterCoach panel to the explorerTasks:

```
<explorerTask name="WaterCoach">
  <displayConfigFileName>WaterCoachDisplay</displayConfigFileName>
  <toolbarTask>>false</toolbarTask>
  <menubarTask>>false</menubarTask>
  <allowMultipleInstances>>false</allowMultipleInstances>
  <toolWindow>>true</toolWindow>
  <loadAtStartup>>true</loadAtStartup>
  <!-- COMMENT: select true if configuration will only be used in
WaterCoach mode -->
</explorerTask>
```

Making a FEWS configuration – Augment with WaterCoach configuration

Full details are provided here: <https://publicwiki.deltares.nl/display/FEWSDOC/Application+configuration>

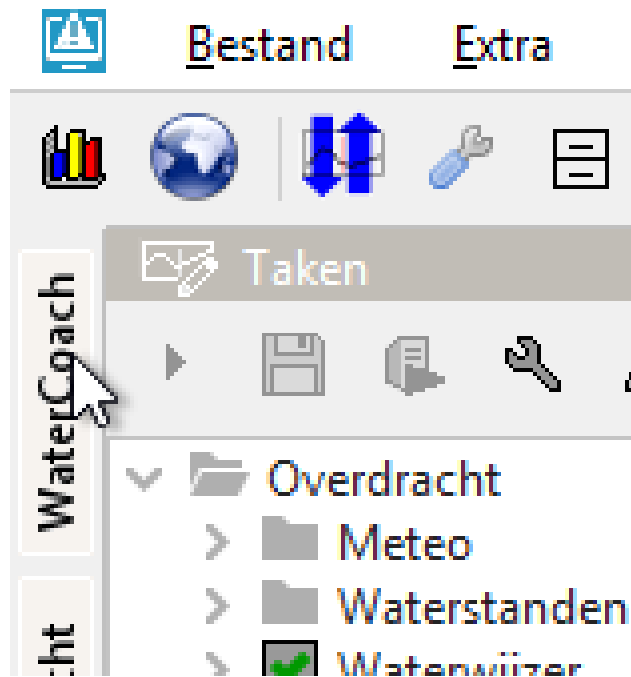
For a simple setup, the following steps are relevant.

1. **Required:** Adapt Explorer config in `..\config\SystemConfigFiles\Explorer.xml`
 1. **Required:** Add WaterCoach panel to the `explorerTasks`
2. **Required:** add `WaterCoachDisplay.xml` to `..\Config\DisplayConfigFiles\` folder; example file on the [wiki](#).
 1. **Required:** make sure that `scenarioScriptDatabasePath` has scenario's (e.g., `%REGION_HOME%\WaterCoach\ScenarioScriptDatabase`)
 2. **Optional:** Hide year from time information (but better is to shift time in the `script_config.xml`), e.g.:

```
<hideYear>true</hideYear>
```
 3. **Optional:** amend `timeControl` buttons to liking
 4. **Optional:** define `experienceLevel` and possibility to change `level` during a session (`adjustLevel`)
 5. **Optional:** set `copyLocalDataStore` to *false* to allow faster testing of the scenario while developing; → default is *true*, such that upon starting a scenario, the `localDataStore` of the Scenario is copied to the `localDataStore` folder.

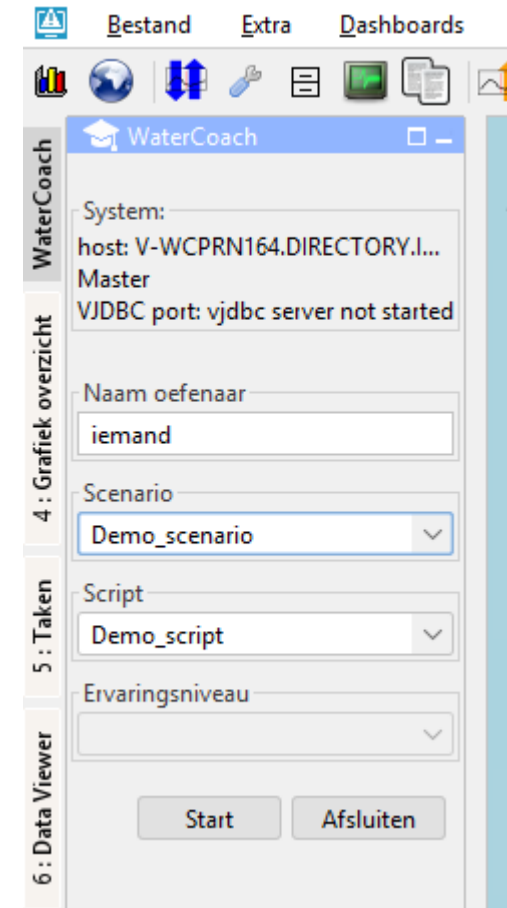
Making a FEWS configuration – Augment with WaterCoach configuration

1. To test if WaterCoach is set up as desired, check if you have a WaterCoach panel on the top left.



Making a FEWS configuration – Augment with WaterCoach configuration

1. To test if WaterCoach is set up as desired, check if you have a WaterCoach panel on the top left.
2. Click and see that a WaterCoach panel opens



Making a WaterCoach scenario + script

Details on wiki:

<https://publicwiki.deltares.nl/display/FEWSDOC/How+to+set+up+a+training>

1. Set up training environment folder (if not yet available); the so called Scenario and Script Database (SSD).
2. Add a folder for the scenario, e.g., 'Demo_scenario'
3. In this folder, add a script folder, e.g., 'Demo_script'
4. In the script folder, **add a script file called `script_config.xml`**
5. In the scenario folder, also add a `localDataStore` folder with the *local.fdb* file

```
ScenarioScriptDatabase
|-- storm surge March 10-13
|   |-- localDataStore
|   |   |-- local.fdb
|   |-- novice
|   |   |-- script_config.xml
|   |   |-- exercise1_EN.txt
|   |   |-- exercise1_NL.txt
|   |   |-- start_session_EN.txt
|   |   |-- start_session_NL.txt
|   |   |-- telephone_call_EN.txt
|   |   |-- telephone_call_NL.txt
|   |   |-- weather_map_March12_00hr.pdf
|   |   |-- weather_map_March12_12hr.pdf
|   |   |-- weather_map_March13_00hr.pdf
|   |-- advanced
|   |   |-- script_config.xml
|   |   |-- telephone_call.txt
|   |   |-- weather_map.pdf
|-- another storm surge
|   |-- localDataStore
|   |   |-- local.fdb
|   |-- script1
|   |   |-- script_config.xml
|   |   |-- file1.pdf
|   |   |-- file2.pdf
```

Making a WaterCoach scenario + script

Details on wiki:

<https://publicwiki.deltares.nl/display/FEWSDOC/How+to+set+up+a+training>

1. Set up training environment folder (if not yet available); the so called Scenario and Script Database (SSD).
2. Add a folder for the scenario, e.g., 'Demo_scenario'
3. In this folder, add a script folder, e.g., 'Demo_script'
4. In the script folder, add a script file called script_config.xml
5. In the scenario folder, also add a localDataStore folder with the *local.fdb* file
6. **Optional:** add specific configuration (this course)
7. **Optional:** add other files needed for the script (not in course)
8. **Optional:** add specific modules as .zip files (not in course)

SSD including different (older) versions of the Config and Modules folder

```
ScenarioScriptDatabase
|-- scenario1
|   |-- localDataStore
|   |   `-- local.fdb
|   |-- script1
|   |   `-- script_config.xml
|   |-- Config.zip
|   |-- Modules.zip
`-- scenario2
    |-- localDataStore
    |   `-- local.fdb
    |-- script1
    |   `-- script_config.xml
    |-- Config.zip
    `-- Modules.zip
```

Make a WaterCoach

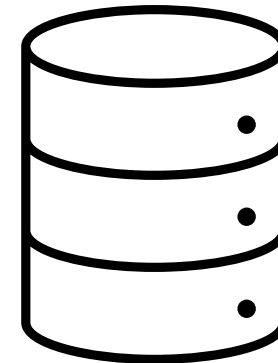
Scenario

Scenario creation

How to fill the Delft-FEWS localDataStore?

- From archive
- Use saved LDS
- Run imports
- WaterCoach on the fly

Scenario = localDataStore

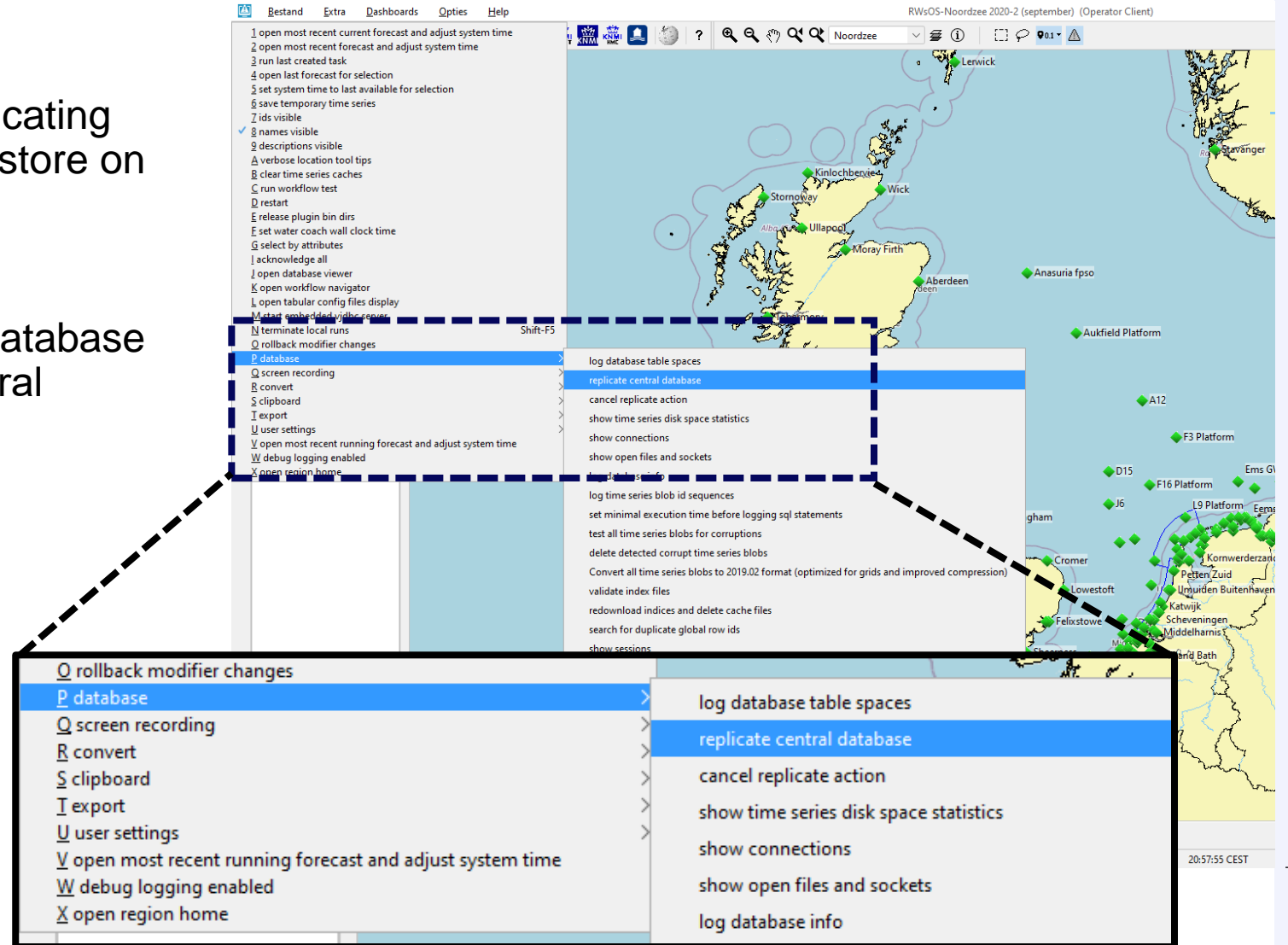


Making a localDataStore – replicate from OC

A localDataStore can be made by replicating data from the central database to datastore on the local PC

Steps:

1. Open F12 menu, and navigate to database menu (P) and select 'replicate central database'



Making a localDataStore – replicate from OC

A localDataStore can be made by replicating data from the central database to datastore on the local PC

Steps:

1. Open F12 menu, and navigate to database menu (P) and select 'replicate central database'
2. Select data of interest (here mainly 12h of timeseries as there is no need to run models)

The 'Profile' dialog box contains the following configuration options:

- Inactive Xml Config
- Active Xml Config
- Inactive Cold States
- Active Cold States
- Inactive ModuleDataSets
- Active ModuleDataSets
- Inactive Map Layers
- Active Map Layers
- Icons
- Report Templates
- Report Images
- Time Series simulated scalar
- Time Series external scalar
- Time Series simulated grids
- Time Series astronomical and climatological
- Time Series external grids
- Time Series invisible external forecast grids
- Warm States
- Log Entries MC
- Log Entries FSS
- Log Entries manual
- Threshold events

<input checked="" type="checkbox"/> Time Series simulated scalar	12	uur	Apply to All
<input checked="" type="checkbox"/> Time Series external scalar	12	uur	Apply to All
<input checked="" type="checkbox"/> Time Series simulated grids	12	uur	Apply to All
<input checked="" type="checkbox"/> Time Series astronomical and climatological	12	uur	Apply to All
<input checked="" type="checkbox"/> Time Series external grids	12	uur	Apply to All
<input type="checkbox"/> Time Series invisible external forecast grids	12	uur	Apply to All
<input type="checkbox"/> Warm States	12	uur	Apply to All
<input type="checkbox"/> Log Entries MC	12	uur	Apply to All
<input type="checkbox"/> Log Entries FSS	12	uur	Apply to All
<input type="checkbox"/> Log Entries manual	12	uur	Apply to All
<input checked="" type="checkbox"/> Threshold events	12	uur	Apply to All

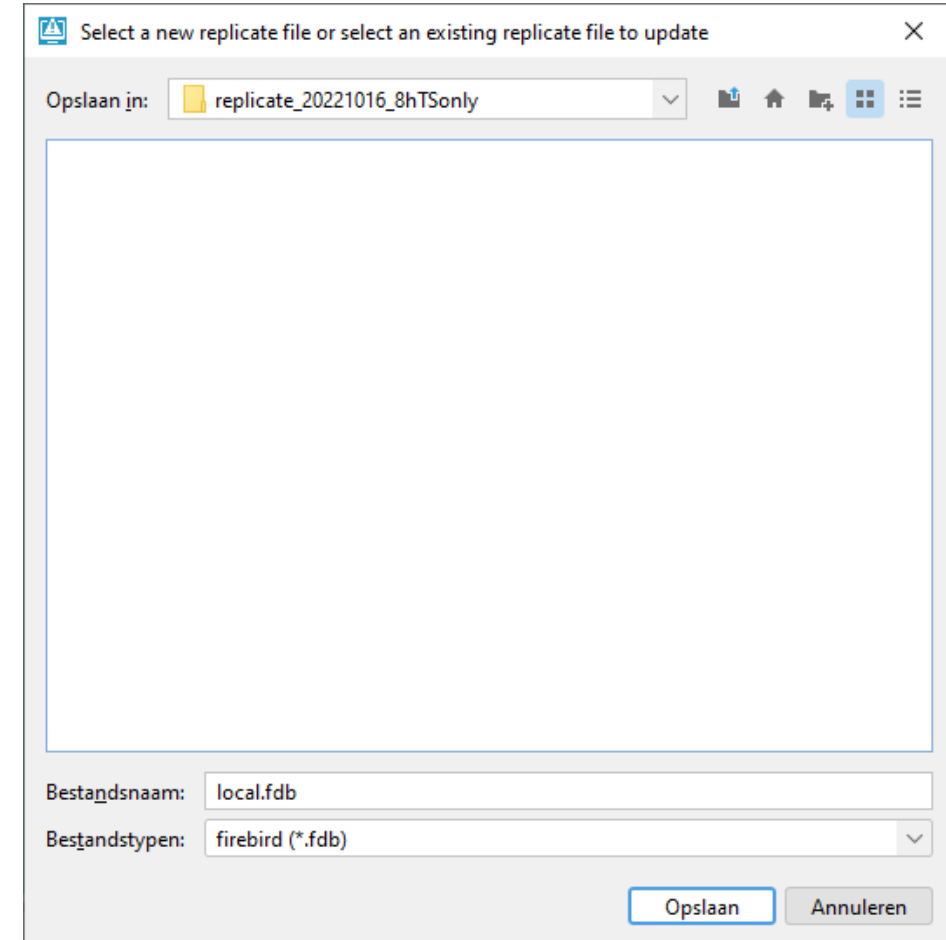
Buttons at the bottom: Select All, Deselect All, Deselect All Config, OK, Annuleren

Making a localDataStore – replicate from OC

A localDataStore can be made by replicating data from the central database to datastore on the local PC

Steps:

1. Open F12 menu, and navigate to database menu (P) and select 'replicate central database'
2. Select data of interest (here mainly 12h of timeseries as there is no need to run models)
3. Set place to save the datastore
 1. For most users, firebird is the preferred database type, so choose that
 2. store as local.fdb as that is the filename a FEWS StandAlone will look for.



→ ***For today, save to regionHome\WaterCoach\ScenarioScriptDatabase\Demo_scenario\LocalDataStore***

Making a localDataStore – data from Open Archive

The Archive Catalogue Display can help to easily import data into an (empty) localDataStore in 2 ways:

- 1) Manual selection of relevant files in the 'search and download' tab
- 2) Importing data of a selected tagged event in the 'search and download events' tab



From scratch, or appending to existing database?

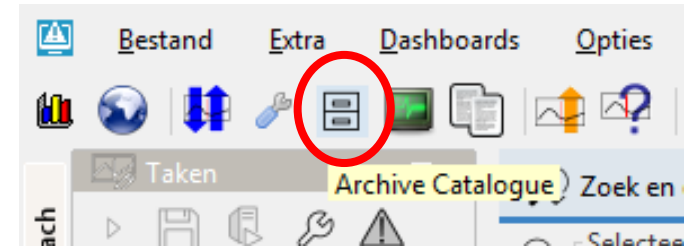
Starting FEWS Stand Alone with empty localDataStore folder to start with empty localDataStore

Start FEWS Stand Alone with localDataStore of interest to add data to that

Making a localDataStore – data from Open Archive

Manual selection of relevant files in the ‘search and download’ tab

- 1) Open the Archive Catalogue
- 2) Go to ‘search and download’ tab
- 3) Use fields to narrow down the data of interest
E.g.,
 - 1) Observations
 - 2) External forecasts
 - 3) Forecasts (simulation with, if archived, model states)
- 4) Press the magnifier glass to search 
- 5) Use double-click on cells to filter even further
- 6) Select data of interest and press  button to import the data into the localDataStore



Making a localDataStore – data from Open Archive

Using event tagging

FEWS supports tagging events to group data for different use cases:

1. Easy downloading a group of data belonging to an event
2. Showing historical event observations in FEWS OC for reference
3. Preventing data from standard archive clean-up actions

More details on event types can be found on the [wiki](#).

Typically, it is recommended to use the WaterCoach event type, which by default marks the following data types:

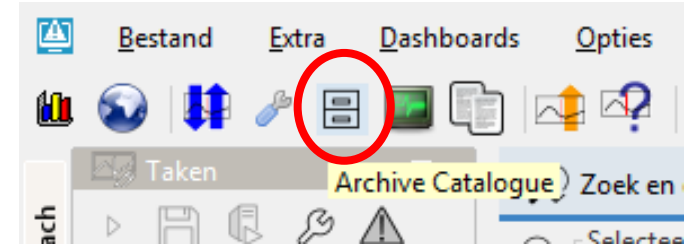
Observations
External forecasts (meteo + hydro)
Own simulations (if relevant: include modifiers and model states)
Forecaster notes
Reports / products

Making a localDataStore – data from Open Archive

Marking an event (typically done in an OC, shortly after an event!)

Open the Archive Catalogue

- 1) Go to ‘make new event tab’
- 2) Press the ‘+’ sign on the left side of the panel
- 3) Choose area of interest
- 4) Choose event type ‘WaterCoach Event’
- 5) Select start and stop period (after inspecting data in the OC)
- 6) Give it a name (and, optionally, a description)
- 7) Press save button
- 8) Press the upload arrow, and confirm this in upcoming dialogue (the event will not turn green)



Making a localDataStore – data from Open Archive

Marking an event (typically done in an OC, shortly after an event!)

Open the Archive Catalogue

1) Go to 'make new event tab'

2)

3)

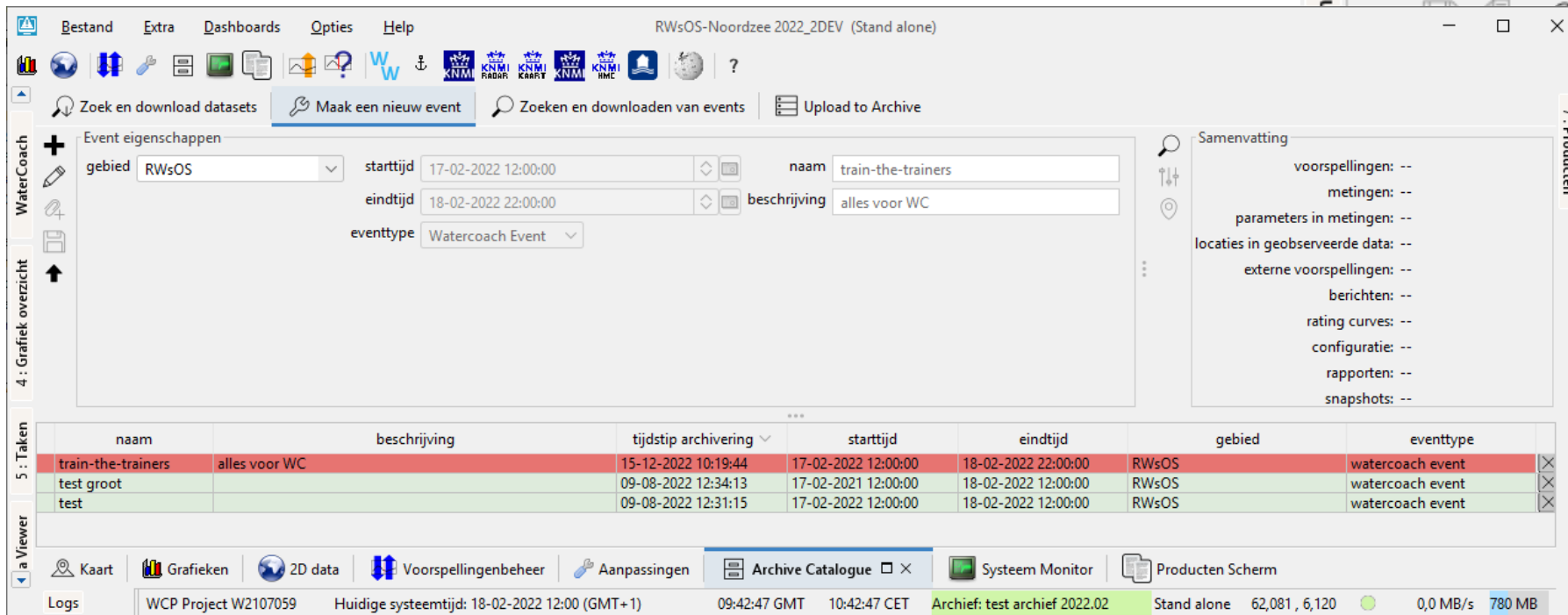
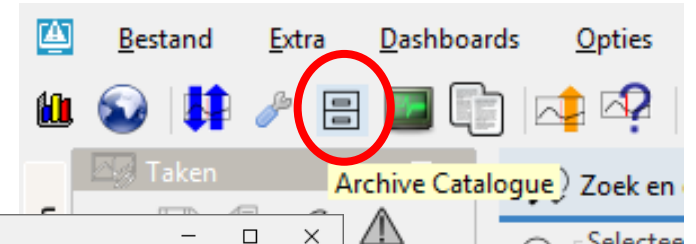
4)

5)

6)

7)

8)



naam	beschrijving	tijdstip archivering	starttijd	eindtijd	gebied	eventtype
train-the-trainers	alles voor WC	15-12-2022 10:19:44	17-02-2022 12:00:00	18-02-2022 22:00:00	RWsOS	watercoach event
test groot		09-08-2022 12:34:13	17-02-2021 12:00:00	18-02-2022 12:00:00	RWsOS	watercoach event
test		09-08-2022 12:31:15	17-02-2022 12:00:00	18-02-2022 12:00:00	RWsOS	watercoach event

(green)

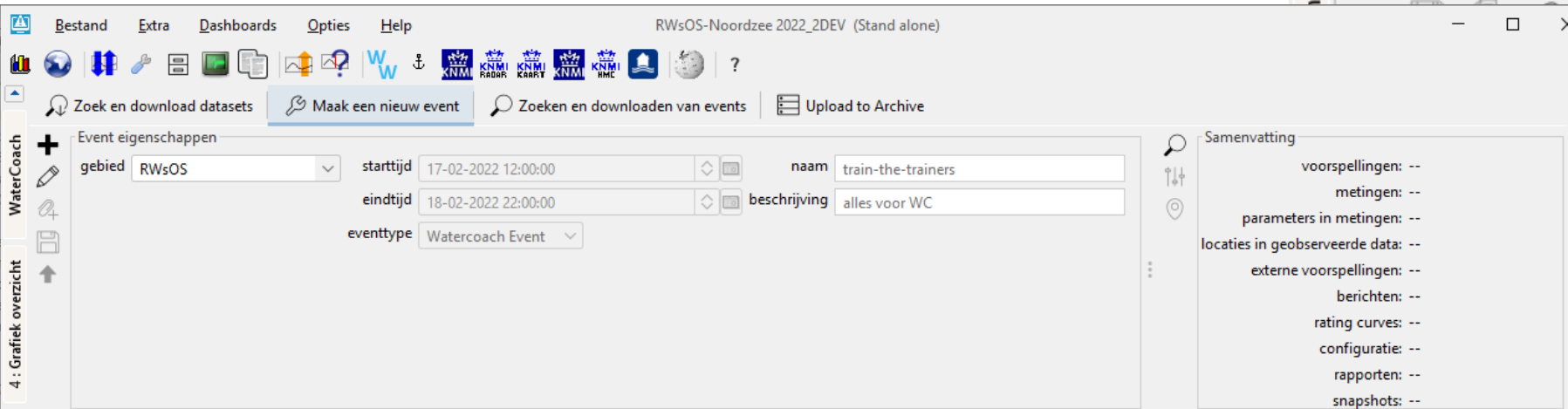
Making a localDataStore – data from Open Archive

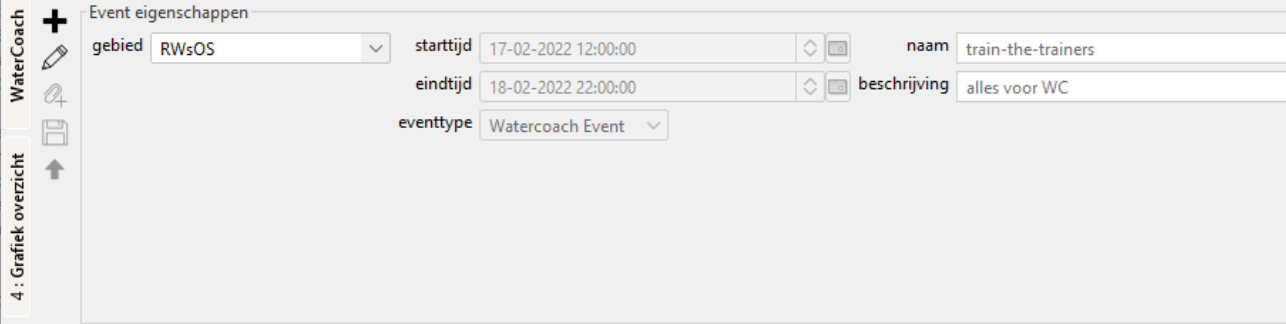
Marking an event (typically done in an OC, shortly after an event!)


Open the Archive Catalogue

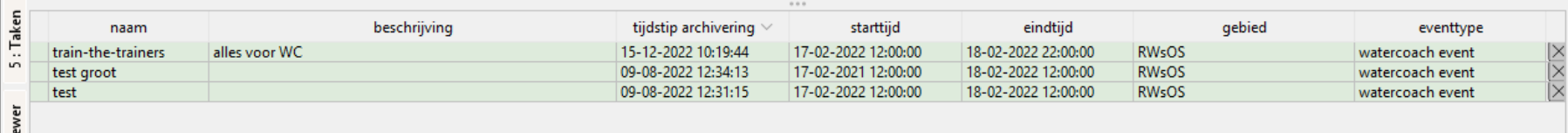
1) Go to 'make new event tab'

2) 

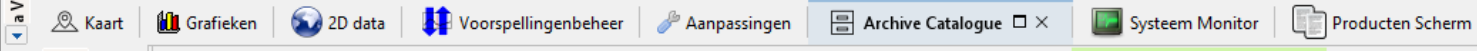
3) 

4) 

4) 

5) 

naam	beschrijving	tijdstip archivering	starttijd	eindtijd	gebied	eventtype
train-the-trainers	alles voor WC	15-12-2022 10:19:44	17-02-2022 12:00:00	18-02-2022 22:00:00	RWsOS	watercoach event
test groot		09-08-2022 12:34:13	17-02-2021 12:00:00	18-02-2022 12:00:00	RWsOS	watercoach event
test		09-08-2022 12:31:15	17-02-2022 12:00:00	18-02-2022 12:00:00	RWsOS	watercoach event

7) 

8) You can edit this event later by pressing the pencil. Requires, again saving & uploading.

green)

Making a localDataStore – data from Open Archive

Marking an event (typically done in an OC, shortly after an event!)

1) Zoek en download datasets

2) Maak een nieuw event

3) Zoeken en downloaden van events

4) Upload to Archive

Event eigenschappen

gebied RWSOS

voeg bestand toe

4: Grafiek overzicht

5: Taken

naam	beschrijving	tijdstip archivering	starttijd	eindtijd	gebied	eventtype
test		09-08-2022 12:31:15	17-02-2022 12:00:00	18-02-2022 12:00:00	RWSOS	watercoach event
test groot		09-08-2022 12:34:13	17-02-2021 12:00:00	18-02-2022 12:00:00	RWSOS	watercoach event
train-the-trainers	alles voor WC	15-12-2022 10:19:44	17-02-2022 12:00:00	18-02-2022 22:00:00	RWSOS	watercoach event

6) Kaart Grafieken 2D data Voorspellingenbeheer Aanpassingen Archive Catalogue Systeem Monitor Producten Scherm

7: Producten

voorspellingen: --
metingen: --
meters in metingen: --
serveerde data: --
voorspellingen: --
berichten: --
rating curves: --
configuratie: --
rapporten: --
snapshots: --

Logs WCP Project W2107059 Huidige systeemtijd: 18-02-2022 12:00 (GMT+1) 09:56:48 GMT 10:56:48 CET Archief: test archief 2022.02 Stand alone 62,081 , 6,120 0,0 MB/s 774 MB

7) Press the upload arrow, and confirm this in upcoming dialogue (the event will not turn green)

8) You can edit this event later by pressing the pencil. Requires, again saving & uploading.

Making a localDataStore – data from Open Archive

Downloading and importing event data

1) STRONGLY RECOMMENDED:

Make sure you have (re)started the FEWS Stand Alone with empty localDataStore
→ *To have a clean setup, and don't risk corrupting a database that is dear to you*

2) Go to 'search and download events' tab

3) Use the area drop-down menu and start/end times to filter out event(s) of interest,
→ press the magnifier glass to apply the settings

4) Select event

Exact location is configured in
<regionHome>\config\DisplayConfigFiles\ArchiveModuleDisplay.xml,
with \$\$ tags resolved in the <regionHome>*_global.properties file

5) Two options:

1) Press 'download and import data' to get all event data in the localDataStore

2) Press 'download data' button to download all event data to the 'ARCHIVE_DOWNLOAD_FOLDER' for inspection/cleanup before running the import manually

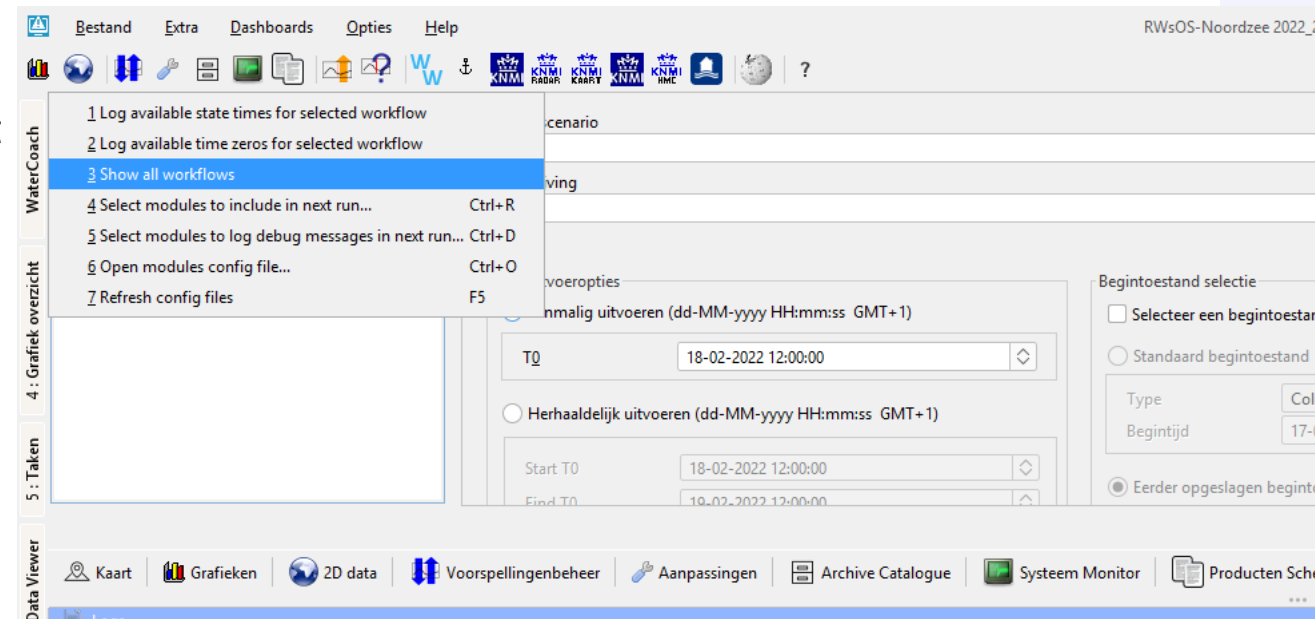
→ Option 2 can be useful if part of the data is not of interest to you, like model states, large NWP grids, etc. Remove the files/folders that you don't need including the accompanying XML files.

Making a localDataStore – data from Open Archive

Importing data downloaded for the event (option 2 previous slide)

1. Start the manual forecast display
2. Move cursor to task panel and press F12 to see more options
3. Choose option 3
4. Search or type 'Archive Import' and select
5. Choose T0, that is after the last date/time of the event
6. Press 'run'
7. FEWS will report when finished

N.B. The files are removed after the import!!!



Making a localDataStore – data from Open Archive

Last steps

1. Close FEWS Stand Alone used for to make the localDataStore
2. Move/Copy the localDataStore to the Scenario folder in the ScenarioScript database dir, etc.

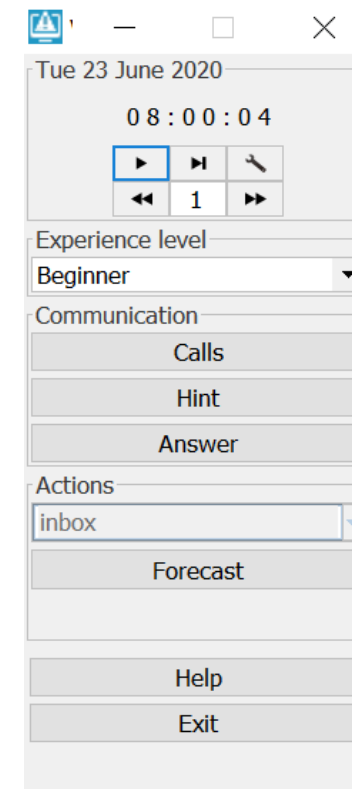
Demonstration of the Script - Components

The story

- Tasks/actions → imports, reports etc.
- Questions → test the tasks/actions
- Calls → mimic reality, additional information

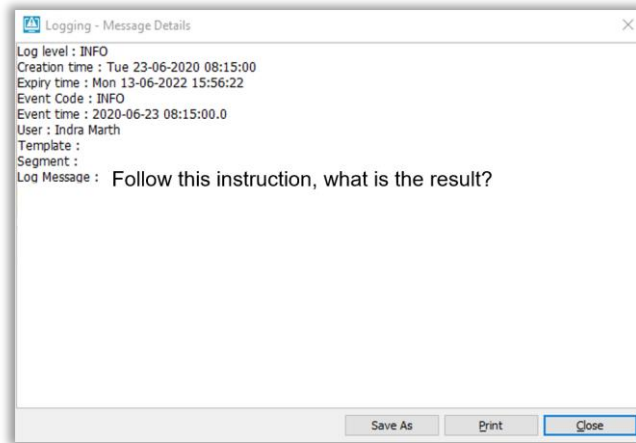
The realization

- Hint → help with tasks/actions or questions
- Answer → gives a preconfigured answer
- Forecast → to fill in and publish answers

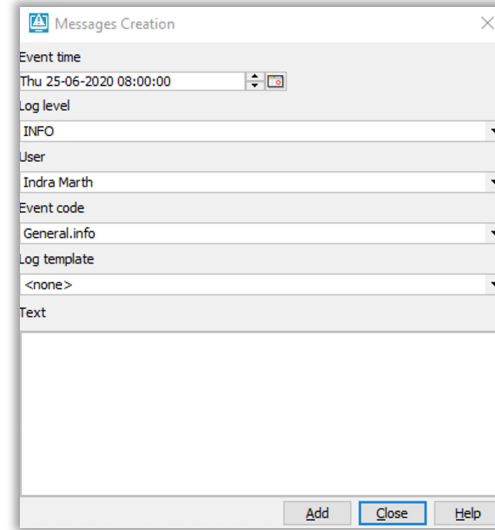


Demonstration of the Script – Communication tools

Messages (input)



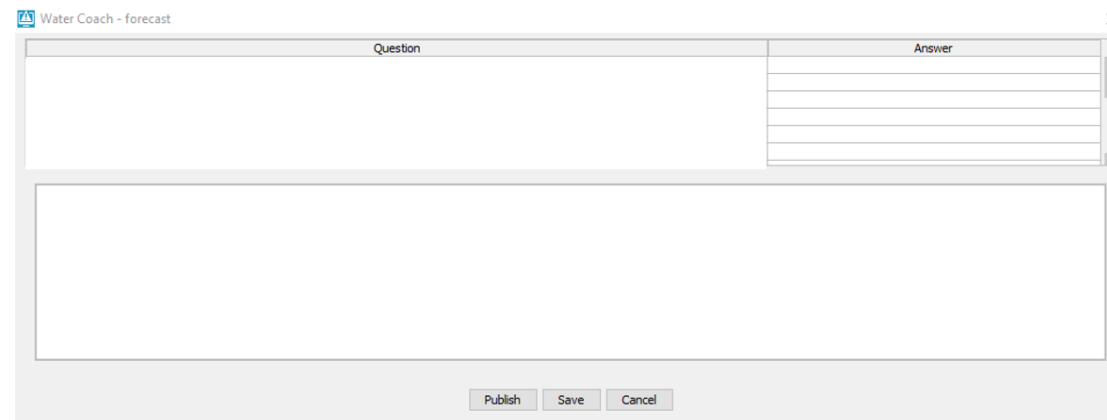
Message creation (output)



Calls (input)



Forecast (output)



My own scripts - Outline

The script is a story line.

Thus it is relatively easy to make several variations of a script.

The learning objectives should be leading in this process.



Example

- Meteorological forecaster communication can be based on ensemble members of the NWP.
- These can be pretty extreme and also quite different from the “observed” outcome.
- This is an easy way to modify the interaction in a realistic way.

Make it interactive!!

My own scripts - Outline

Get started with your own script:

- What are the learning objectives? Tailor script for this.
 - Button course
 - Communication
 - Make a forecast
- How can you use the possibilities of the Water Coach script?
 - Stories / communication buttons
 - Experience levels
 - Forecast table
 - Conditions



My own scripts - Content

- Messages used in scripts can be based on actual data.
- Define methods or procedures to save relevant data, such as:
 - E-mails,
 - Phone calls with meteorological forecasters,
 - Discussion within the team,
 - Forecasts,
 - Evaluation of the team afterwards,
 - After event analysis, including comments on model performance in the specific situation
 - Reports
- Single user or multi-user?



Making a WaterCoach script

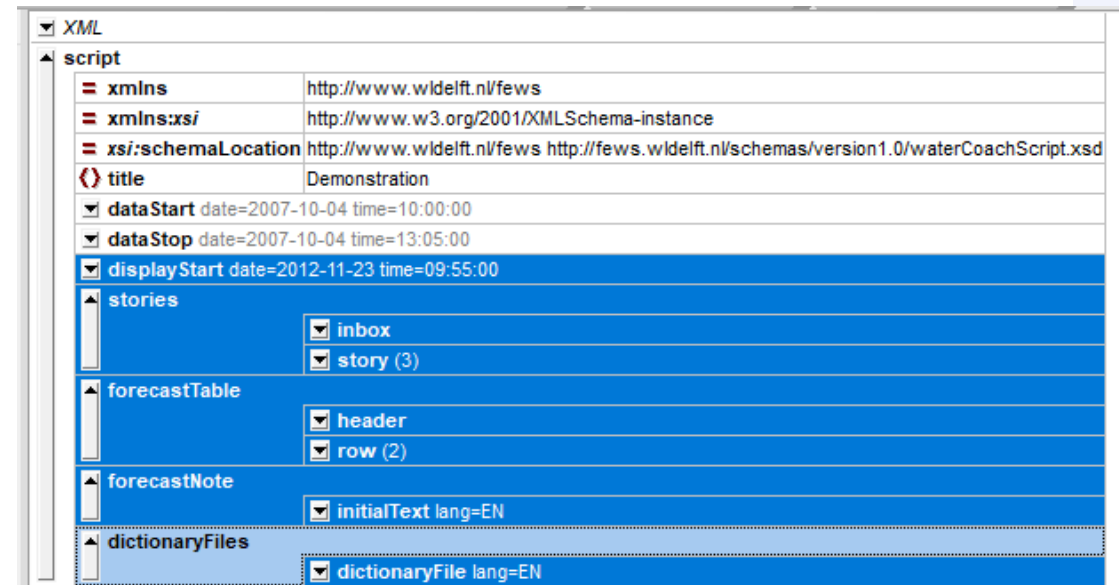
Details on wiki:

<https://publicwiki.deltares.nl/display/FEWSDOC/Script+configuration>

The example file on the wiki has many fields that are optional. These are here marked in blue.

Relevant option for many users: shift the scenario in time by setting the display start time, e.g.:

```
<displayStart date="2024-10-16"  
time="15:00:00"/>
```



Getting a FEWS configuration

Step 1: Get a configuration

Options:

- Copy of current live system's configuration
- Download from Open Archive
- (get from repository; not part of this course)

Step 2: Augment with WaterCoach configuration

Getting a FEWS configuration – export current configuration from OC

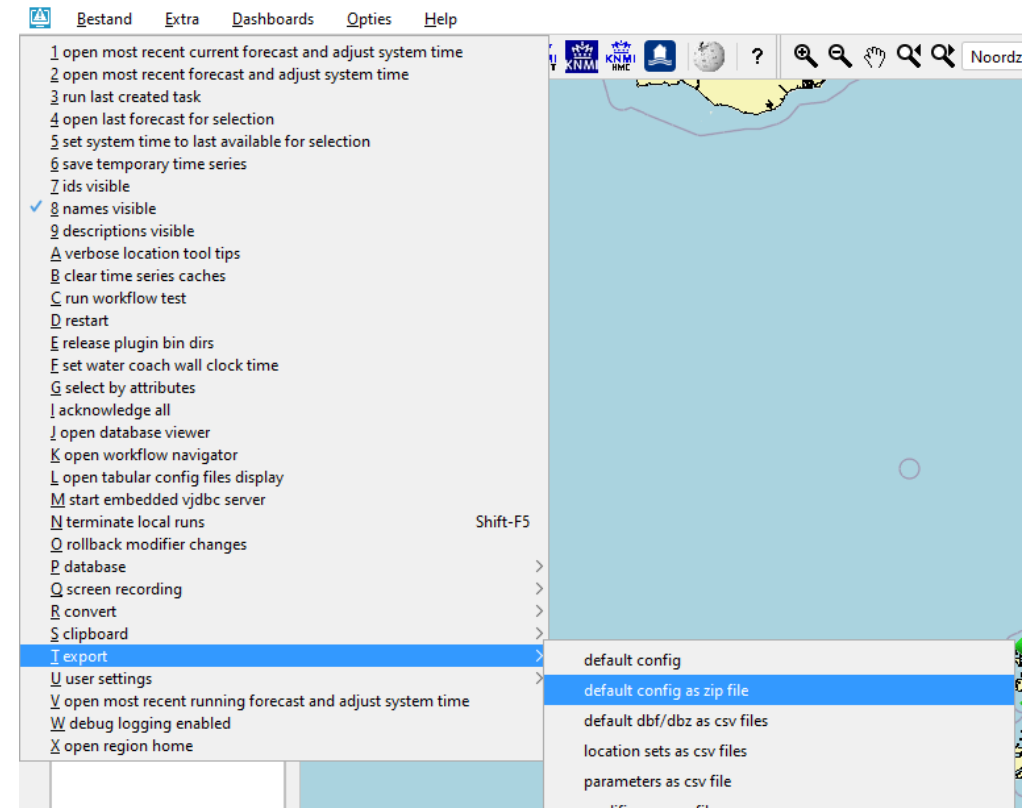
The current configuration can be exported from the OC and saved to a place on the PC

Steps:

1. F12 menu, Export (T), select 'default config as zip file.'
2. Choose place to save the file

N.B.: If it is not needed to run models, one can empty the subfolders 'ColdStateFiles' and 'ModuleDataSetFiles' later

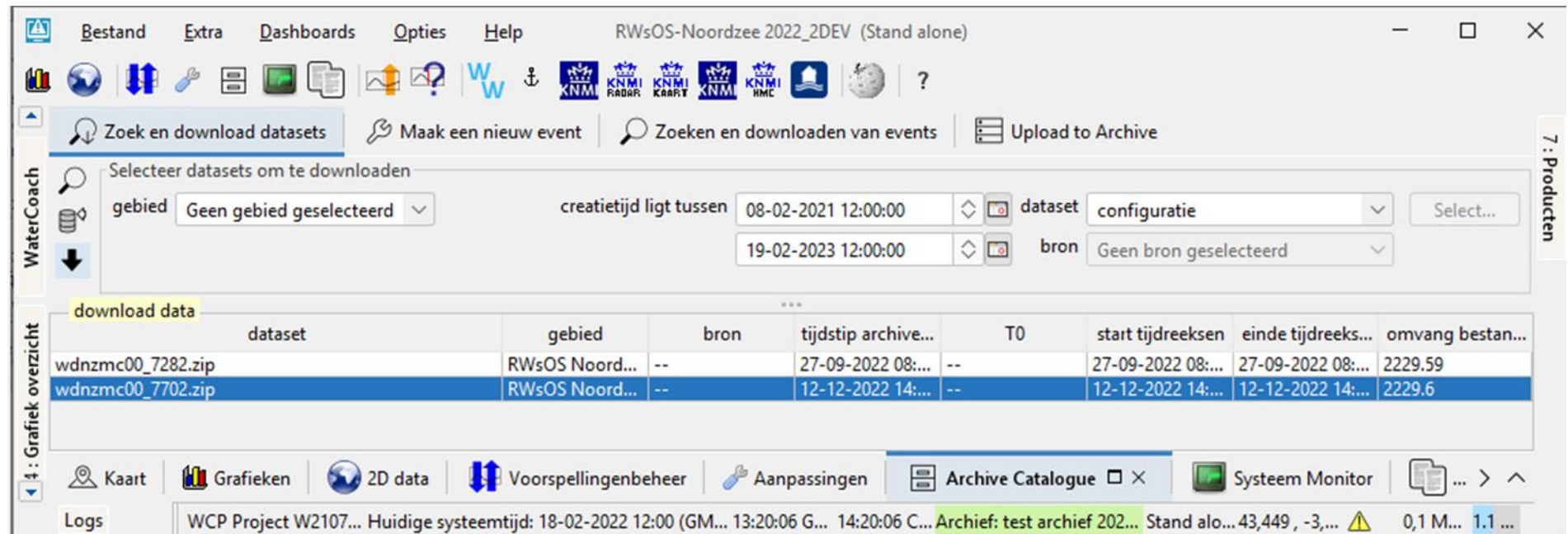
→ Move or copy as config.zip to the relevant folder in the ScenarioScriptDatabase ([see this slide](#))



Getting a FEWS configuration – download from Open Archive

At Rijkswaterstaat, a daily routine will be scheduled at night, to check if the FEWS configuration was changed, and export the configuration as a zip file to the Open Archive.

These configurations can be downloaded through the FEWS **Archive Catalogue** in your Stand Alone.



The screenshot shows the 'Archive Catalogue' window in the FEWS software. The window title is 'RWsOS-Noordzee 2022_2DEV (Stand alone)'. The interface includes a search bar, a 'Maak een nieuw event' button, and a 'Zoeken en downloaden van events' button. Below these, there are filters for 'gebied' (set to 'Geen gebied geselecteerd'), 'creatietijd ligt tussen' (with dates '08-02-2021 12:00:00' and '19-02-2023 12:00:00'), 'dataset' (set to 'configuratie'), and 'bron' (set to 'Geen bron geselecteerd').

dataset	gebied	bron	tijdstip archive...	T0	start tijdreeksen	einde tijdreeks...	omvang bestan...
wdnzm00_7282.zip	RWOS Noord...	--	27-09-2022 08:...	--	27-09-2022 08:...	27-09-2022 08:...	2229.59
wdnzm00_7702.zip	RWOS Noord...	--	12-12-2022 14:...	--	12-12-2022 14:...	12-12-2022 14:...	2229.6

The bottom of the window shows a taskbar with various icons and a status bar with system information.

Getting a FEWS configuration – download from Open Archive

To get the data:

- 1) Open the search and download tab
- 2) Adapt area, time span
- 3) Set dataset type to 'archive'
- 4) Search
- 5) Select
- 6) Download

!
If button 'download and import' it used, a new FEWS instance is started in c:\feWS\<<archive_download folder>\configuration\tempRegionHomes\
!

The screenshot shows the 'RWsOS- Noordzee 2022_2DEV (Stand alone)' application window. The 'download data' section is active, displaying a table of datasets. A blue arrow points from the 'Download' step in the list to the download icon in the interface. A red 'X' is over the search icon, and a blue arrow points from the search bar to the 'download data' section.

dataset	gebied	bron	tijdstip archive...	T0	start tijdreeksen	einde tijdreeks...	omvang bestan...
wdnzmc00_7282.zip	RWsOS Noord...	--	27-09-2022 08:...	--	27-09-2022 08:...	27-09-2022 08:...	2229.59
wdnzmc00_7702.zip	RWsOS Noord...	--	12-12-2022 14:...	--	12-12-2022 14:...	12-12-2022 14:...	2229.6

Getting a FEWS configuration – download from Open Archive

To get the data:

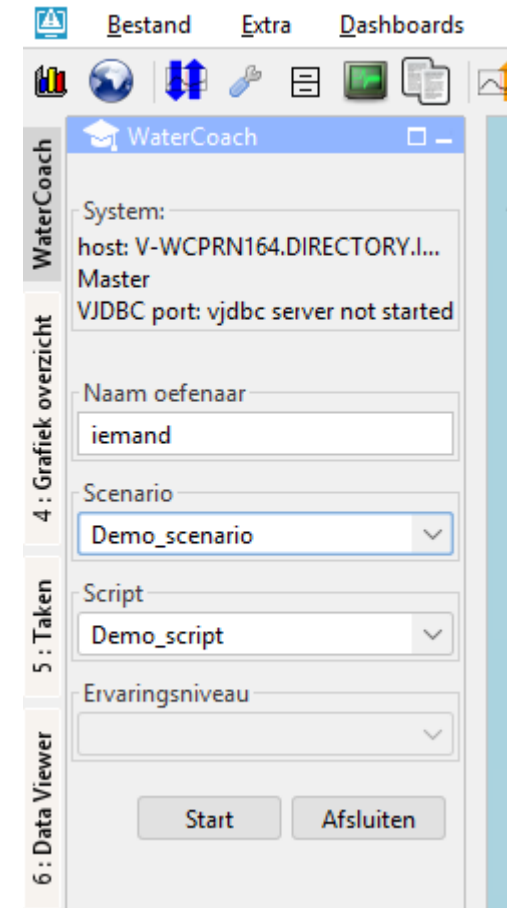
- 1) Open the search and download tab
- 2) Adapt area, time span
- 3) Set dataset type to 'archive'
- 4) Search
- 5) Select
- 6) Download

Download results in a .zip like this :
c:\fews\`<archive_download_folder>`\configuration\config\rwsos.noordzee\20221014\wdnzm00_7702\wdnzm00_7702.zip
(with accompanying metadata.xml that the archive catalogue needs for indexing; this file is not needed for making a WaterCoach)

- 7) Copy as config.zip to the relevant folder in the ScenarioScriptDatabase ([see this slide](#))

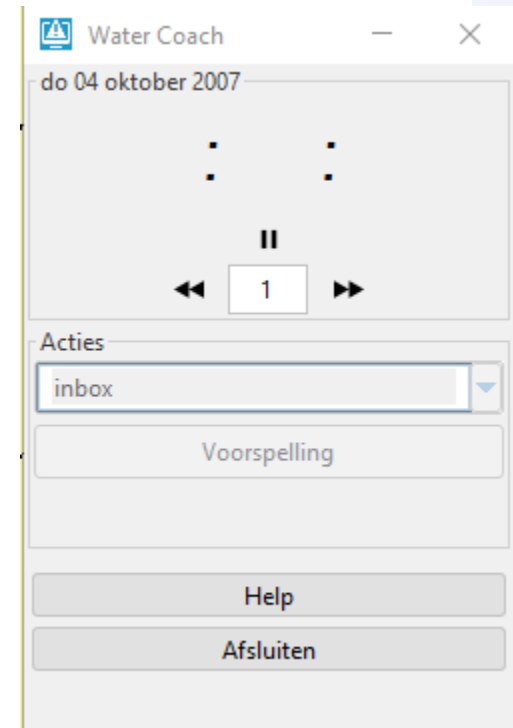
Testing the scenario

1. Open the WaterCoach panel
2. Test the scenario by adding a name for the participant and press 'start'



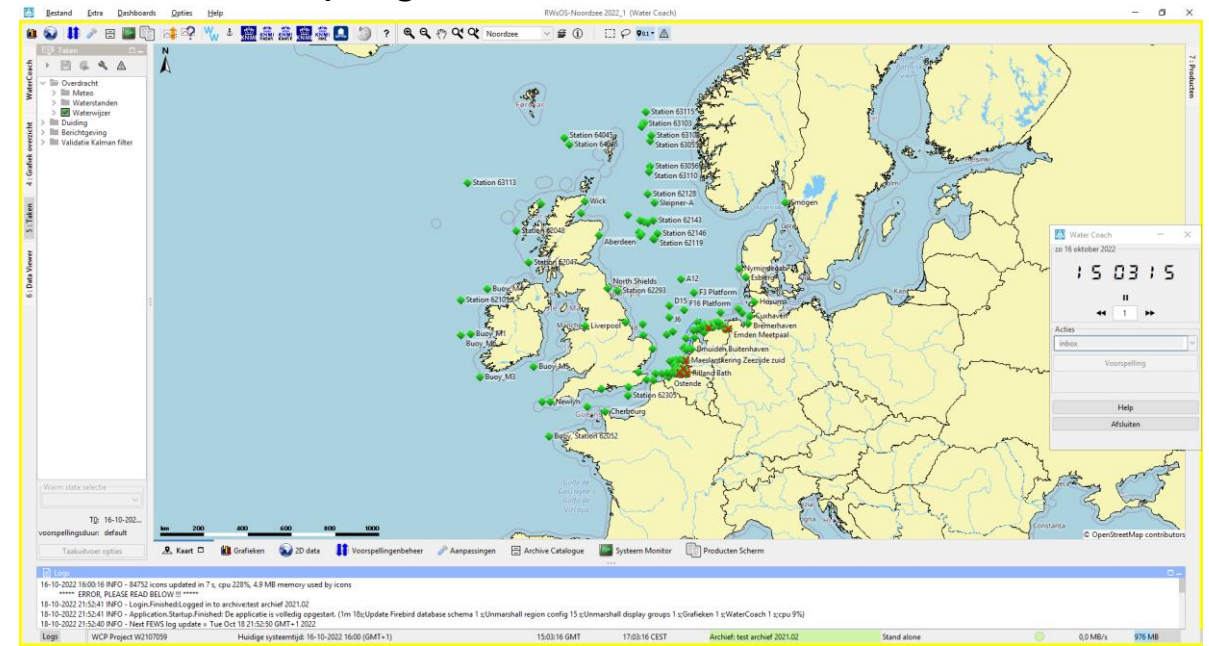
Making a FEWS configuration – Augment with WaterCoach configuration

1. Open the WaterCoach panel
2. Test the scenario by adding a name for the participant and press *'start'*
3. While you wait for FEWS to prepare the session the WaterCoach clock is empty
 - a. Particularly if a large localDataStore needs to be copied, this may take a while



Making a FEWS configuration – Augment with WaterCoach configuration

1. To test if WaterCoach is set up as desired, check if you have a WaterCoach panel on the top left.
2. Click and see that a WaterCoach panel opens
3. Test the scenario by adding a name for the participant and press 'start'
4. While you wait for FEWS to prepare the session the WaterCoach clock is empty
 - a. *Particularly if a large localDataStore needs to be copied, this may take a while*
5. When fully started, a yellow border appears, and time starts to progress



WaterCoach on the Fly – What is it?

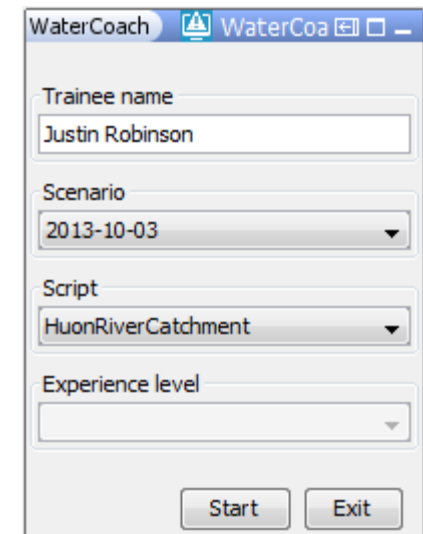
A **scenario** consists of data, preferably **realistic** data

The FEWS Archive Catalogue Displays can be helpful here; steps:

1. **Tag an event** in the OC; relevant data is marked in the catalogue
2. Open an **SA with empty localDataStore**
3. **Select the event and import the data**

Next steps:

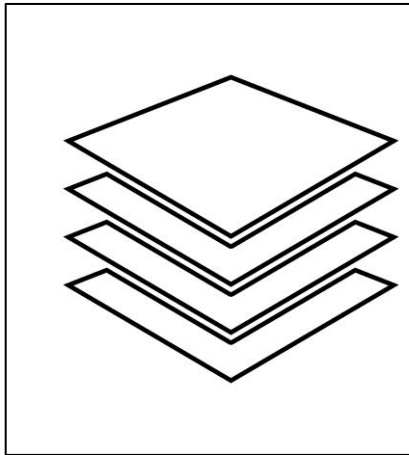
4. Make a **script** (XML); can be just exercise title, start and end time
5. **Store** script with configuration and localDataStore in dedicated **folder structure**
6. Open WaterCoach panel and select the script of interest



WaterCoach on the Fly - What is it?

A **scenario** consists of data from a folder with **realistic data**

The FEWS Analysis can be helpful here; steps:



logue

4. Make a scenario
5. **Store** script
6. Open WaterCoach

exercise title, start and end time

LocalDataStore in dedicated **folder**

the script of interest

WaterCoach

System:
host: L03181.DIRECTORY.INTRA
Master
VJDBC port: vjdbc server not started

Select scenario

Trainee name

Scenario

Script

Experience level

Generate scenario

Scenario name

Start time
14-02-2023 13:00:00

End time
17-02-2023 13:00:00

Import grids as reference
 Import model states
 Import modifiers

Generate Exit

Q&A,
feedback,
closure

Contact

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The Open Archive – How?

Summary of FEWS' Open Archive solutions

