

Deltares

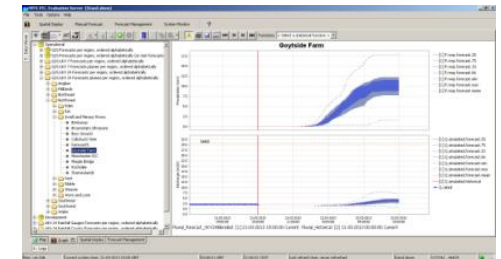
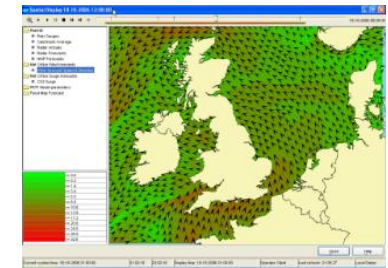
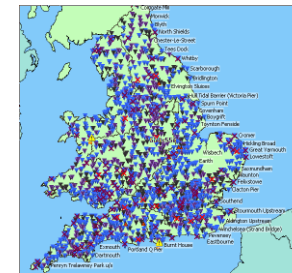
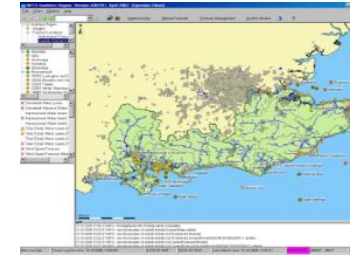
Delft-FEWS User Days

IMFS

**Ian Clayton, Alan Smith (EA)
Paul Wass (JBA)
Marc van Dijk (Deltares)**

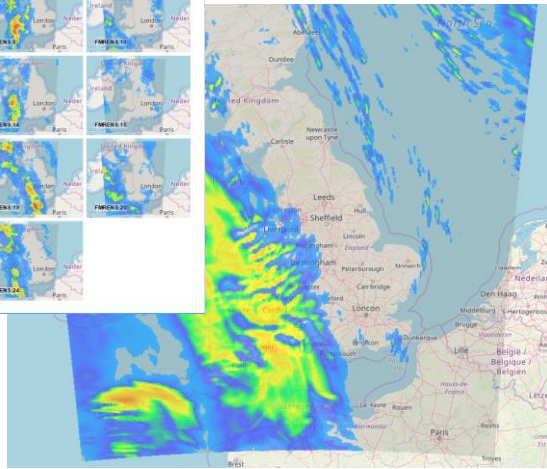
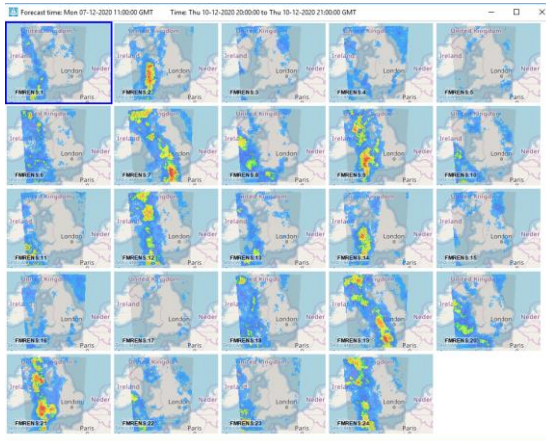
NFFS – FFFS - IMFS Project History

- 2003 National Flood Forecasting System for England and Wales
 - Migrate existing **regional systems** to Delft-FEWS client-server
 - Large differences in models and experience (>20 models)
 - Harmonisation: national consistency and National Datasets
- 2007: **National** implementation for FFC
 - Close cooperation between EA and Met Office
 - Use of new ensemble products for probability forecasting
- In 2010: National **Bathing Water Quality** System
 - National Coastal lookup tables for water quality
 - Use observed and forecasted rainfall as input
- 2018-2021: Future Flood Forecasting System
 - One national system for floods & bathing water quality
 - Simplified maintenance: **scripted configuration** from reference database
 - Deployment in the **cloud** (Azure)
 - Development team: EA, JBA & Deltares

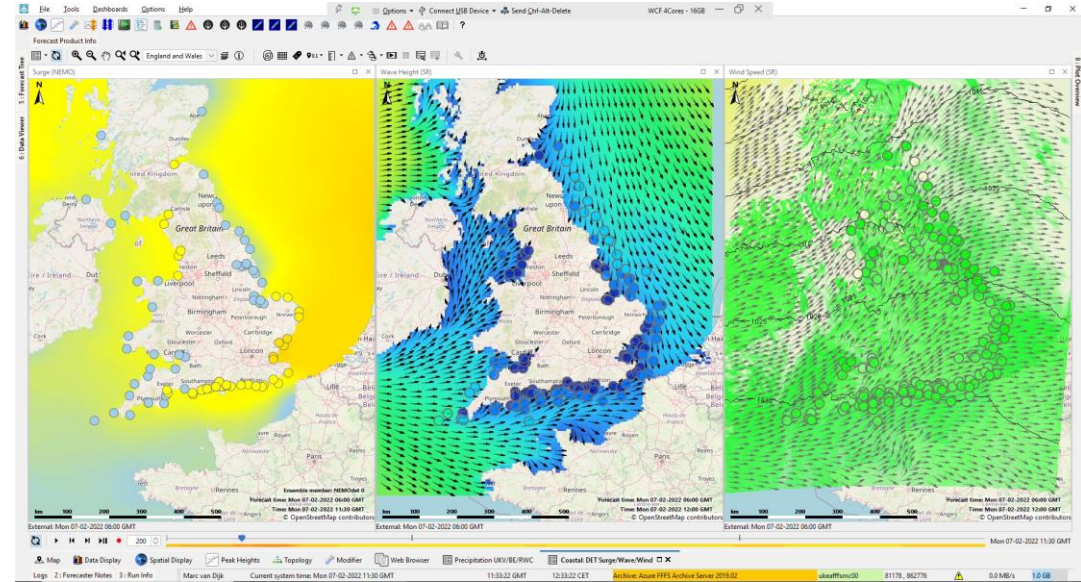


Delft-FEWS Software Developments

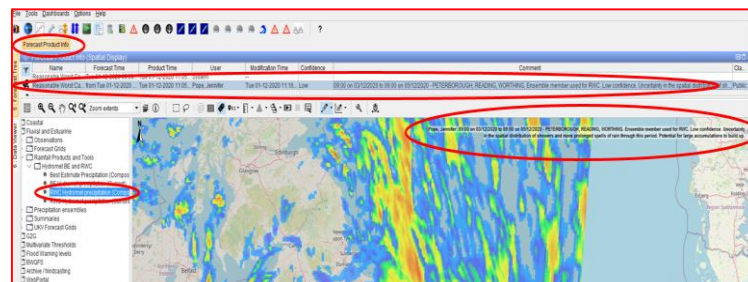
Ensemble Thumbnails



Dashboards



Forecast Product Information



New Table/Threshold Display

	RFS 6 hr (OP)		RFS 12 hr (OP)		RFS 6 hr (BE)		RFS 12 hr (BE)		RFS 6 hr (RWC)		RFS 12 hr (RWC)								
Location	01/12 06:00		01/12 12:00		01/12 18:00		02/12 00:00		02/12 06:00		02/12 12:00		02/12 18:00		03/12 00:00		03/12 06:00		
	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	
<input checked="" type="checkbox"/> Birmingham																			
● Shropshire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.38	0.05	0.63	0.08	1.22	0.48	5.52	
● Central Area	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.28	0.17	0.69	0.00	0.00	0.06	
● Severn Lowlands	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.74	0.00	0.00	0.01	0.47	
● Staffs / High Peaks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.30	1.44	0.12	0.81	0.07	2.66	0.01	0.78	
● Trent Lowlands	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.13	0.03	0.24	0.00	0.06	0.00	0.03	
● Avon / Soar Headwaters	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.33	1.10	0.00	0.00	0.00	0.00	
● Tems and Wye	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.37	0.02	0.22	0.05	1.45	0.11	4.50	
<input checked="" type="checkbox"/> Peterborough																			
<input checked="" type="checkbox"/> Wales																			
<input checked="" type="checkbox"/> Exeter																			
<input checked="" type="checkbox"/> Worthing																			

Improved Templating of Configurations

IMFS Components



- Azure Cloud Environment



- IMRD-IMTD databases with reference data, models and thresholds



- Delft-FEWS configuration scripts: developed in Python



- Delft-FEWS Software + IMFS Configuration

- IMFS Model Performance Module

Deltares

