European Commission

Copernicus
Emergency Management Service (EMS)

The integration of ERICHA into the European Flood Awareness System

A success story

Joint Research Centre

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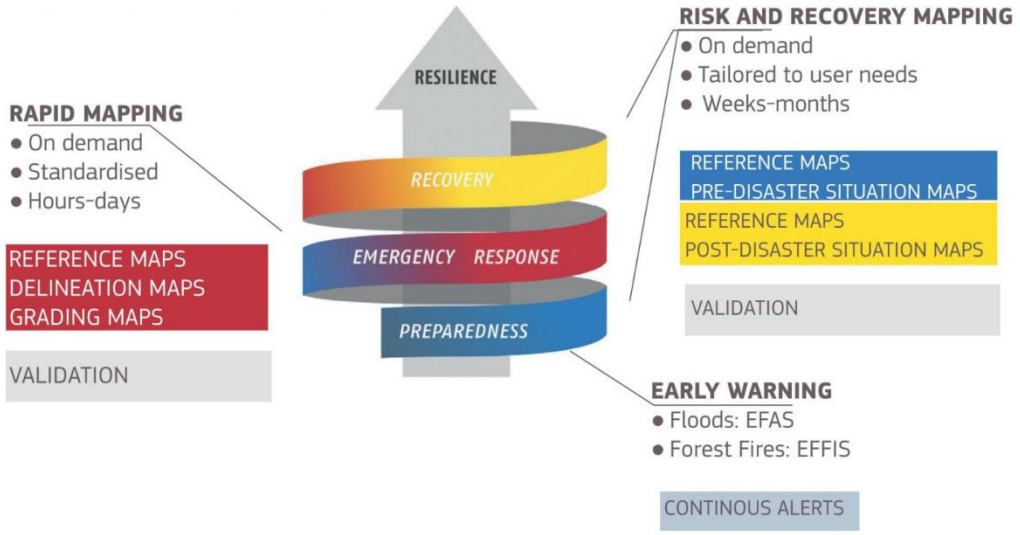
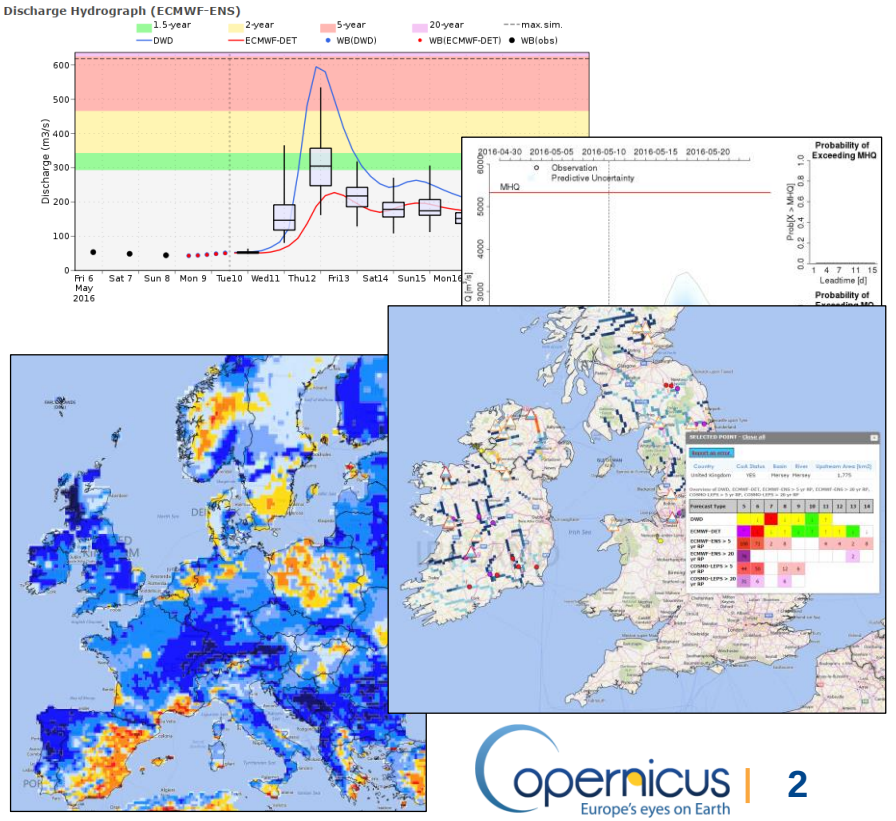
Europe's eyes on Earth

European Flood Awareness System (EFAS)

Objective: Provide **complementary, added value** flood early warning & monitoring products to improve the preparedness and emergency response of relevant stakeholders

Development started in 2003 - since September 2012 fully operational as part of the Copernicus Emergency Management Service





More than 50 EFAS Partners

(29 countries, national/regional hydro-meteo authorities, civil protection)

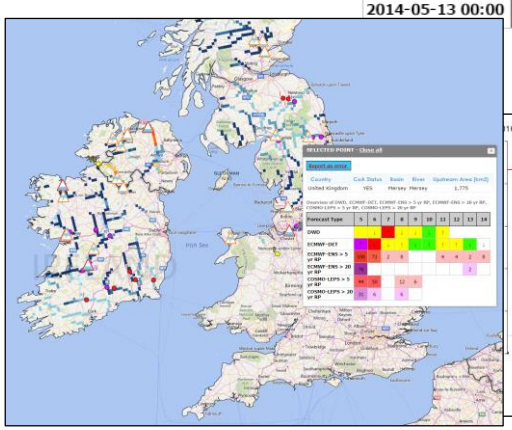
European Flood Awareness System (EFAS)

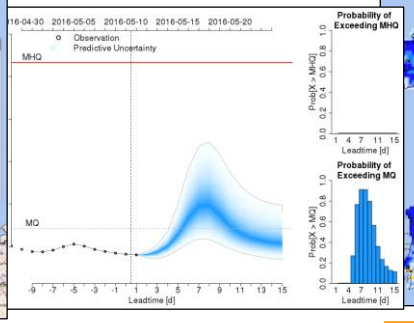
Added value through:

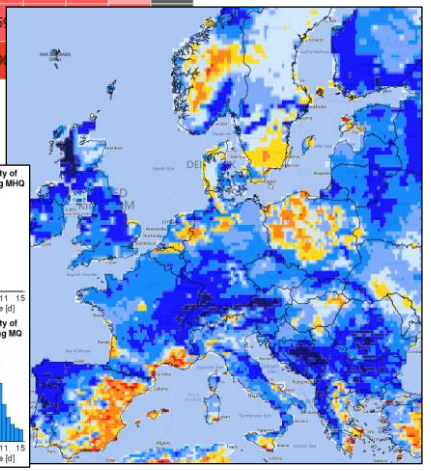
- ★ **Trans-national, river basin wide, probabilistic, medium range forecasts**
- ★ **Knowledge exchange** – building a community
- ★ **Bridging science & operations** – testing new & innovative products (example: ERICHA!)

EUE > HAL

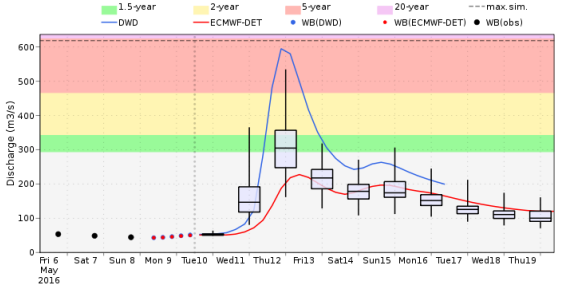
Forecast Day	10	11	12	13	14	15	16	17	18	19	20	21	22
2014-05-10 00:00							16	33	35	35			
2014-05-10 12:00					2	6	14	27	37	33			
2014-05-11 00:00						4	27	43	53	53	39		
2014-05-11 12:00						10	35	49	55	43	39		
2014-05-12 00:00							6	22	41	49	41	31	
2014-05-12 12:00						2	18	47	5				
2014-05-13 00:00							14	61	9				







Discharge Hydrograph (ECMWF-ENS)

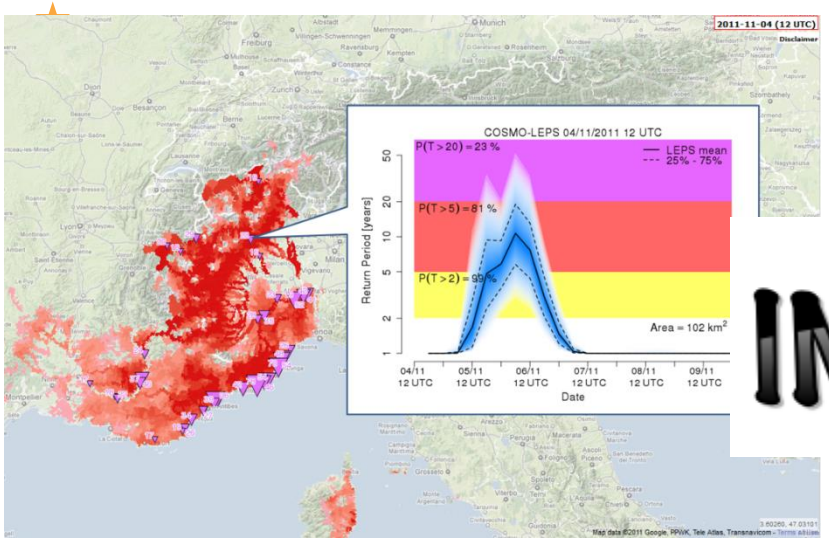


Overview of DWD, EUD, EUE > HAL, EUE > SAL

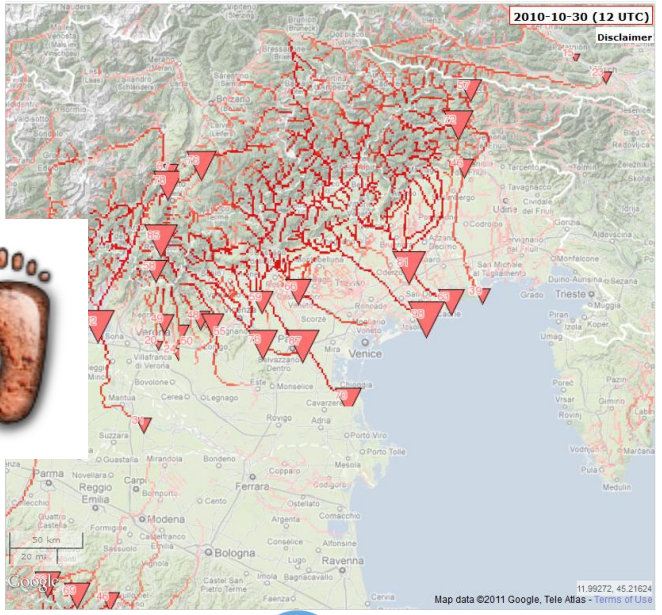
Forecast Type	13	14	15	16	17	18	19	20	21	22
DWD		↓	↓	↑	↑	*	↓			
EUD		↓	↑	↑	↑	*	↓	↓	↓	↓
EUE > HAL				14	61	90	90	88	82	69
EUE > SAL					22	47	47	37	31	14
COS > HAL				25	69					
COS > SAL				12	37					

EFAS & flash floods

- ★ **EFAS flash flood products are based on an indicator developed in IMPRINTS**
- ★ **Make use of high-res, ensemble forecasts – good for ranges from 6h – 72h**
- ★ **Monitoring and nowcasting was not covered**

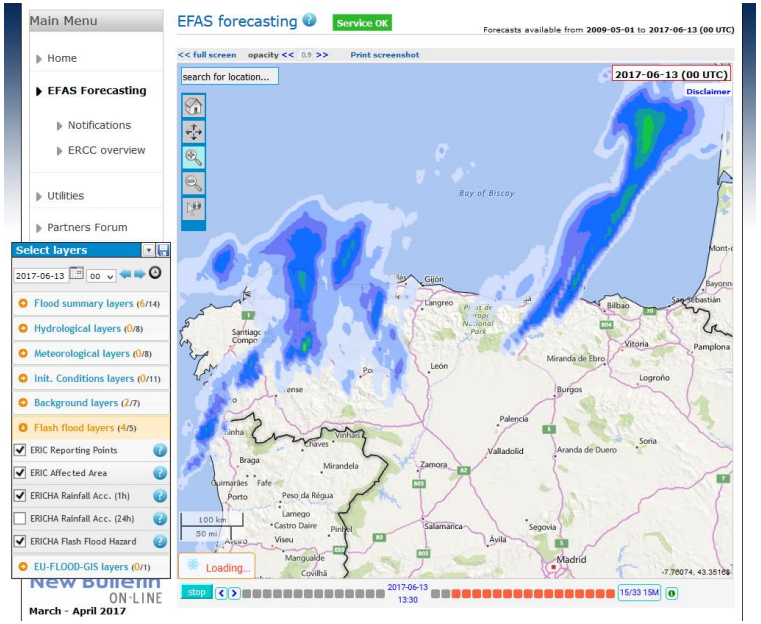


IMPRINTS



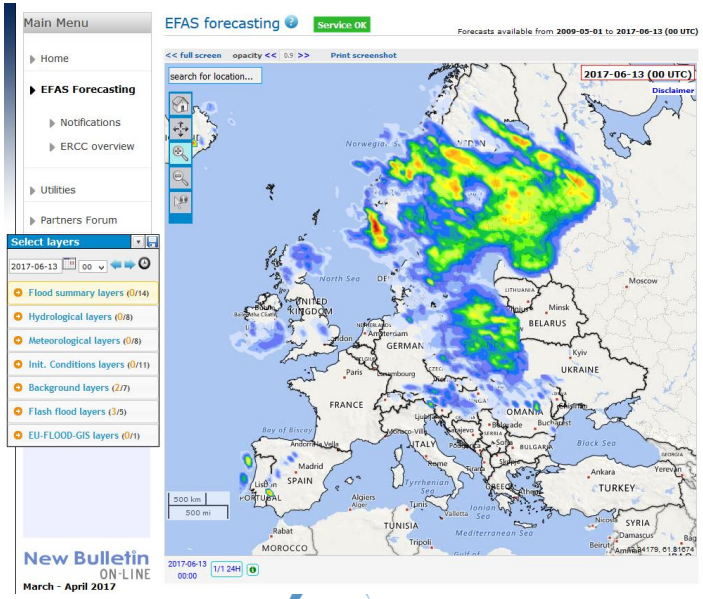
EFAS & ERICHA

- ★ **Integration of ERICHA products into EFAS closes a gap**
- ★ **Enables seamless monitoring and forecasting**
- ★ **Best practice example for transferring science into operations!**
- ★ **Making ERICHA products accessible for a broad user community**



ERICHA

European Civil Protection



Future work

- First version of ERICHA products is now available through EFAS
- More work is needed to improve visualization & performance
- Integration of the next scientific developments from ERICHA (?) into EFAS