



Copernicus Emergency Management Service

What's New in EFAS? CEMS-Flood User Corner

EFAS Annual Meeting 2022

Presented by Karen O'Regan

27 09 2022





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EFAS Wiki



<https://confluence.ecmwf.int/display/CEMS/CEMS-Flood>

ECMWF Copernicus Emergency Management Service - CEMS

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CEMS-Flood

Created by Francesca Di Giuseppe, last modified by Karen O'Regan on Sep 01, 2022.

Copernicus Emergency Management Service - Floods (CEMS-Flood) include two operational services, both operated by ECMWF who have the responsibilities of running the forecasts, post-processing, and hosting the associated information system platforms.

EFAS is the European Flood Awareness System. It is operational since 2012 in collaboration with several European organisations responsible for producing and providing the flood information. It provides pan-European overview maps of flood probabilities up to 15 days in advance, seasonal streamflow outlooks up to 3 months ahead, and flash-flood risk.

Access To EFAS web
<https://www.efas.eu/en>

GloFAS is the Global Flood Awareness System, It is operational since 2018 and provides global overview maps of flood probabilities up to 30 days in advance and seasonal streamflow outlooks up to 4 months ahead.

Access to GloFAS web
<https://www.globalfloods.eu/>

CEMS-Flood wiki

The CEMS-Flood wiki is split into three main branches, which you can see 'page trees' for below. The pages describe the main CEMS-Floods products and services, including product descriptions, system versioning, and data access.

- **European Flood Awareness System:** For information related specifically to the EFAS system, its detailed documentation and product descriptions, etc.
- **Global Flood Awareness System:** For information related specifically to the GloFAS system, its detailed documentation and product descriptions, etc.
- **CEMS-Flood User Guide Corner:** Hosts various user guides relating to the CEMS-Flood services including: EFAS, GloFAS, and Data user guides. Documentation in the 'CEMS-Flood Data User Guide' covers information that is not EFAS/GloFAS specific including: data availability, data structures/formats, data access, how to work with our data, and user support information.

There is an additional branch of the wiki relating to CEMS-Flood Development and Outreach, where you can find out more on our publications, studies, and webinars.

European Flood Awareness System: Browse by content

Expand all Collapse all

- EFAS models and procedures
 - EFAS meteorological forcing and land surface data
 - EFAS hydrological forecasting chain
 - EFAS hydrological model

Global Flood Awareness System: Browse by content

Expand all Collapse all

- GloFAS models and procedures
 - GloFAS meteorological forcings
 - GloFAS hydrological models
 - GloFAS medium-range forecasting

CEMS-Flood User Guide Corner: Browse by content

Expand all Collapse all

- placeholder - EFAS User Guide
- placeholder - GloFAS User Guide
- CEMS-Flood Data User Guide
 - CEMS-Flood Terminology



Search CEMS-Flood wiki

Search this documentation for...



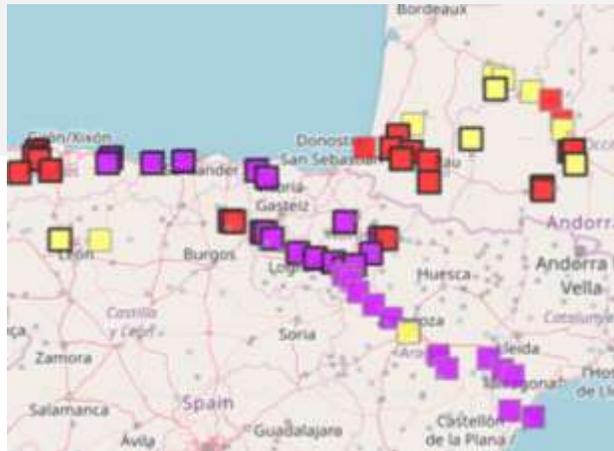
Reporting Points

Introducing the purple points and probability persistence

Indicates 1-in-20 year/severe flood signals

Changes made to:

- Dynamic reporting points algorithm
- Reporting point thresholds

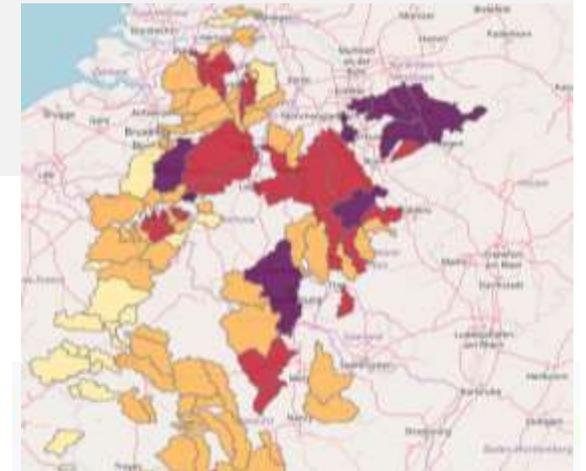


TAMIR

Implemented in September 2022

4 new flash flood products:

- Catchment summaries
- Impacts Forecasts
- Past 24-h precipitation
- Total Precipitation 80th Percentile





Post Processing

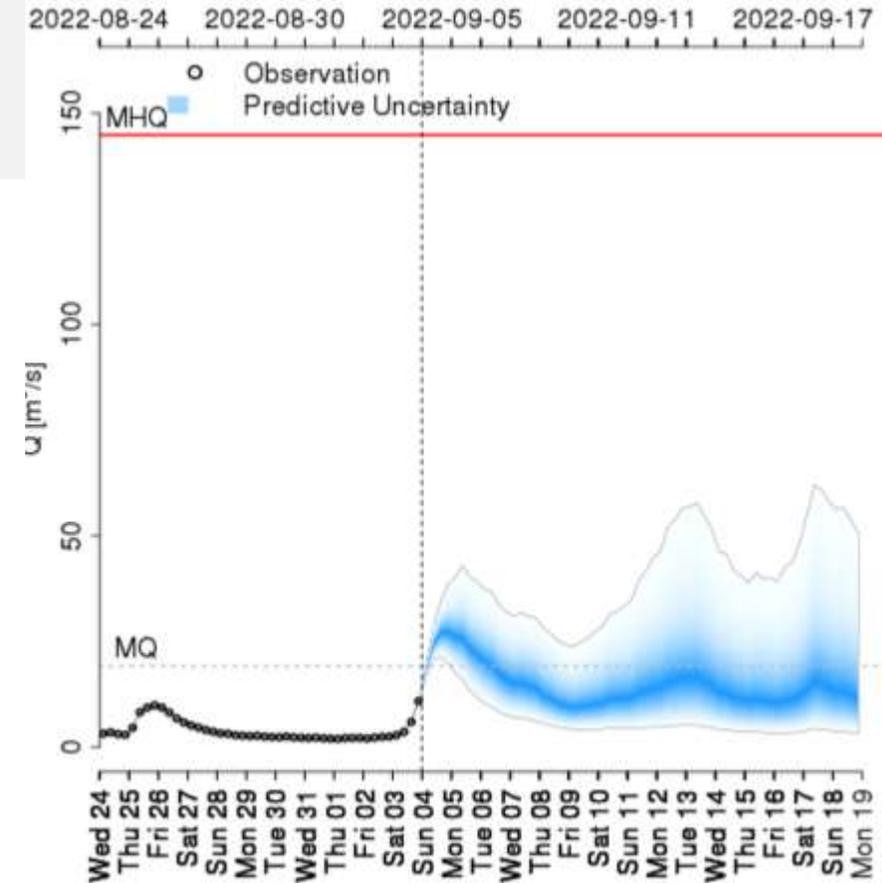
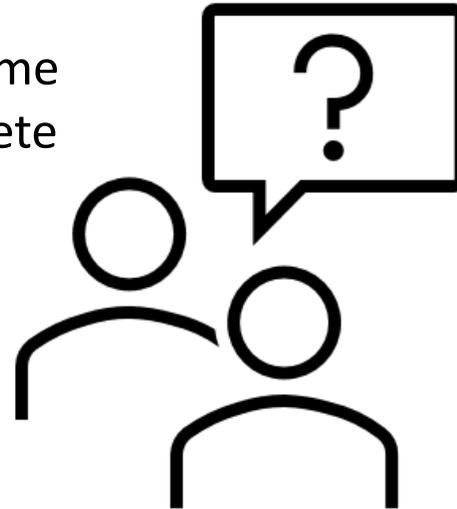
Recalibration of post processing stations

Increased temporal resolution of bias-adjusted method - 24 hours to 6 hours

Access to PP forecast via SOS: <https://confluence.ecmwf.int/x/DZzGDg>



Please take some
time to complete
pre-workshop
questionnaire!





<https://confluence.ecmwf.int/display/CEMS/CEMS-Flood+User+Guide+Corner>

CEMS-Flood Data User Guide

Created by Karen O'Regan, last modified on Aug 16, 2022

The CEMS-Flood Service User Guide provides documentation relevant for both EFAS and GloFAS services, including availability of data, how to access and work with the data, and how to access further support.



+ Expand all - Collapse all

- CEMS-Flood Terminology
- > Data Catalogue
- > Data Structure and Formats
- > Data Access
- > Working with CEMS-Flood Data
- > FAQs
- CEMS-Flood Data Support

Welcome to the Climate Data Store

Dive into this wealth of information about the Earth's past, present and future climate.

It is freely available and functions as a one-stop shop to explore climate data. [Register for free](#) to obtain access to the CDS and its Toolbox.

We are constantly improving the services and adding new datasets. For more information, please consult the [catalogue](#) and our [FAQ](#).

Enter search terms:



Climate Data Store Toolbox



Climate Data Store API



Access climate reanalysis (ERA5)

Open a GRIB file

```
In [1]: import xarray as xr
```

```
In [2]: ds = xr.open_dataset('download.grib',engine='cfgrib')
```

```
In [3]: ds
```

```
Out[4]:
```

```
<xarray.Dataset>
```

```
Dimensions:      (latitude: 1500, longitude: 3600, step: 3, time: 3)
```

```
Coordinates:
```

```
  number      int64 ...
  * time       (time) datetime64[ns] 2019-12-01 2019-12-02 2019-12-03
  * step       (step) timedelta64[ns] 1 days 2 days 3 days
  surface      int64 ...
  * latitude   (latitude) float64 89.95 89.85 89.75 ... -59.75 -59.85 -59.95
  * longitude  (longitude) float64 -179.9 -179.8 -179.8 ... 179.7 179.8 179.9
  valid_time   (time, step) datetime64[ns] ...
```

```
Data variables:
```

```
  dis24       (time, step, latitude, longitude) float32 ...
```

```
Attributes:
```

```
GRIB_edition:      2
GRIB_centre:       ecmf
GRIB_centreDescription: European Centre for Medium-Range Weather Forecasts
GRIB_subCentre:    0
Conventions:       CF-1.7
institution:       European Centre for Medium-Range Weather Forecasts
history:           2021-02-11T11:00:21 GRIB to CDM+CF via cfgrib-0...
```



3.2 EFAS Map Viewer

Skapad av nina bosshard, senast ändrad alldeles nyss

The **Map Viewer** of the EFAS Information System (EFAS-IS) is the main source of information for users. Real-time forecasts can only be accessed by registered users.

After selecting to access the EFAS map viewer, the user will be able to access various data and information. Details on the products can also be found in [here](#).

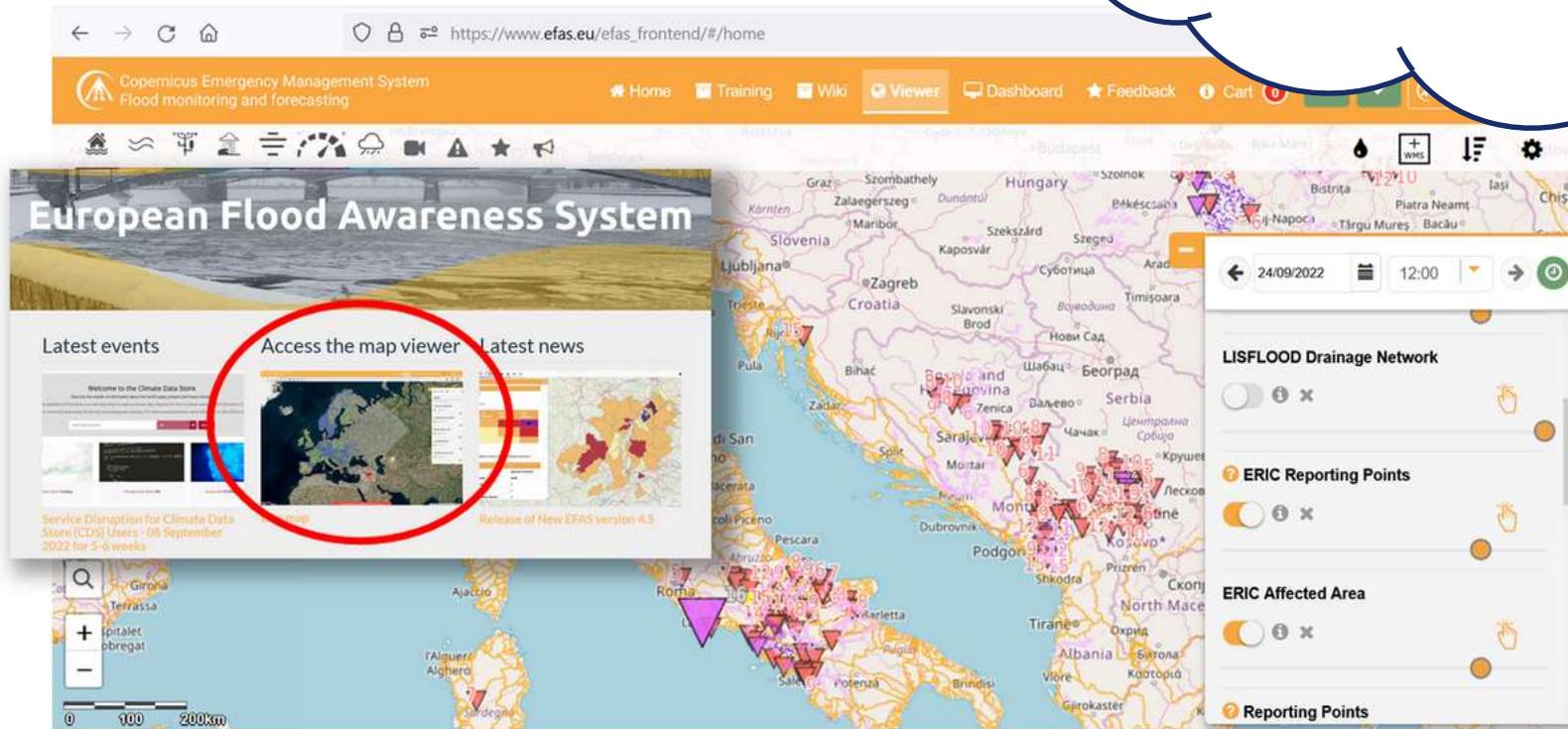


New user guides to come from DISS, METEO & HYDRO

CEMS-Flood User Guide Corner

EFAS User Guide

- > 1 Background
- 2 EFAS products overview
- > 3 EFAS interface
- > 4 Hands-on guide for EFAS partners
- > 5 EFAS resources
- 6 Contributing to EFAS
- 7 FAQ in EFAS
- 8 EFAS Glossary



<https://efascom.smhi.se/confluence/display/ECM/Updating+the+CEMS-Flood+Wiki+pages+on+ECMWF+Confluence>



Emergency Management

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