Copernicus downstream services for the mapping of water bodies in Europe:

the Eugenius approach

Within the framework of the EUGENIUS (European Group of Enterprises for a Network of Information Using Space) H2020 project, an European network of service providers is delivering geo-information services to the regional and local European market; based on the combined exploitation of Copernicus satellite data (especially Sentinel-1 and Sentinel-2) and local data, a common catalog of thematic services has been set up among which the regional flood mapping and monitoring service.

The Flood Mapping Service

- a regional service dedicated to flood, water / wetlands, river basin, environmental, and land planning actors as well as local authorities, state services or the insurance sector, collecting geo-information on:
  - historical hydrological events
  - on-going regional (plain) floods

In 2016: an historical plain flood monitoring

ILL river flood event of January – February 2016, Grand-Est region, France

In 2018: an on-going regional flood event monitoring

Grand-Est Region, France

In January 2018, the regional flood mapping service was activated for the monitoring of the evolution of the situation of the main rivers of the North East of France.

The flooded areas along the Moselle, Meuse, Meurthe, Senne, Ill, river have been mapped from Sentinel-1 imagery and results provided to the users community through the Eugenius regional platform.

20 successive observations, 1 month of monitoring with Sentinel-1