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REGIONAL FLOOD MONITORING WITH SENTINELS DATA

>>> A few years later

In the past few years, this solution has supported the Public Administration in its tasks. For example, in January 2021, the Regional Flood Service has been solicited for rapid mapping of the flooding event occurring in the Lys river Basin, North of France. The information provided has allowed to monitor the extent and the impact of the event, and hence to further support flood risk management decision making.

Nadine Tholey | ICube-SERTIT



BENEFICIARIES	ICube-SERTIT	French Grand Est and Hauts-de-France Regions	Local authorities; River Basin Management authorities	Citizens and Society
SERVICES	TIER 1: SERVICE PROVIDER Sentinel-1; Sentinel-2; Contributing missions (such as Pleiades or Radarsat-2)	TIER 2 PRIMARY USER Regional flood monitoring service; Timely flood extent and its evolution; Flood maximum extent, impact and duration (post-event analysis) Information on past events	TIER 3 SECONDARY USER Improved immediate situation management; Possibility for flood model fine-tuning; Flood prevention action plan	TIER 4 END USER BENEFICIARIES Benefits for the territorial planning community; Improved knowledge on dynamics of regional flood events for risk assessment and management; Improvement in civil security and sense of safety by citizens

Value chain definition following SeBS Methodology - <https://earsc.org/sebs>

The space-based solution

This Copernicus-based solution was produced by a scientific entity for a for a Public Administration and for other users such as companies, professionals, agencies, associations, single citizens.

The Usage Maturity Level

The solution has consolidated at UML=4. The main reason for this is found in the increased recognition about the effectiveness of the solution at decision-making level based on the achieved results and return-of-experience.

Thematic Area



BIODIVERSITY AND ENVIRONMENTAL PROTECTION

Region of Application



GRAND-EST

Sentinel mission used



S1
S2

Copernicus Service used



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Usage Maturity Level



4

Overall benefits

ECONOMIC



The replicability of the solution was achieved

INNOVATION



There were positive market externalities

ENVIRONMENTAL



Improved knowledge on dynamics of regional flood events

SCIENCE



There was an increase in technical/scientific expertise related to Copernicus/EO within the PA

REGULATORY



Improved knowledge on dynamics of regional flood events for risk assessment and management;

SOCIETAL



- Improvement in civil security and sense of safety by citizens
- There have been improvements in public awareness on climate (flood) threats

Benefits classification following SeBS Methodology - <https://ears.org/sebs>

Interesting facts...

In terms of technical advancements, over the last few years there were significant improvements such as processing chain improvements and optimization including (semi) automatic modules of the solution.

Specifically, in January 2021, the Regional Flood Service has been solicited in a reactive mode for the rapid mapping of the flooding event occurring in the Lys river Basin, North of France. The information provided has allowed to monitor the extent and the impact of the event, and hence to further support flood risk management decision making.

Outlook to the future

Mutualization scenarios are under investigation for the optimization and sustainability of the regional flood service in French Grand Est region. Moreover, taking advantage of the region's geographical position and sharing borders with Belgium, Germany, Luxembourg and Switzerland, trans-national possible extensions are under investigation, especially for cross-border river basins that are facing a similar flood risk.

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Contacts

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ABOUT COPERNICUS4REGIONS

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