

Integration of the EDERA products in the EWS platforms in the pilot sites

1 Introduction and scope

The main objective of the project is the demonstration of the EDERA products for forecasting hazards and impacts triggered by storms, heavy rainfall and floods (initially developed in the TAMIR project; UCPM-2019-PP-AG) integrated in real time to support Civil Protection Agencies (CPAs) at national, regional and local levels.

In EDERA Work Package 4, improved versions of these products have been integrated and applied to prepare a real-time demonstration for a period of 15 months (from August 2023 until October 2024) with the participation of end users with operational responsibilities.

2 EDERA end-users

The main end-users at the EDERA pilot sites are institutions with responsibilities in emergency management and first response during storms, heavy rainfall and flood events. They will be participating in the demonstration of the integration of the EDERA products to support decision making for improved coordination and emergency management. To facilitate access to the products, they have been integrated in real time in the EDERA web-based platform, which integrates local datasets (observations, forecasts and exposure and vulnerability maps), as explained in EDERA Deliverable 4.1.

2.1 Spain-Portugal pilot site

The pilot site will demonstrate the coordination among the different levels of civil protection (national, regional and local), and the exchange between types of stakeholders (e.g., National Hydrological and Meteorological Services, NHMS, and Civil Protection Agencies, CPAs).

Table 1. End users participating in the Spain-Portugal pilot site.

	Country	Area of interest	Type of end-user	Access to the products	Role in the project
AMAYA	ES	Andalusia	Water & Environment Agency (Regional)	EDERA platform	Partner
DGPCE	ES	Spain – Huelva	Civil Protection (National)	EDERA platform	Partner
ANEPC	PT	Portugal - Algarve	Civil Protection (National)	EDERA platform	Partner
CP And	ES	Andalusia	Civil Protection (Regional)	EDERA platform	Stakeholder
EAV	ES	Valencia region	Civil Protection (Regional)	EDERA platform	Stakeholder
CP Cat	ES	Catalonia	Civil Protection (Regional)	EDERA platform	Stakeholder

CP PG	ES	Puente Genil (Córdoba)	Civil Protection (Local)	Integrated in own platform	Stakeholder
AEMET	ES	Spain	Weather Service (National)	EDERA platform	Stakeholder
IPMA	PT	Portugal	Weather Service (National)	EDERA platform	Stakeholder
Coimbra region	PT	Portugal	Intermunicipal community (Regional)	Integrated in own platform	Stakeholder

2.2 Finland+ pilot site

This pilot site focuses on the integration of the EDERA products for improved emergency management at regional scale and the collaboration between Finnish regions.

Table 2. End users participating in the Finland+ pilot site.

	Country	Area of interest	Type of end-user	Access to the products	Role in the project
FMI	FI	Finland	Weather service (National)	EDERA platform	Partner
SYKE	FI	Finland	Environmental institute (National)	EDERA platform	Stakeholder
KYMPE	FI	Kymenlaakso region	Rescue services (Regional)	EDERA platform	Stakeholder
HRD	FI	Helsinki region	Rescue services (Regional)	EDERA platform	Stakeholder

3 EDERA platform

A web-based platform provides the real-time EDERA products, existing official products, additional observations and forecasts (e.g., those generated by EFAS¹), vulnerability information and exposure layers with different coverage (i.e., local, regional, national and Continental).

The EDERA platform (Figure 1) is an evolution of the TAMIR platform. New functionalities developed in EDERA include:

- Display of EFAS products and warnings and MeteoAlarm² warnings.
- Set-up of specific configurations for different institutions and user profiles.
- Language selection in the user configuration.

¹ EFAS (European Floods Awareness System, www.efas.eu) is the early warning and monitoring component for floods of the Copernicus Emergency Management Service (CEMS).

² MeteoAlarm (www.meteoalarm.org) is a system that integrates the official warnings of severe weather issued by the national meteorological services participating in EUMETNET.

- Warnings definition by setting up thresholds on the real-time products and/or crossing the real-time products with static exposure and vulnerability layers.

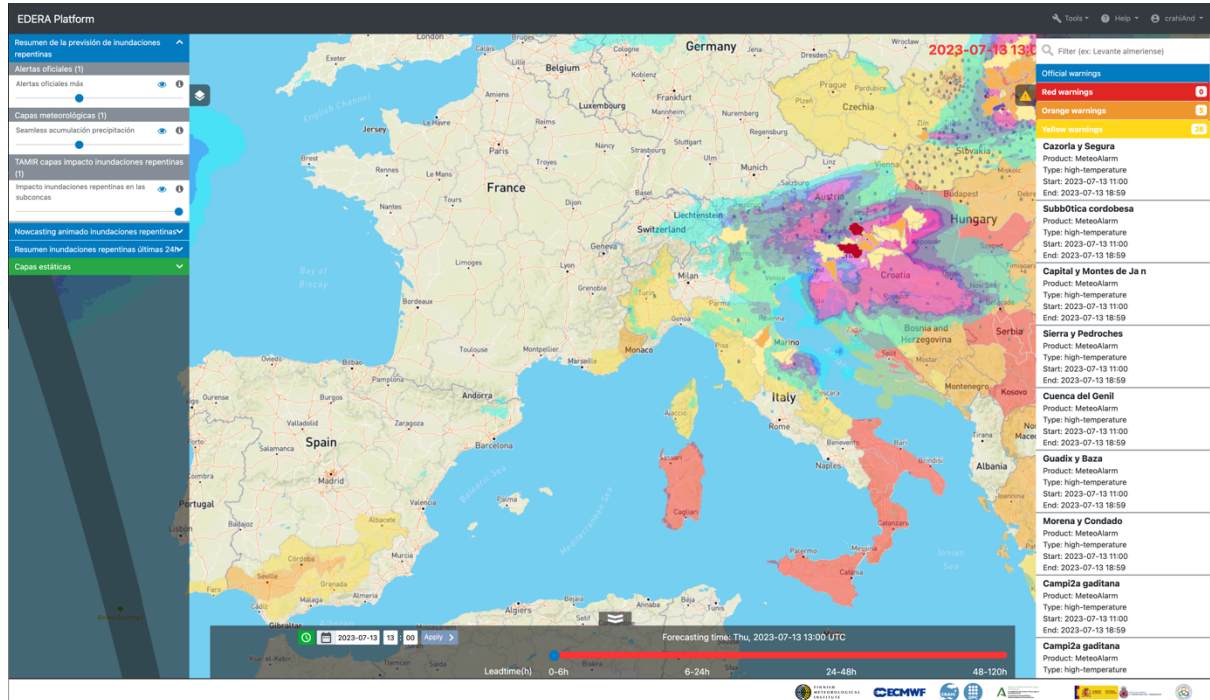


Figure 1. General overview of the EDERA web platform. The screen capture of the browser shows the Products Navigator (left) and Warnings list (right). The time selector (bottom) is used to display the selected products at different time steps.

4 Integrated EDERA products

Table 3 shows the list of EDERA products accessible in real time by the end-users at the beginning of the demonstration period. They have been integrated in the different configurations of the EDERA web platform for the end users (and those integrating the products in their own platforms have been given access to the products in real time).

Table 3. List of EDERA products available in real time by the EDERA end users.

Forecast summary (0-120 h)
Seamless accumulation precipitation
Flash flood impact over sub-catchment
Animated storm and flash flood nowcasting (1-h resolution)
Total precipitation 80th percentile
Storm hazard
Storm impact
Pluvial floods hazard

Flash flood hazard
Flash flood impact over the river network
Flash flood impact over sub-catchment
Flash flood past 24-h summary
Precipitation accumulation (24 h)
Storm hazard
Storm impact
Pluvial floods hazard
Flash flood impact over the river network (24 h)
Flash flood impact over sub-catchment (24 h)