



Copernicus ENhanced Tools for Anticipative response to climate change in the emergency and securiTy domain

What is CENTAUR

The Horizon Europe project CENTAUR aims to address societal challenges arising from climate change threats by developing and demonstrating new service components for the Copernicus Emergency Management Service (CEMS) and Copernicus Security Service – Support to EU External and Security Actions (CSS-SESA). The project focuses on:



Improving situational awareness and preparedness around climate change and its impact on complex emergencies and multi-dimensional security crises



Anticipating the occurrence and possible knock-on effects of crisis events, contributing to resilience and effective adaptation



Providing early warning systems which generates alerts when pre-established thresholds for crisis indicators are reached.

APPLICATION DOMAIN



Copernicus
Emergency
Management
Service

Flood-related
threats to
population, assets
and infrastructures
in **urban areas**.



Copernicus
Security Service
Support to EU External
and Security Actions

Water and food
insecurity as
precursors of
political instability,
conflict and forced
displacement



OPERATIONAL BENEFITS



Copernicus EMS

- Improves the current capacities to predict urban flood events, detect their extent, estimate their damages, mitigate their effects and eventually increase the effectiveness of recovery action.
- Provides an early warning system which generates alerts when pre-established thresholds for crisis indicators are reached.

Copernicus SESA

- Enriches the CSS – SESA current portfolio by integrating new vulnerability and fragility indexes
- Reinforces early warning capacities via the systematic surveillance of early signs and drivers of social unrest, population movements, and conflicts in connection with food and water insecurity.

Conceptual Model

Data are generated continuously over large areas, aiming to provide wide-scale observatories of phenomena capable to send an alert corresponding to significant changes in the normal patterns of the indicators. As alerts are triggered, CENTAUR transitions to an event-driven model at regional level, using real-time measurements of key parameters along with newly acquired, higher-resolution data.

Consortium

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