






CENTAUR

COPERNICUS ENHANCED TOOLS FOR ANTICIPATIVE RESPONSE TO CLIMATE CHANGE IN THE EMERGENCY AND SECURITY DOMAIN

WHY?

-  **11,000 disasters related to extreme weather** caused 2 million deaths in 50 years. [1]
-  The number of **major flood events doubled** from 2000-2019. [2]
-  Recent **conflicts** have endangered **food security**, increasing risks for political **instability** & displacement.
-  The effects of **climate change** worsen political instability and **threaten peace and security** across the globe. [3]

OBJECTIVES

-  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 an **early warning system** which generates alerts when pre-established thresholds for crisis indicators are reached.

APPLICATION DOMAIN



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

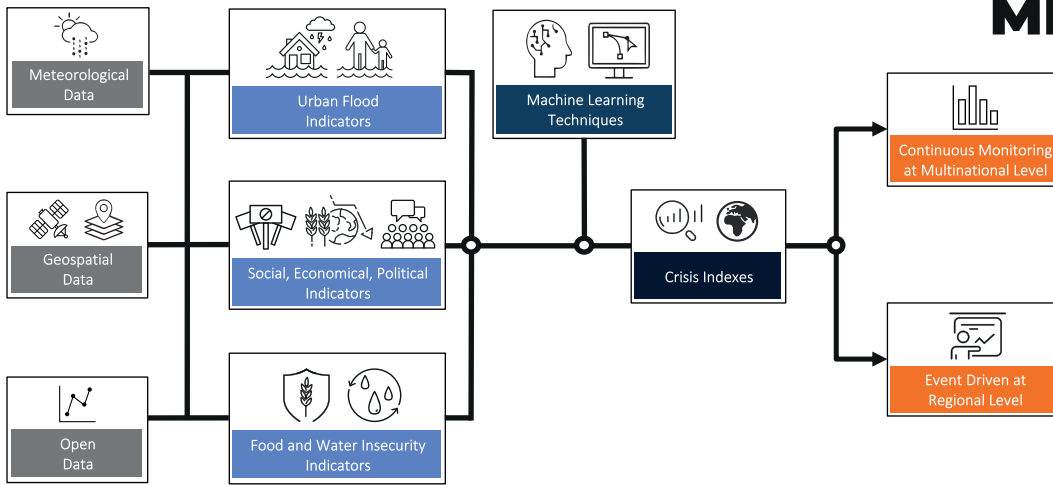


Water and food insecurity as precursors of political instability, conflict and forced displacement

Footnotes

[1] World Meteorological Organization (2021). WMO atlas of mortality and economic losses from weather, climate and water extremes (1970–2019).
 [2] UNDRR report: The human cost of disasters: an overview of the last 20 years (2000–2019).
 [3] Meyer, C., Vantaggiato, F. P., & Youngs, R. (2021). Preparing the CSDP for the new security environment created by climate change. European Union.

METHODOLOGY



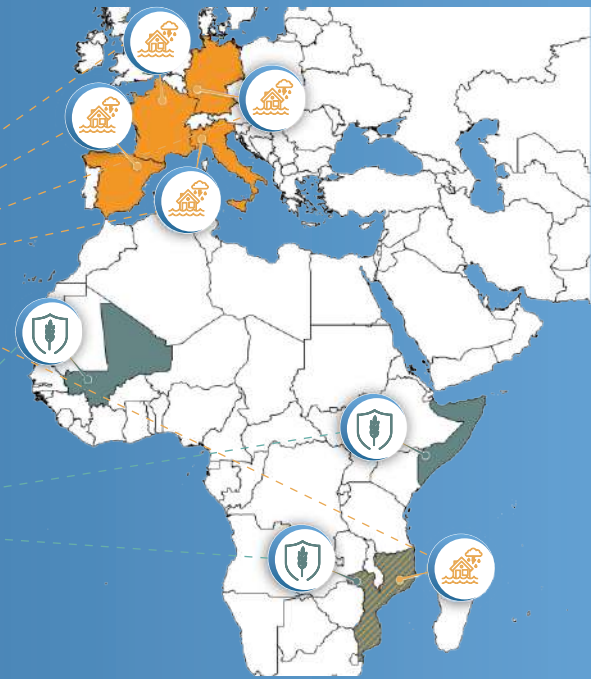
USE CASES

URBAN FLOODS

- Spain
- France
- Italy
- Germany
- Mozambique

WATER AND FOOD INSECURITY

- Mali
- Somalia
- Mozambique



OPERATIONAL BENEFITS

Inclusion of a prototype **urban flood layer within the European Flood Awareness System (EFAS)** map viewer, improving early warning

Integrating the CEMS mapping portfolio with enhanced products and services for mapping flood extent in urban areas

Enrich current portfolio by integrating new **vulnerability and fragility indexes**

Reinforcing early warning capacities and pro-active geo-intelligence services for the systematic surveillance of early signs and drivers of social unrest, population movements, and conflicts in connection with food and water insecurity



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