

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



Copernicus
Emergency
Management
Service

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



Copernicus
Security Service
Support to EU
External Action

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

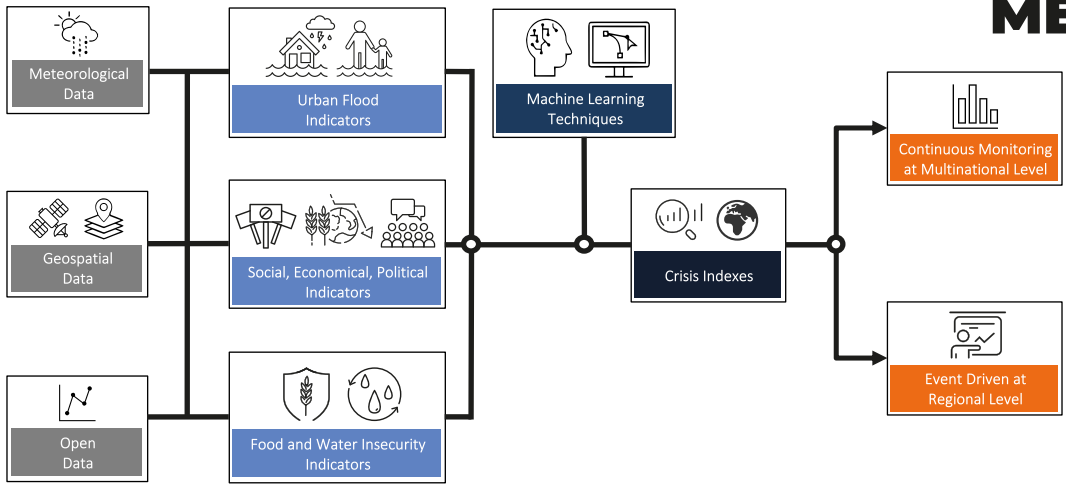
Footnotes

[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



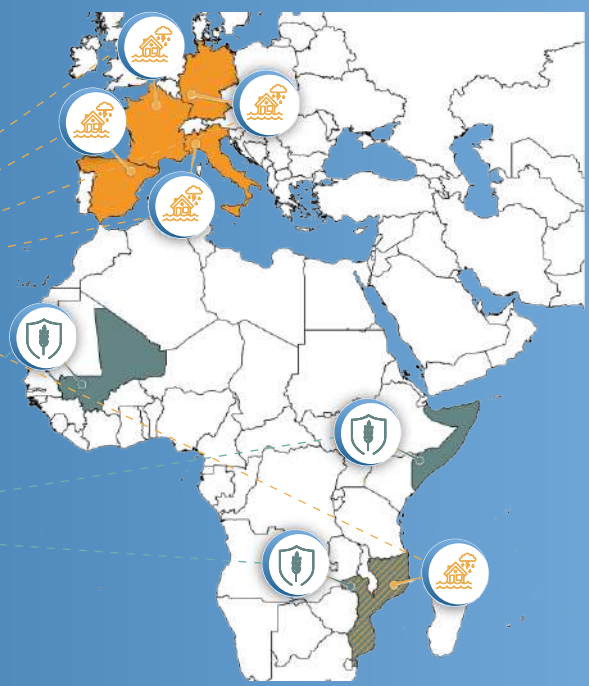
USE CASES

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



This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No. 101082720 – CENTAUR

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