



PROGRAMME OF THE
EUROPEAN UNION



©European Union, Copernicus Sentinel-2 imagery

The increasing importance of early-warning and response systems

Peter Salamon, European Commission Joint Research Center,

Integrating Disaster Risk Data in Policy

13 October 2023

Greece (Sep 2023)



Source: Greek Fire Service

Slovenia/Austria/Croatia
(August 2023)



Source: Government of Slovenia

Libya (September 2023)



Source: Libyan Red Crescent Society

Spain (Sep 2023)



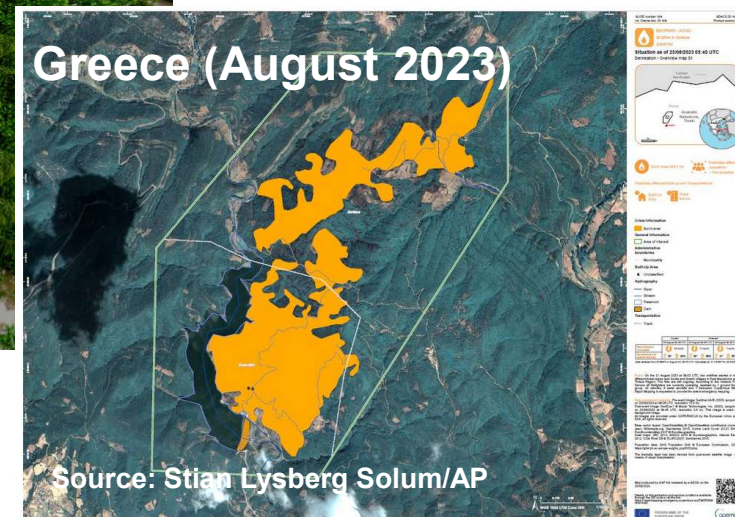
Source: Ayuntamiento Buenache de Alarcón

Norway/Sweden (August 2023)



Source: Stian Lysberg Solum/AP

Greece (August 2023)



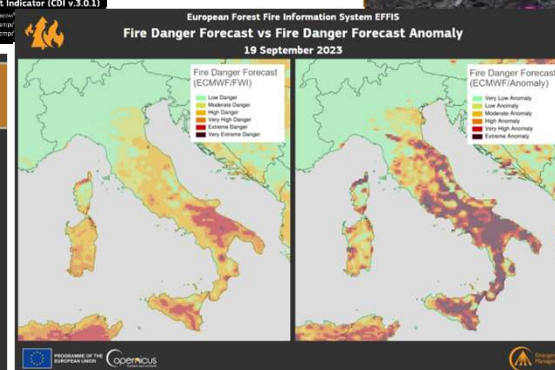
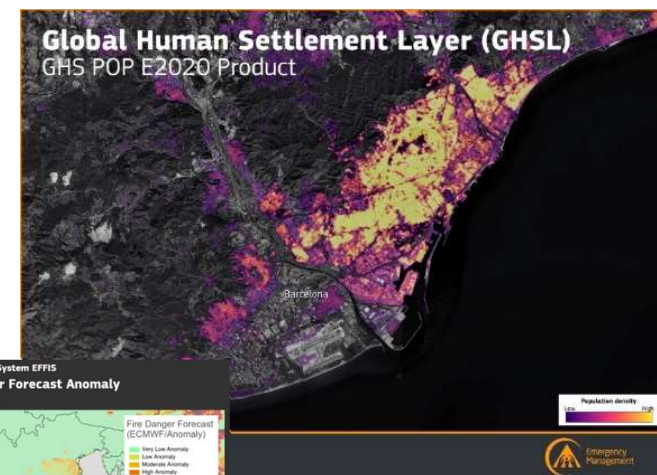
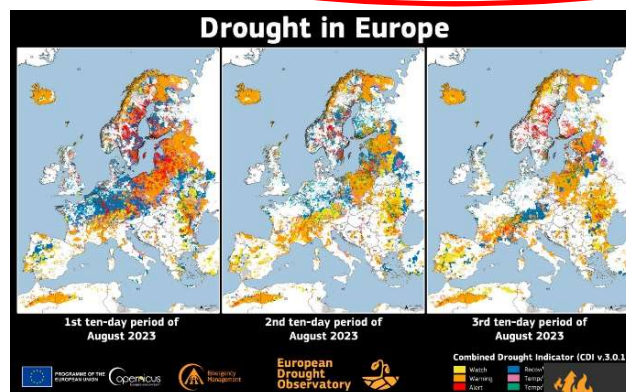
Source: Stian Lysberg Solum/AP

Early Warning for All (EW4ALL)



“Today, one third of the world’s people, mainly in least developed countries and small island developing states, are still not covered by early warning systems... This is unacceptable, particularly with climate impacts sure to get even worse. Early warnings and action save lives. To that end, today I announce the United Nations will spearhead new action to ensure every person on Earth is protected by early warning systems within five years.”

UN Secretary-General António Guterres on World Meteorological Day 23 March 2022

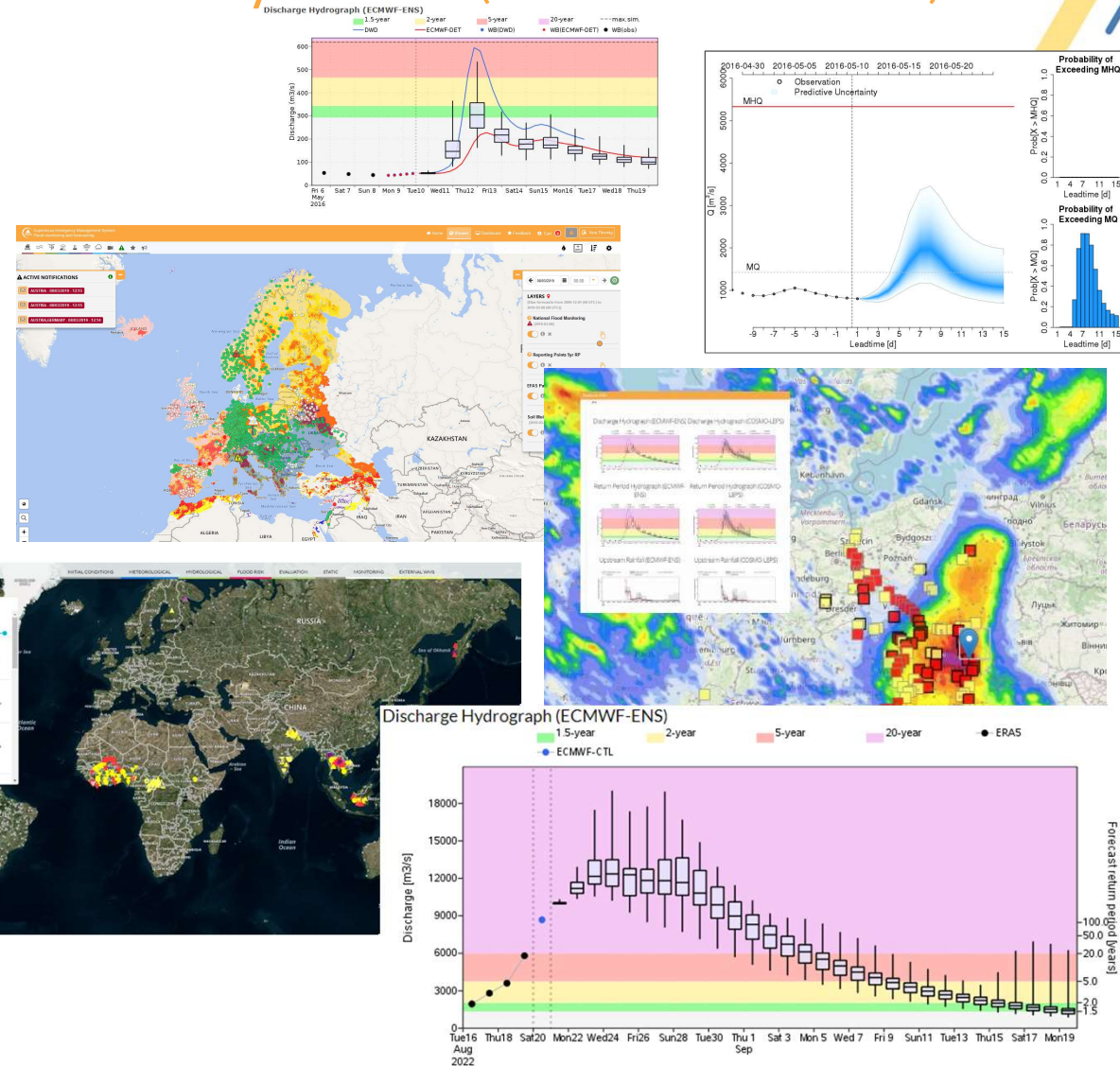


European and Global Flood Awareness Systems (EFAS & GloFAS)

- Provide users with **complementary, added value flood forecasting and monitoring**
 - Probabilistic
 - Medium-range
 - River basin wide
- Support **preparedness & response for floods at EU and global level** by providing an overview of ongoing and forecasted floods
- **Knowledge exchange platform** for operational flood forecasting
- **Foster collaboration and co-operation** between the different users

www.efas.eu

www.globalfloods.eu



European and Global Flood Awareness Systems (EFAS & GloFAS)

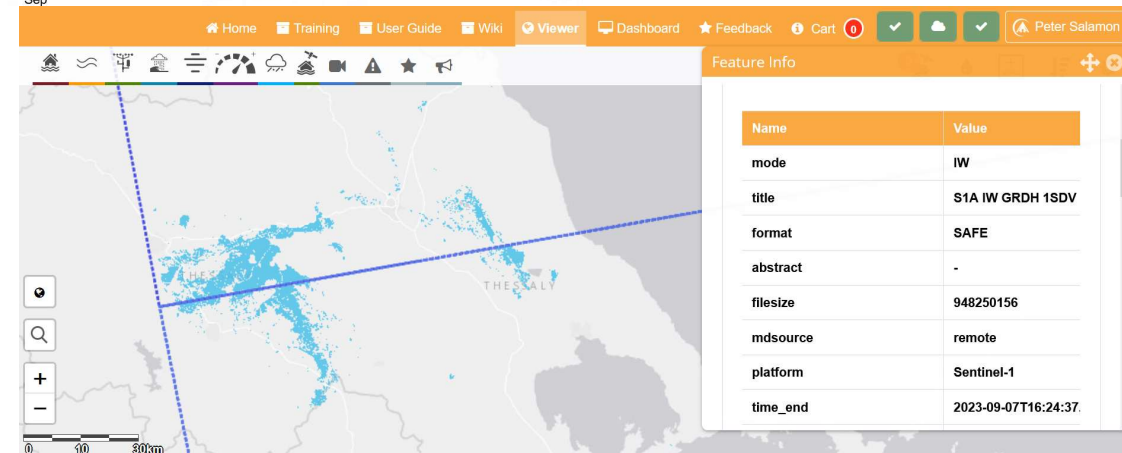
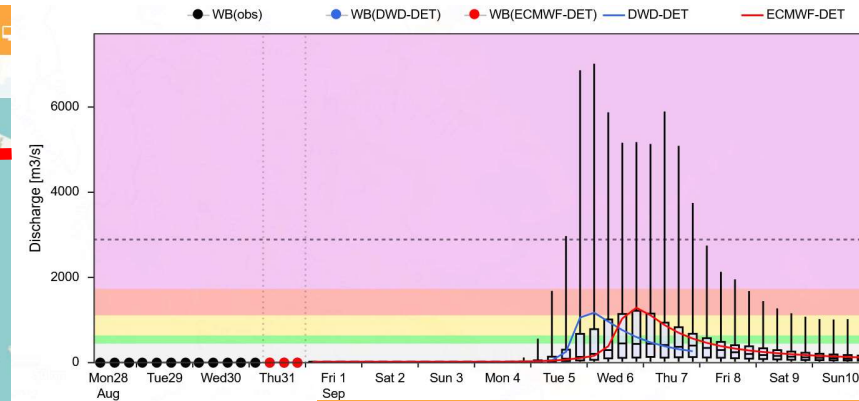
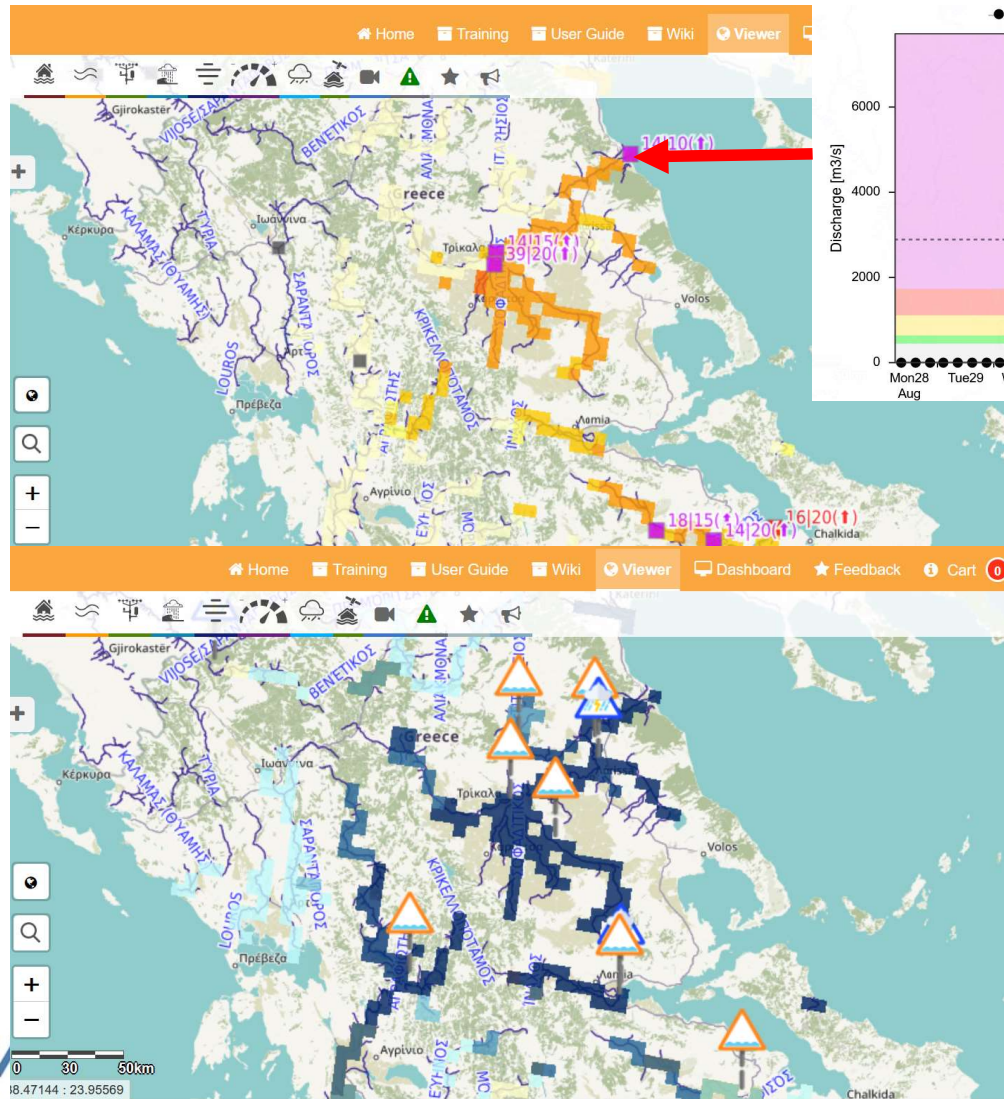
Users of EFAS & GloFAS:

- Emergency Response Coordination Center (ERCC)
- National and Regional Hydro-Meteorological Authorities
- Civil Protection
- Other agencies/authorities/decision makers in relation to flood risk management
- International aid organisations & development agencies



Photo by: URCS-IFRC-
Climate Centre, Denis
Onyodi
© Anticipation Hub

EFAS Use Case: Floods in Thessaly, Greece – September 2023



- 1 September: early indications of possible severe flooding
- 2. – 5. September: 6 (informal) flood notifications and 3 flash flood notifications

GloFAS Use Cases



The coproduction of the Early Action Protocol for floods in Uganda: A model of strong collaboration for the effective scale-up of FbF

Zambia activates its Early Action Protocol for Floods



Triggering Anticipatory Action for Floods in Nepal



Africa Multi-Hazard Early Warning and Action System for DRR
Continental Situation Room

2. DETAILED MULTI-HAZARD OUTLOOK FOR THE NEXT 5 DAYS From September 12, 2023 to September 16, 2023

Multi-Hazard assessment



Extreme Precipitation



Wind Storms

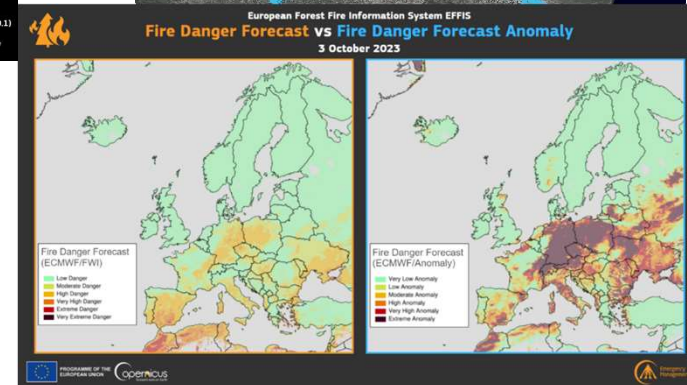
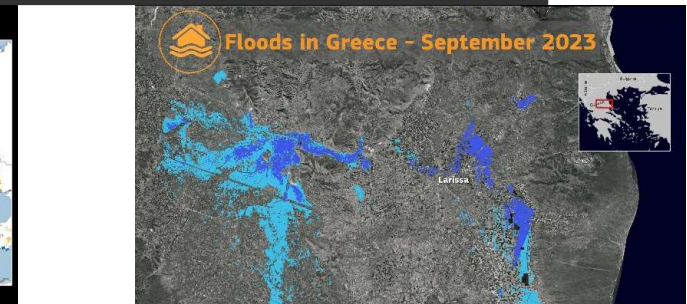
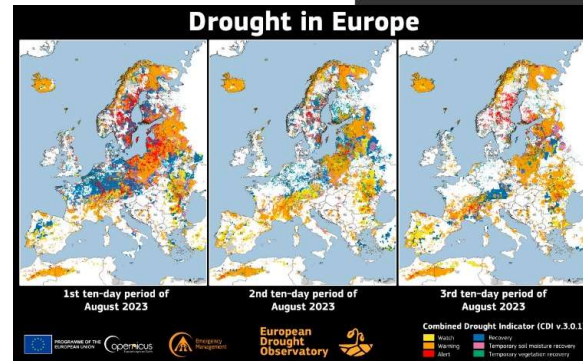
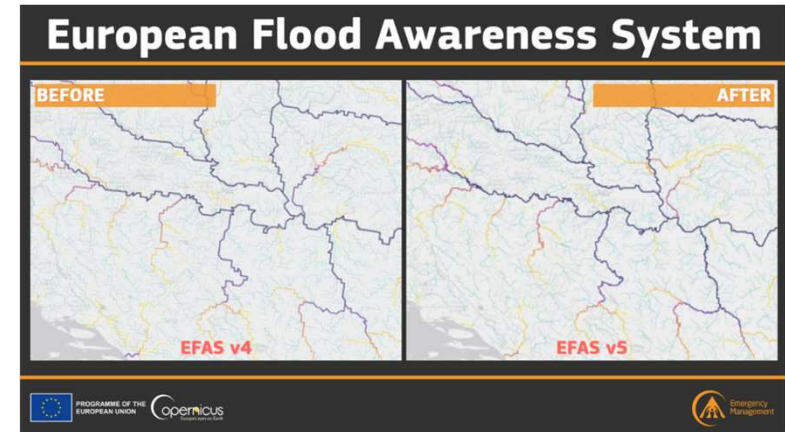


River Floods



Challenges for (flood) early warning systems

- Climate Change Adaptation
- Flash flood predictions
- Integration of machine learning into EW
- From hazards to impacts
- Communication (uncertainty, ensuring communication chains)



Keep in touch

Copernicus Emergency Management Service

 emergency.copernicus.eu

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