

Big data from Copernicus & its Emergency Management Service (EMS)for Africa's Disaster management

Emergency Management

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Emergency Ianagement

> Copernicus programme - what is it ? <u>https://www.youtube.com/watc</u>

The <u>6 services</u> from Copernicus

The Emergency Service



opernic

European

2

Copernicus

current status

Monitoring of earth systems



Land

Marine



Atmosphere





The six Copernicus services

Security

Emergency

Climate Change



Copernicus architecture

6 services use Earth Observation data to deliver ...



Contributing missions





Emergency Management Service (EMS)





Helping victims when disaster







EMS Rapid Mapping examples

anagement





Vanuatu



Ebola epidemic, Guinea



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EMSR125: Earthquake in Nepal

Evenet These (UFC): 2013-34-20-11.40 Evenet These (UFC): 2013-34-20-16-40 Evenet Taple: Earthquake Antipythes These (UFC): 2013-34-20-12-20

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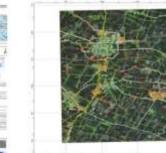
Earthquake, Nepal



Tropical Cyclone,









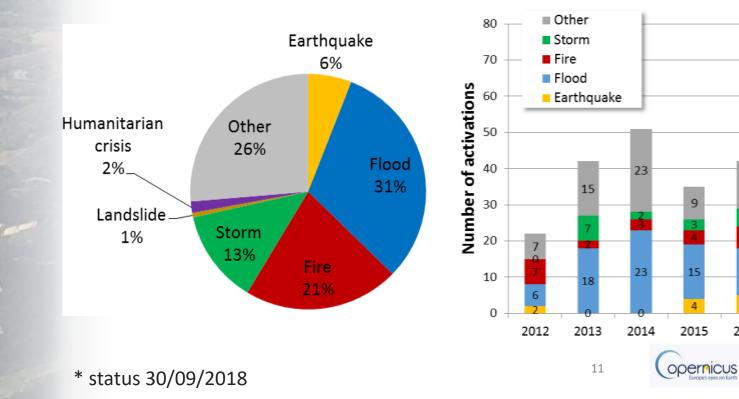
Refugee Camp, Al Mafraq Jordan Floods, Ostlandet Norway

Earthquake, San Felice sul Panaro, Italy

🔪 Rapid Mapping – Event types

Emergency lanagement

319 activations (2012-2018)*



12

2017

2018

European

Commission

13

2016

Drought Observatory

To monitor and forecast droughts



http://edo.jrc.ec.europa.eu http://edo.jrc.ec.europa.eu/gdo

To analyse the risk of drought impacts

opernicus



Drought in Germany observed by Sentinel-2

GMES and Africa

Emergency lanagement

Long-standing EU-Africa Cooperation to support Africa's own capacity to exploit EO





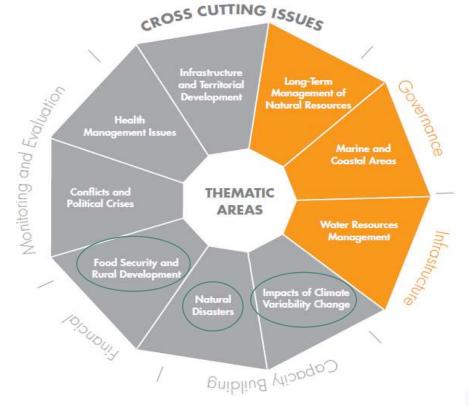
2006: Maputo Declaration Call to extend the benefits of European GMES programme to ACP countries

2007: Lisbon Declaration Launch of GMES & Africa

GMES/Copernicus programme as a main pillar of GMES & Africa 2018: EC-AUC Cooperation Arrangement signed on Access to Sentinel data



Current and future thematic areas Emergency of GMES & Africa







New & Future Developments for Copernicus EMS

- **Drought Observatory** new Early Warning component from 2018
- International framework agreements bilaterally with countries/international organisations (Internat. Charter, African Union, CEOS)
- Use of airplanes and **drones** for image acquisition
- Use of **social media** for early alerts (in addition to open data)
- **Platforms of platforms** (with various types of data, not just satellites, algorythms, machine learning..)
- Building of a common platform among international (mapping) agencies in case of large disasters



Thank you for your attention

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