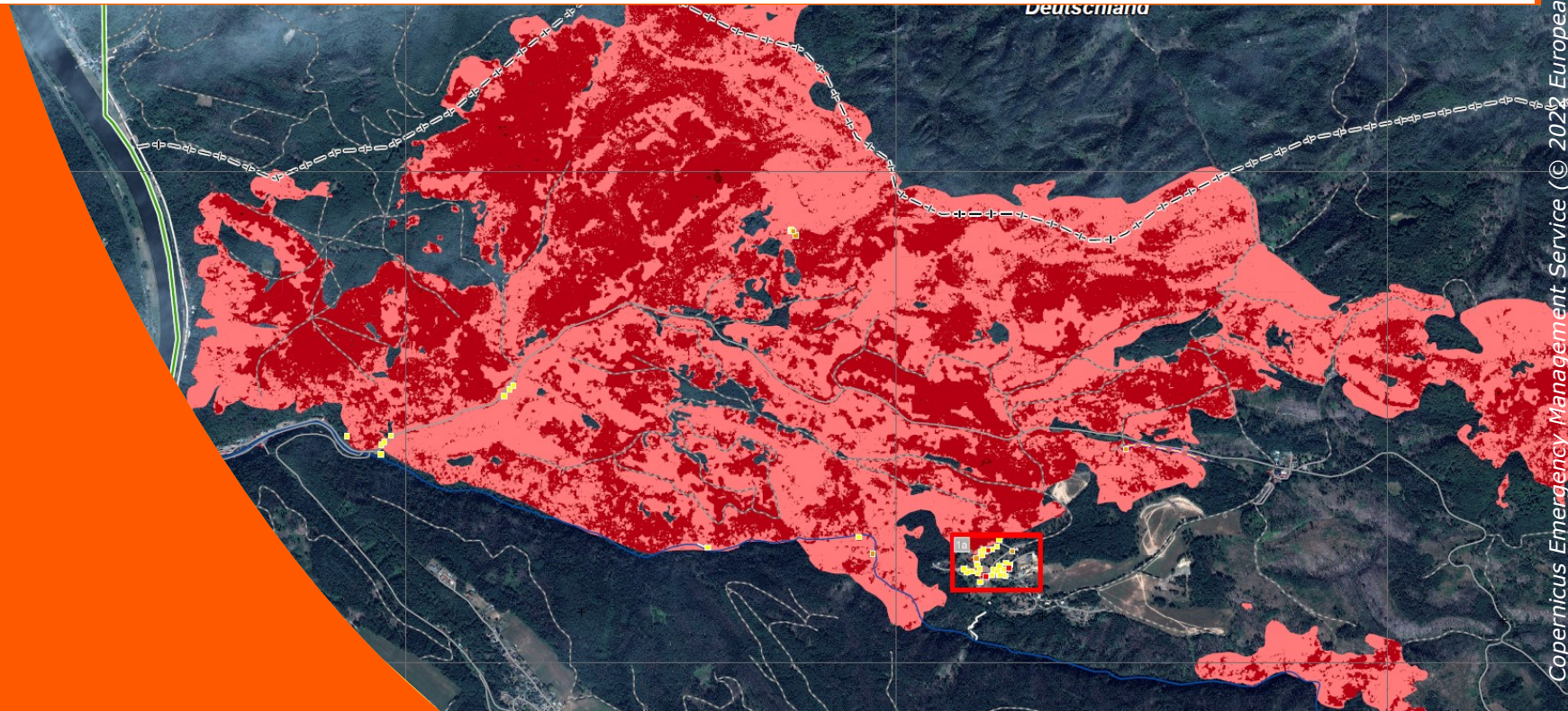




Bundesamt  
für Bevölkerungsschutz  
und Katastrophenhilfe

# Copernicus Emergency Management Service

GDI-Forum NRW 20.09.2023



BBK. Gemeinsam handeln. Sicher leben.

# Agenda

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1. CEMS in a nutshell
2. Produkte und Leistungen
3. Anforderungsverfahren
4. Fragen







# Copernicus Emergency Management Service (CEMS)

FULL, FREE AND OPEN  
ACCESS TO DATA

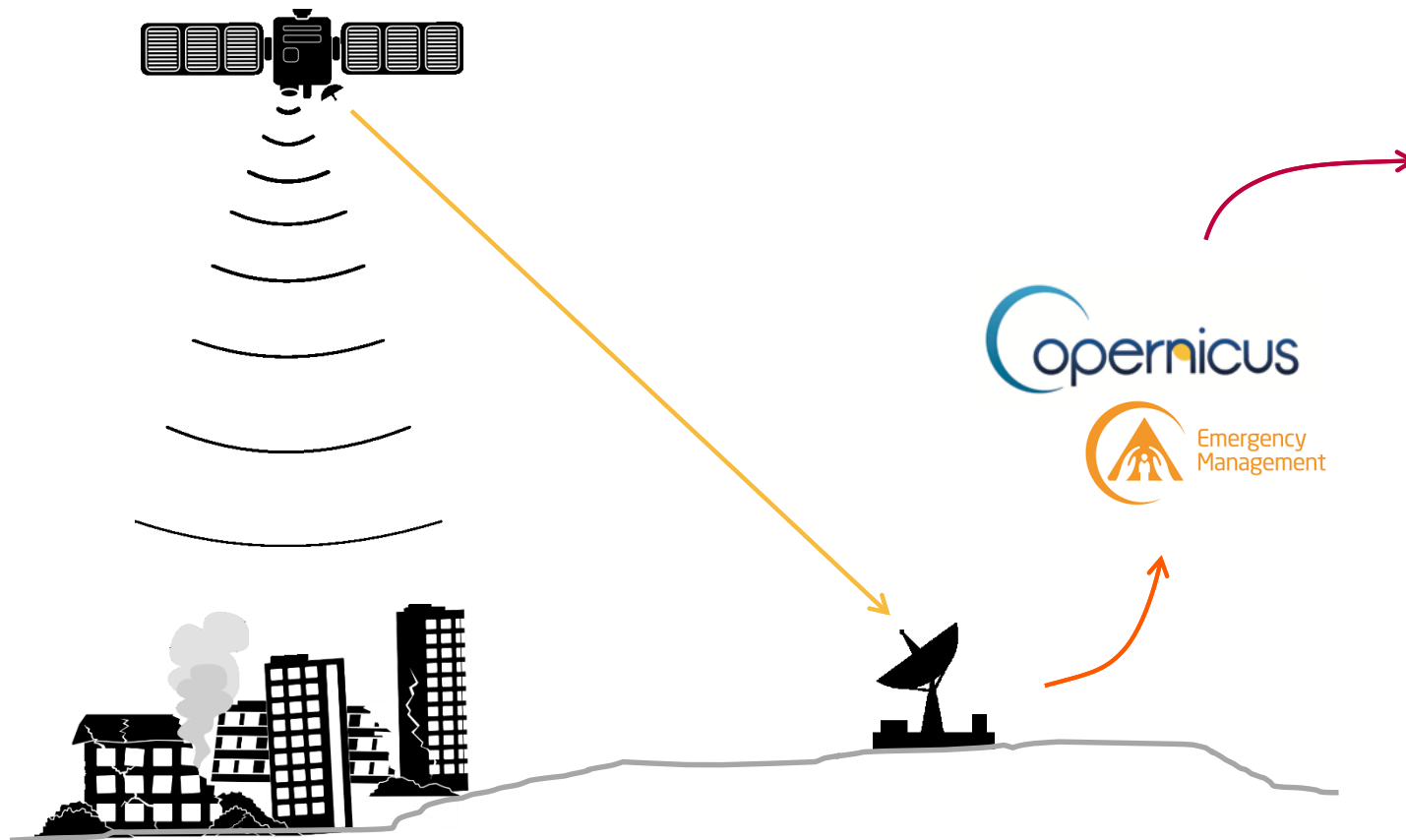


-  ATMOSPHERE MONITORING
-  MARINE ENVIRONMENT MONITORING
-  LAND MONITORING
-  CLIMATE CHANGE
-  EMERGENCY MANAGEMENT
-  SECURITY

 **copernicus**  
Europe's eyes on Earth

Quelle: [www.copernicus.eu](http://www.copernicus.eu)

# Erdbeobachtungsdaten für Krisenmanagement



- Schnelle Schadensabschätzung
- Bildmaterial für Lagebesprechung
- Dokumentation
- Risikomanagement
- ....





Hochwasser, 2021



GLIDE number: N/A      Activation ID: EMSR517  
Int. Charter Alt. ID: N/A      Product N: 15BADNEUENHR-AHRWEILER\_v3  
**Bad Neuenahr-Ahrweiler - GERMANY**  
Flood - Situation as of 20/07/2021  
Grading MONIT01 - Detail map 02

“Rettungsmissionen zielgerichteter und schneller durchgeführt” (BRK)



Quelle: BRK














 Schadenskartierung

Copernicus Emergency Management Service

Übersicht Kartierungsgebiete

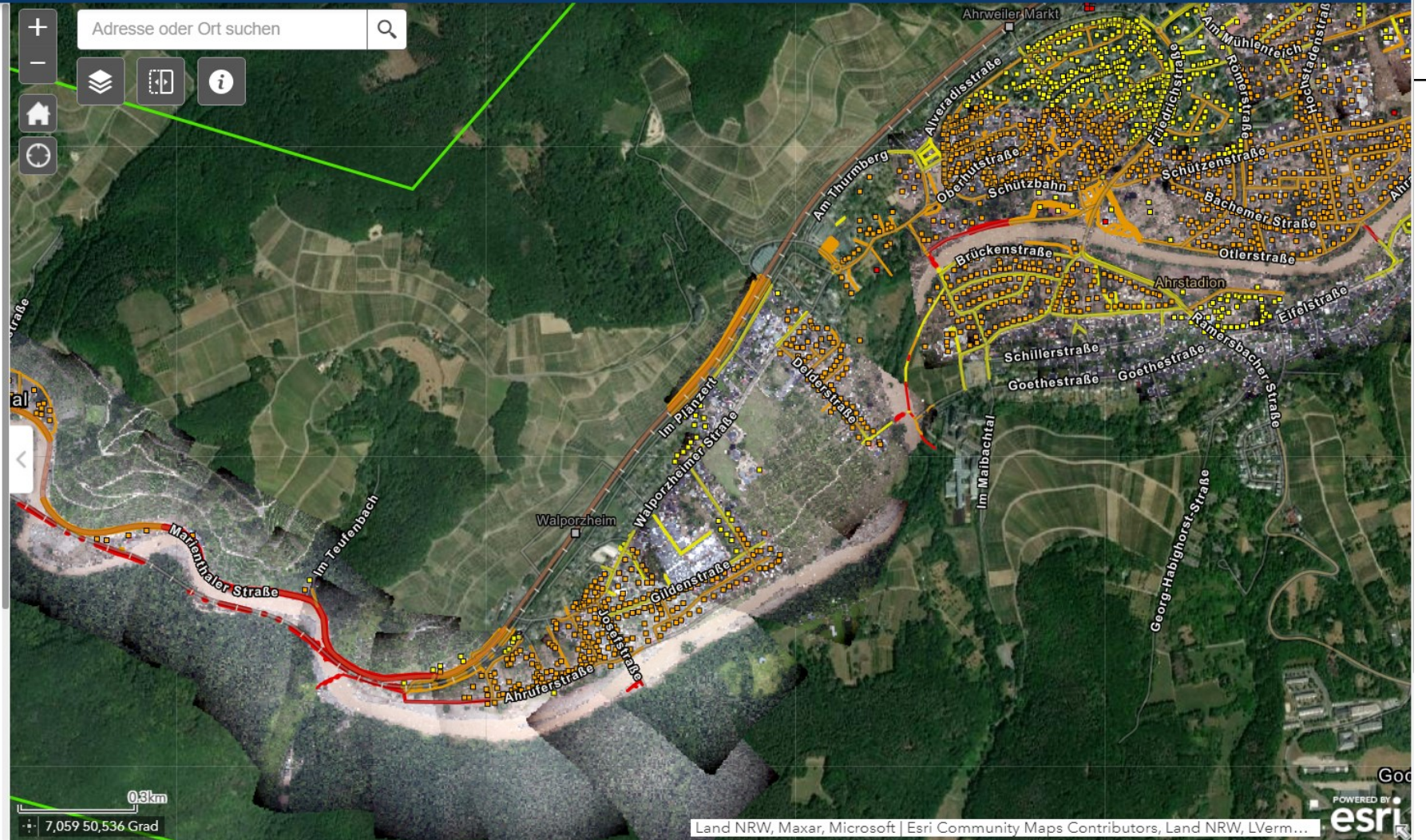
-  in Bearbeitung
-  Verkehrswege in Bearbeitung
-  Gebäude in Bearbeitung
-  verfügbar

Schadenskartierung Gebäude

-  Zerstört
-  Beschädigt
-  Möglicherweise beschädigt

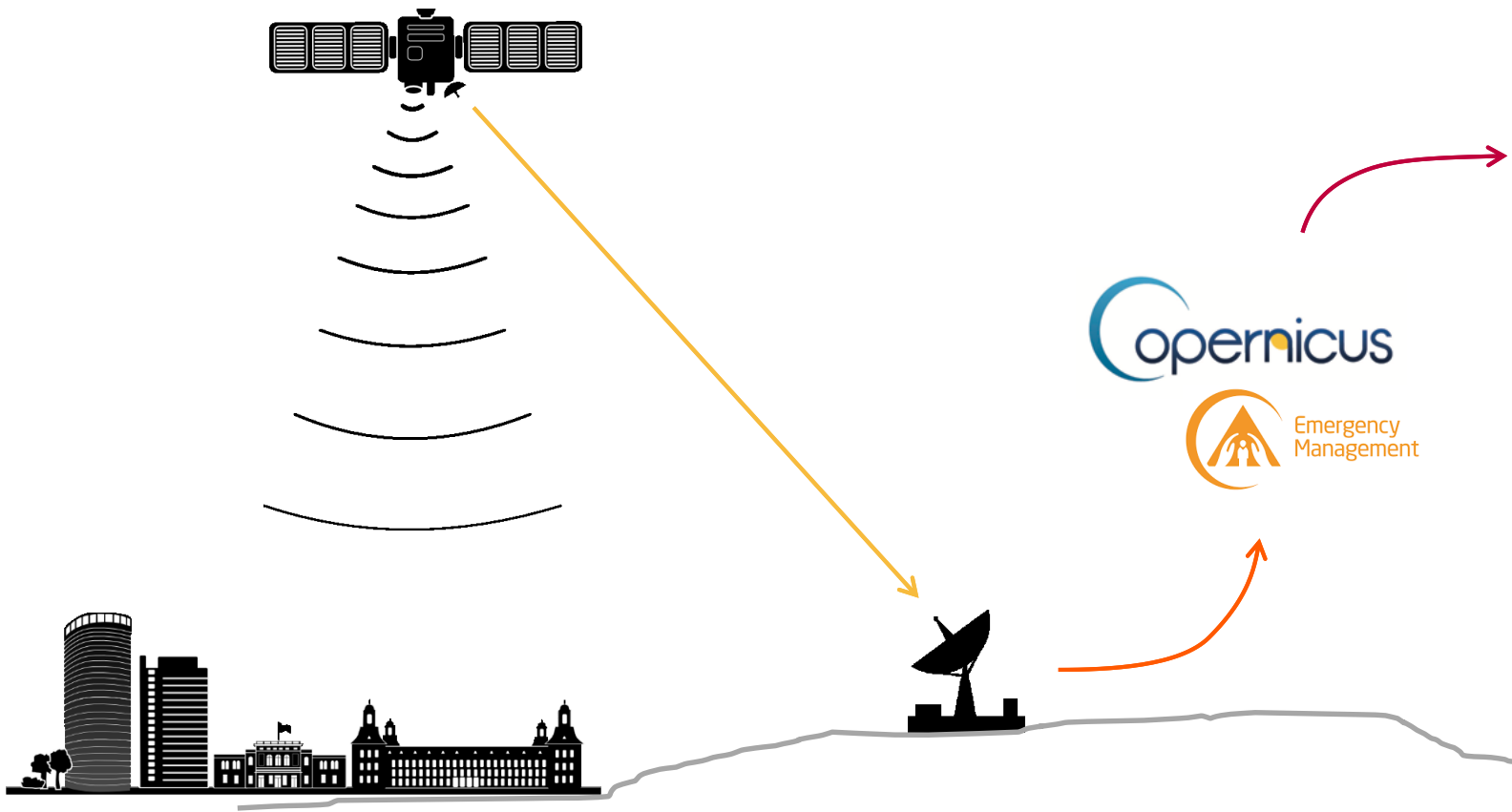
Schadenskartierung Verkehrswege

-  Zerstört - Hauptstraßen
-  Zerstört - Ortsstraße
-  Zerstört - unbefestigte Straße
-  Zerstört - Zugfernverkehrsstrecken
-  Zerstört - Brücken und Hochstraßen
-  Beschädigt - Autobahnen
-  Beschädigt - Hauptstraßen
-  Beschädigt - Landstraßen
-  Beschädigt - Ortsstraße
-  Beschädigt - unbefestigte Straße
-  Beschädigt - Zugfernverkehrsstrecken





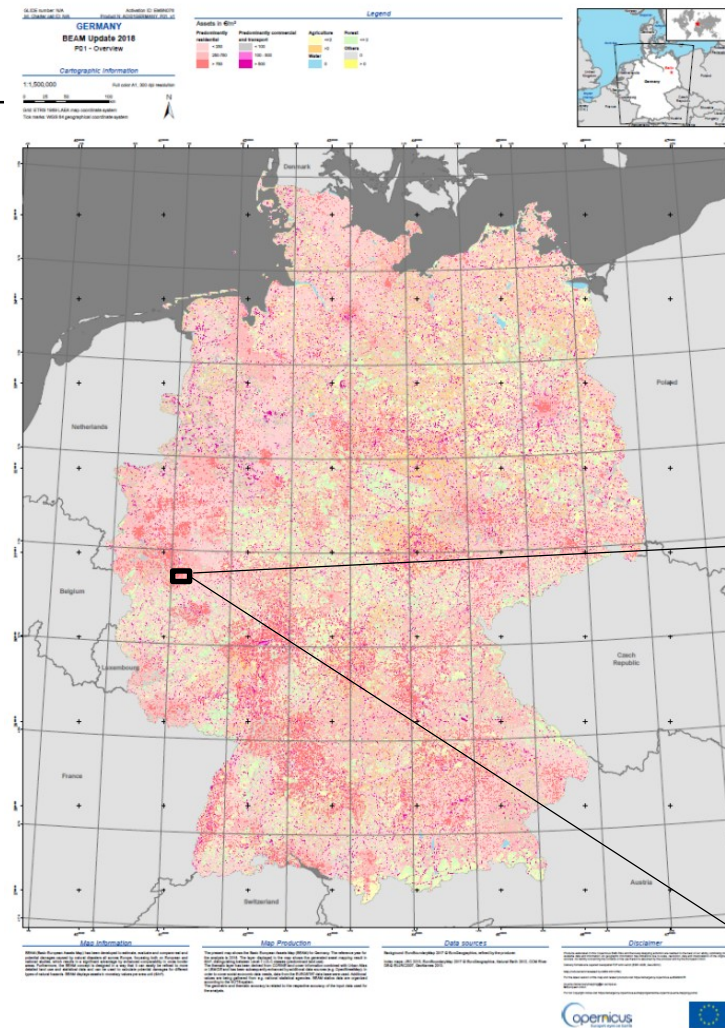
# Erdbeobachtungsdaten für Risikomanagement



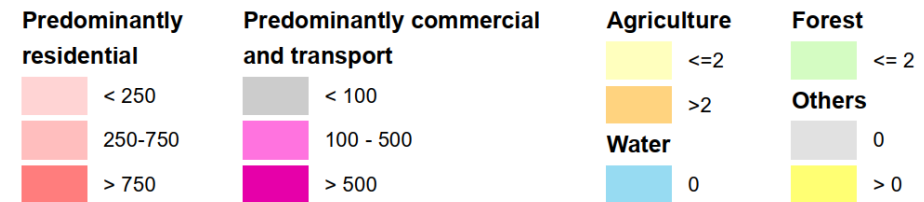
- Risikomanagement
- Vulnerabilitätseinschätzung
- Vorsorgeplanung
- Wiederaufbaumonitoring
- ....



# Räumliche Verteilung Vermögenswerte (Jahr 2020)

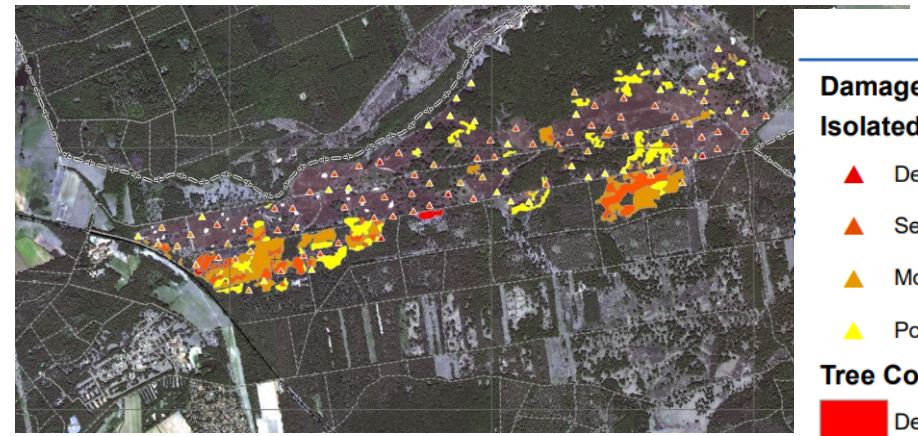
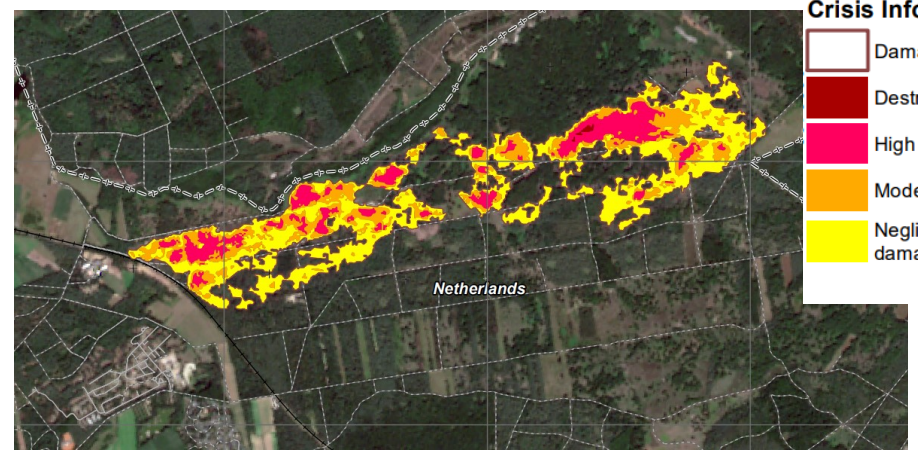
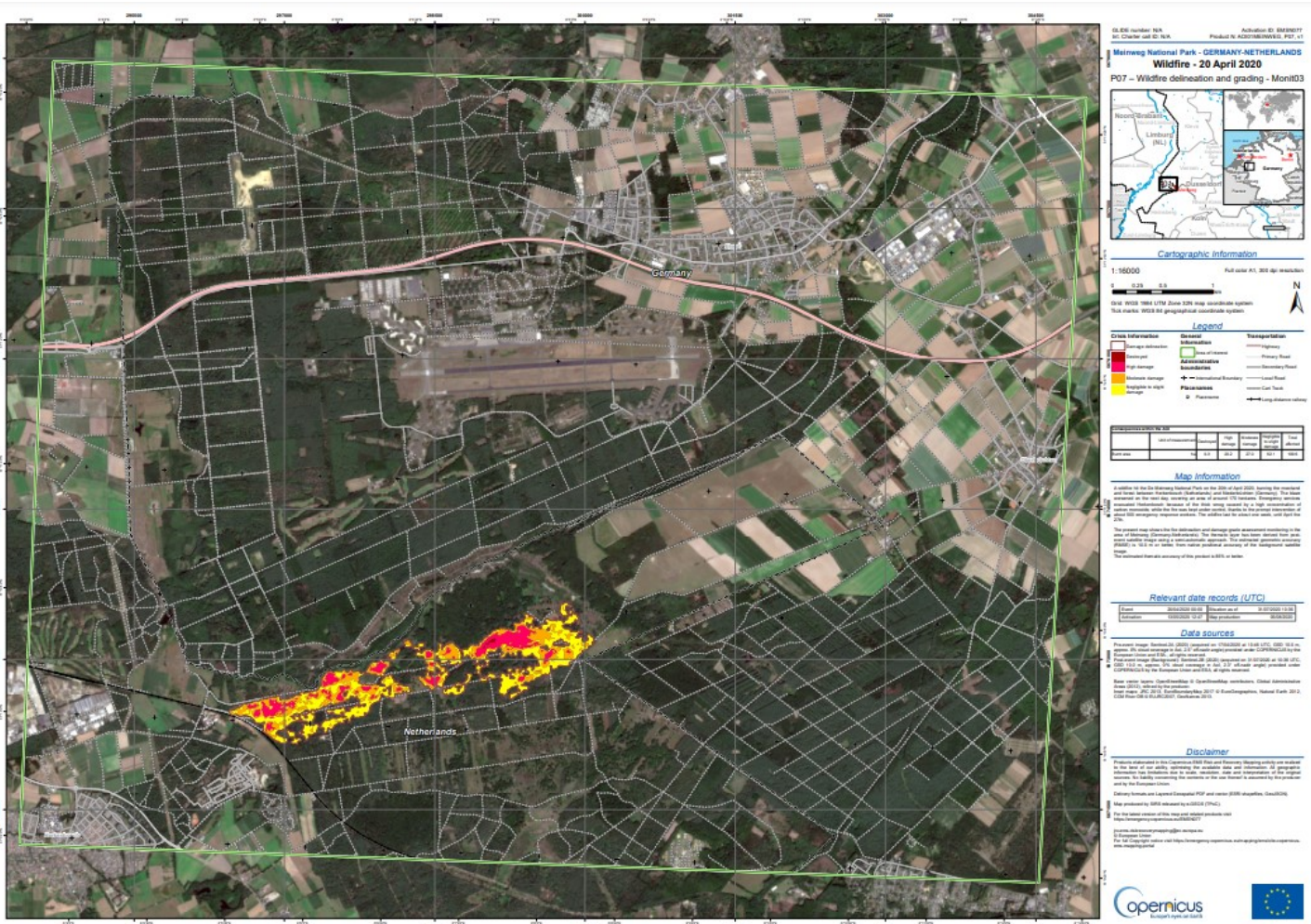


Assets in €/m<sup>2</sup>





# Waldbrandschäden „Meinweg Nationalpark“ April 2020





# Hochwasser 2021 in der Retrospektive



- Nutzung von CEMS für die **retrospektive** Abschätzung der **Hochwasserfläche und -tiefe** für die Stadt Solingen
- Interessant für: Kommunen, Versicherer, Versorgungsunternehmen, Forschung



# Fischsterben in der Oder 2022



GLIDE number: N/A Activation ID: EMSN136  
 W. Chamer call ID: N/A Product N: 6202RA\_P03\_v01

### Odra - POLAND

#### Water Quality Assessment

##### Chlorophyll Concentration 2022 - Detail Map 55

**Cartographic Information**

1:55,000 Full color A1, 300 dpi resolution

Scale: 0 5 10 km

Grid: WGS 1984 UTM Zone 33N map coordinate system  
 Tick marks: WGS 84 geographical coordinate system

**Legend**

<b>Chlorophyll-a concentration [µg/l]</b>	<b>General Information</b>	<b>Land use (Land Cover) (CLC level 2)</b>
0	Train Station	110 Continuous urban fabric
10	Highway	111 Discontinuous urban fabric
20	Primary road	120 Industrial or commercial zone
30	Secondary road	121 Road and rail network and associated land
40	Local road	122 Minor urban sites
50	Long distance water	130 Green space
60	Ditch	210 Non-irrigated arable land
70	Water	212 Permanently irrigated land
80	Stream	213 Annual or seasonal crops
90		310 Continuous forest
		320 Natural grassland
		321 Natural grassland
		322 Pasture, rough pasture

**Map Information**

In late July 2022, a massive fish die-off began in the upstream area of the main Odra around the village Łódź and moved downstream to Krynówka just Odra for August 10, 2022. Polish and German authorities work with high priority to reveal the reasons for the observed die-off and to prevent a further fish die-off. High chlorophyll concentrations are indicator of a harmful algal bloom.

The remote sensing of EMSN136 aims to provide water quality information system for the area Odra to support the investigations to identify the source of the general chlorophyll concentration in the Odra in Polish section. The satellite data were derived from Sentinel-2 imagery during the time period when the die-off was found. The same analysis is done for the time period for the time period prior to the start of the concentration values and as necessary. The spatial focus lies on the region of Wrocław and Olawa.

**Map Production**

The present map series shows the chlorophyll concentration in the Odra river for 11 days between August 01 and 26 August 2022. The temporal gaps are due to the satellite coverage. The analysis is not complete for the full Odra river section. The "chlorophyll-a" is displayed on the "National" legend (see: <https://emergency.copernicus.eu/EMSN136/>).

The POI reference is added as map background and shows basic topographic features derived from satellite imagery.

**Data Sources**

Present Imagery: Sentinel-2 (2022) downloaded from Copernicus Sentinel-2 L1C (30m) provided under Copernicus US by the European Union and ESA.

Basemap (Background): © Esri, DeLorme, Garmin, IGN, Intermap, INRA, GEBCO, USGS, AeroGRID, IGN, and the GIS User Community.

Base vector: Mapbox, OpenStreetMap © OpenStreetMap contributors (2022), Cycle Land Cover (CC-BY), Mapbox Streets (CC-BY), Copernicus.

Index maps: JRC 2013, EuroGeoInfoMap 2017 © EuroGeoInfoMap, National Earth 2012, USGS River ID © JRC/USGS, GeoNames 2012.

**Disclaimer**

Products developed in this Copernicus EMS Risk and Response Mapping activities are provided as they are. Copernicus does not warrant, endorse, or assume any liability for the accuracy, reliability, or completeness of the information provided. The use of the information is at the user's own risk and is not intended to be used for any purpose other than the one intended by the provider and by the European Union.

Other: Remote area Layered Geospatial PDF vector (GeoPDF) and vector (GML) data. See: <https://emergency.copernicus.eu/EMSN136/>

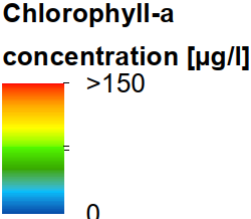
Map produced and released by EMSN136 (P).

For the latest version of this map and related products visit: <https://emergency.copernicus.eu/EMSN136/>

For more information contact: [info@emergency.copernicus.eu](mailto:info@emergency.copernicus.eu)

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# Produktportfolio

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Während akuter Krisenlagen („rapid mapping“)

<https://emergency.copernicus.eu/mapping/ems/rapid-mapping-portfolio>

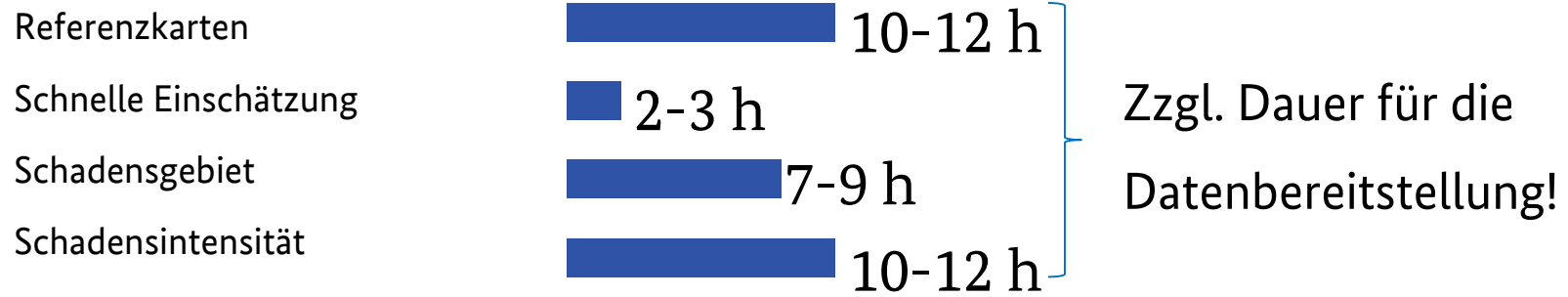
Außerhalb Krisenlagen („risk and recovery“)

<https://emergency.copernicus.eu/mapping/ems/risk-and-recovery-mapping-portfolio>



# Bearbeitungsdauer

## Notfallkartierung



## Risikoanalysen

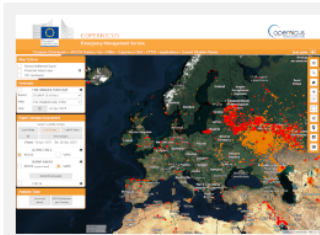




# European Forest Fire Information System

<https://effis.jrc.ec.europa.eu/>

## EFFIS applications



### Current Situation Viewer

The most up to date information on the current fire season in Europe and in the Mediterranean area.

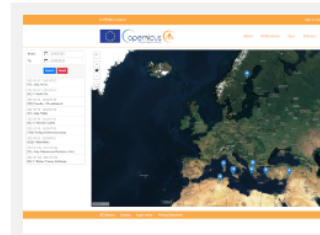
[Read more >](#)



### Current Statistics Portal

Statistics are provided at national level and also for 3 groups of countries, EU, European non-EU countries, and Middle East and North Africa countries.

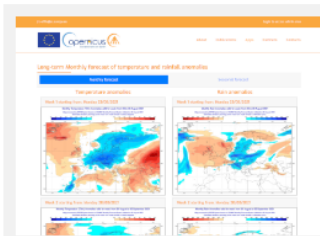
[Read more >](#)



### Firenews

Fire news is an application that collects, geo-locates and stores in a database fire news published in the internet in all the EU and other languages, allowing the user to filter the news on the basis of geographical scope, keywords, etc.

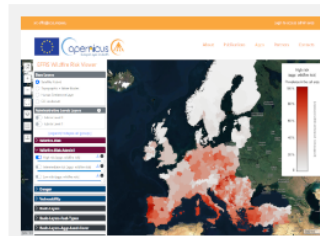
[Read more >](#)



### Long-term fire weather forecast

Monthly and seasonal forecast of temperature and rainfall anomalies that are expected to prevail over European and Mediterranean areas.

[Read more >](#)



### Wildfire Risk Viewer

Wildfire Risk index for the pan-European Scale. This includes two main groups of components by considering the fire danger and the vulnerability on three categories: people, ecological, and economic



### Data request

Request for country totals (burnt areas & number of fires) per year, as published in the Forest Fires in Europe, North Africa and Middle East reports, and more.

[Read more >](#)

## Visit our

[Global Wildfire Information System Viewer](#)

## EFFIS Damage Assessment

### EFFIS Burned Area (ha)

#### Total EU Countries

Mapped 63154  
(91% forest)

Estimated 66477

#### Total EFFIS Coverage

Mapped 76563

Estimated 80592

(Daily updated)

[RDA Disclaimer and layer info](#)

## EFFIS Applications

[Current Situation Viewer](#)

[Current Statistics Portal](#)

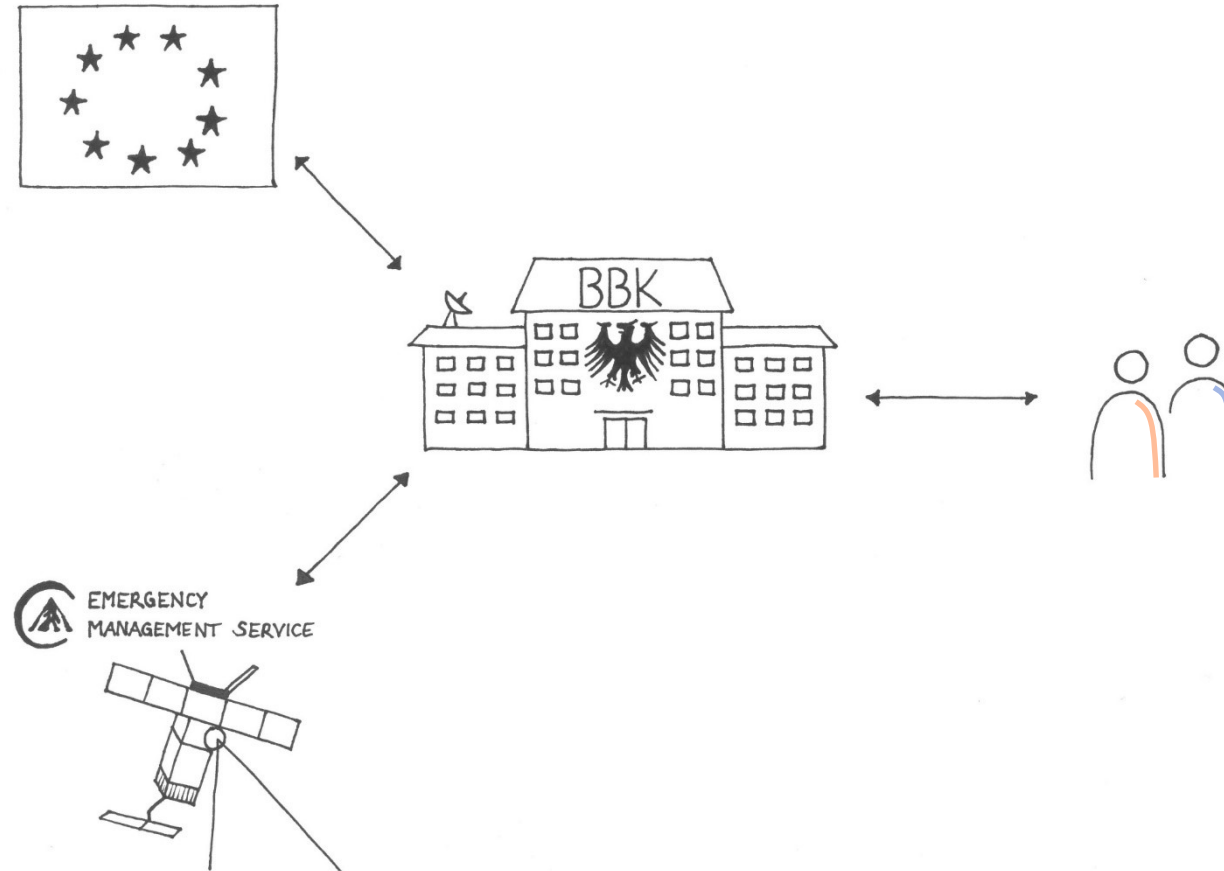
[Firenews](#)

[Long-term fire weather forecast](#)

[Wildfire Risk Viewer](#)



# Rolle BBK





# Eckpunkte Anforderungsverfahren

- Produkterstellung („Kartierung“) nur auf Anfrage
- Leistungsabruf nur durch berechtigte Stelle: Gemeinsames Melde- und Lagezentrum von Bund und Ländern
- Im Krisenfall -> Anfrage an GMLZ (24/7)
- Alle anderen Anfragen  
-> [copernicus.ems@bbk.bund.de](mailto:copernicus.ems@bbk.bund.de)
- Alle Produkte:  
<https://emergency.copernicus.eu/mapping>





# Weiterführende Links

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- CEMS Webseite: <https://emergency.copernicus.eu/>
- FAQ: <https://emergency.copernicus.eu/faq.html>
- Informationen auf BBK-Webseite:  
[https://www.bbk.bund.de/DE/Themen/Krisenmanagement/Lagebild/Fernerkundung/Copernicus/copernicus\\_node.html](https://www.bbk.bund.de/DE/Themen/Krisenmanagement/Lagebild/Fernerkundung/Copernicus/copernicus_node.html)





# Vielen Dank für Ihre Aufmerksamkeit!

## Kontakt

Dr. Michael Judex

Nationaler Fachkoordinator für den Copernicus Emergency Management Service (CEMS)

Referat I.1. Grundlagen und IT-Verfahren im Krisenmanagement

Abteilung I Krisenmanagement

Bundesamt für Bevölkerungsschutz und Katastrophenhilfe (BBK)

Provinzialstraße 93, 53127 Bonn

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