



GMES Emergency Management Service (EMS) – mapping

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Management and Emergency Response"

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Outline

- **Introduction to GMES**
- **What is the GMES EMS mapping?**
- **Who are the users?**
- **Example activations and products**
- **Conclusions**



GMES in a nutshell

*The Global Monitoring for Environment and Security (GMES) is an **EU-led initiative** for an autonomous and operational European Earth monitoring capacity*

*GMES aims at **providing relevant information** to policy-makers and other users, particularly in relation to environment and security*

*GMES is a **flagship of the European Space Policy***



The GMES programme comprise of:

*a **service component** ensuring access to information*



*a **space component** ensuring sustainable space borne observations for the service areas*



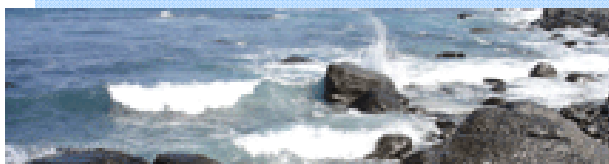
*an **in-situ component** ensuring observations through airborne, seaborne and ground-based installations for the service areas*



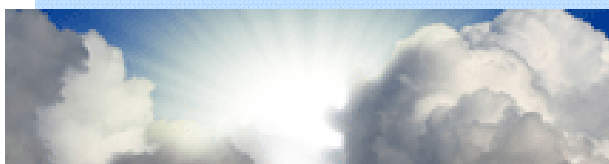
Vertical applications



Land



Marine



Atmosphere

GMES services:
*providing relevant
information to policy-
makers and other
users, particularly in
relation to environment
and security*



Security



Emergency



Climate Change

Horizontal applications

GMES dedicated missions: Sentinels



Sentinel 1 – SAR imaging

All weather, day/night applications, interferometry



Sentinel 2 – Multispectral imaging

Land applications: urban, forest, agriculture,..
Continuity of Landsat, SPOT



Sentinel 3 – Ocean and global land monitoring

Wide-swath ocean color, vegetation, sea/land
surface temperature, altimetry



Sentinel 4 – Geostationary atmospheric

Atmospheric composition monitoring, trans-
boundary pollution



Sentinel 5 – Low-orbit atmospheric

Atmospheric composition monitoring
(S5 Precursor launch in 2014)



USERS

Policy makers & Public & Private, commercial

What is their need?



Farming

Ice
monitoring

Air quality

Flood

Surveillance Climate Change

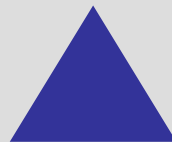
Examples provided



Land



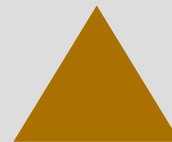
Marine



Atmosphere



Emergency



Security



Climate

Information services

Space
Infrastructure

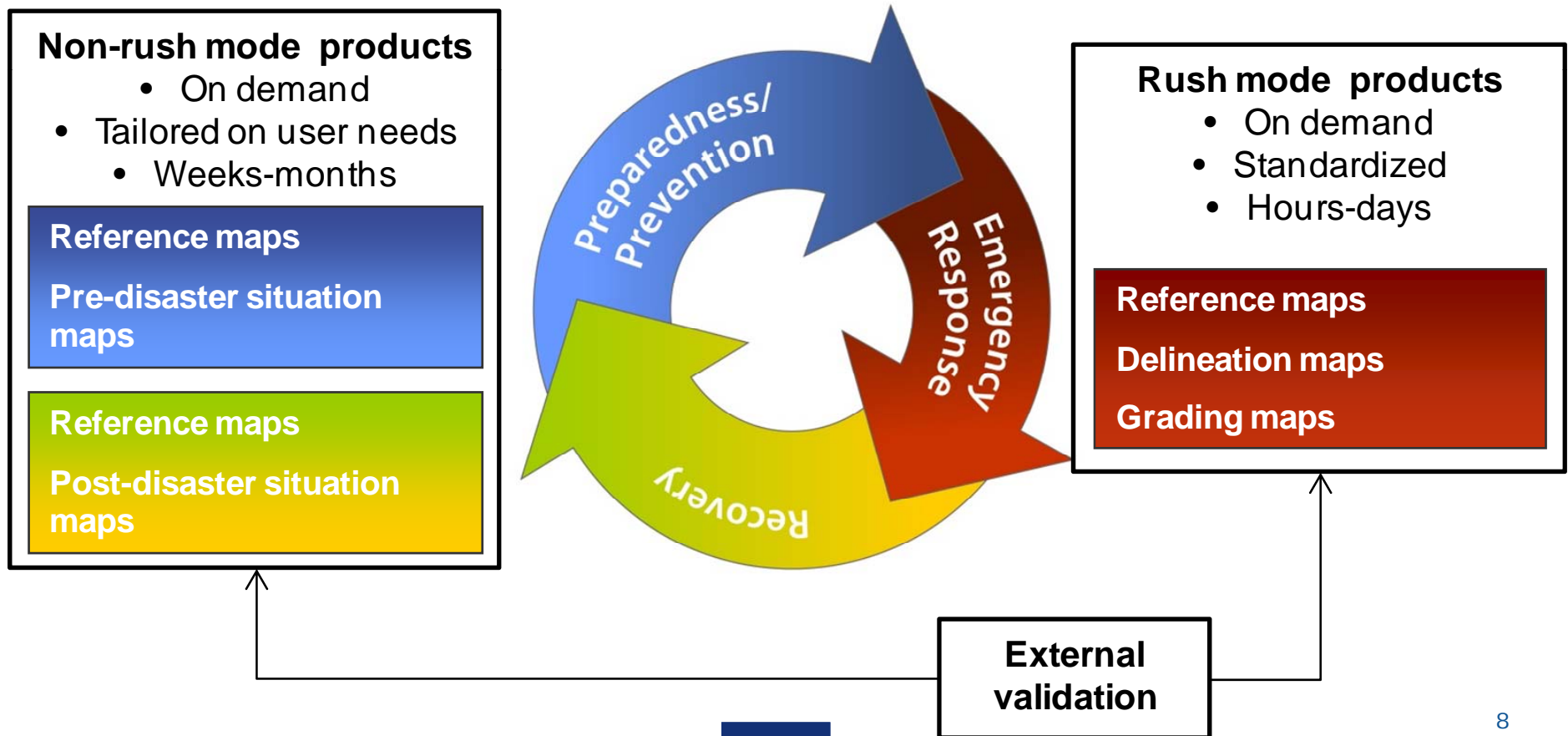
&

in-situ
Infrastructure

Sustainable information

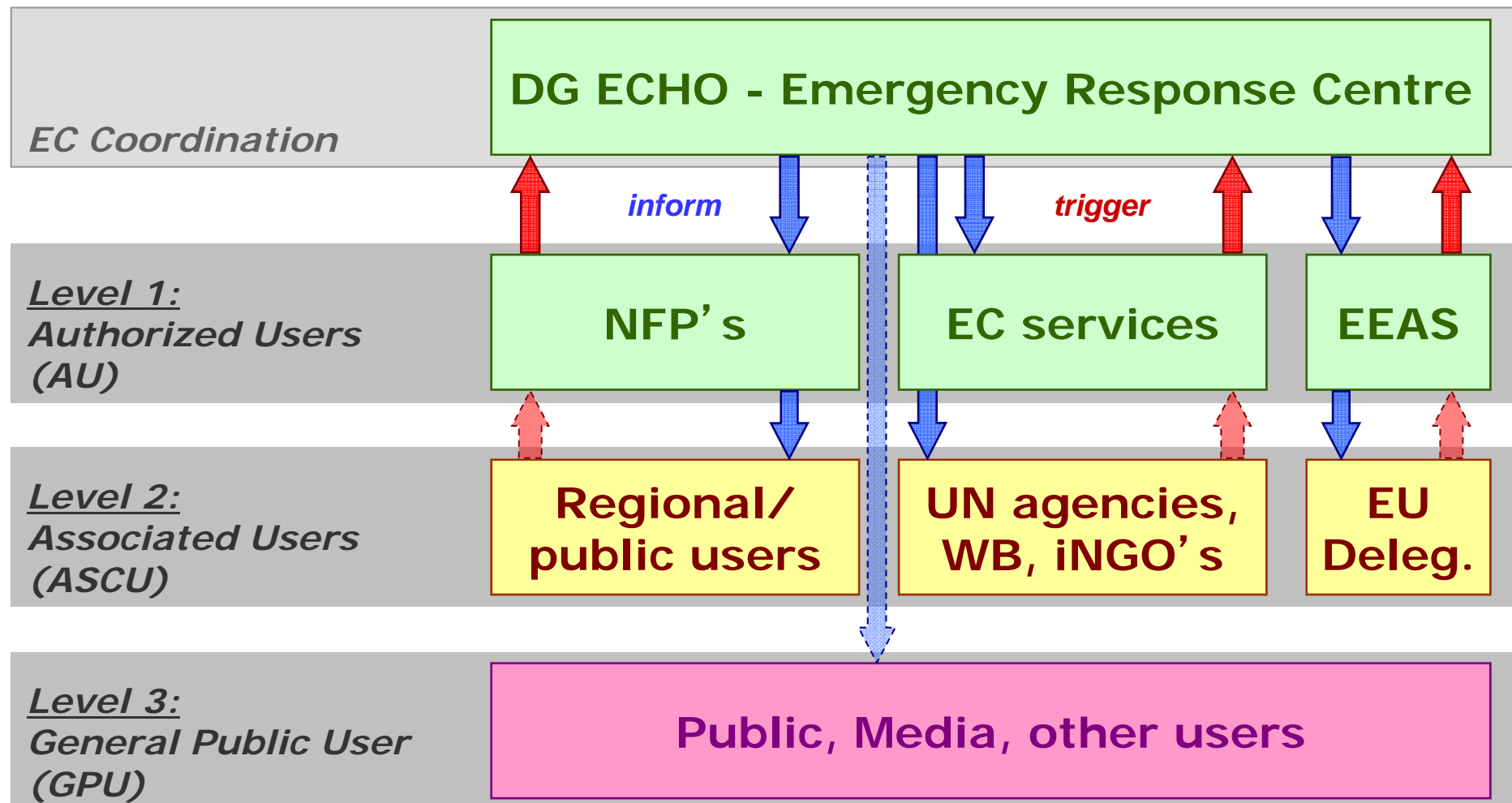
OBSERVATION

GMES Emergency Management Mapping Service: operational since 1 April 2012





GIO EMS TRIGGERING / INFORMATION FLOW



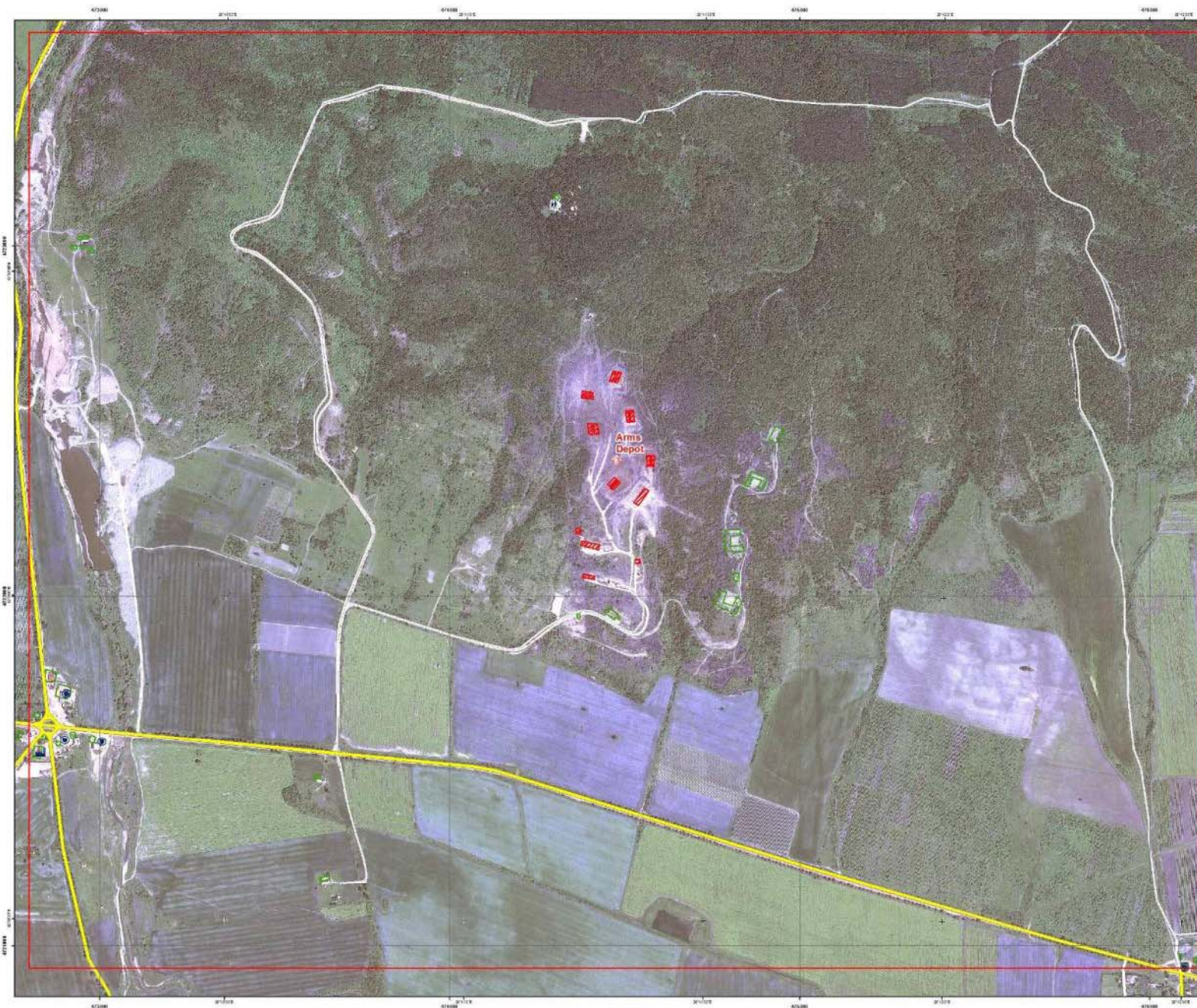
List of International Associated Users

ID	Organisation	International Associated Users (UN agencies, the World Bank, INGO's)
1.	UN-OCHA	United Nations - Office for the Coordination of Humanitarian Affairs
2.	UNDPKO	United Nations Department for Peacekeeping Operations
3.	UNHCR	United Nations High Commissioner for Refugees
4.	UNOOSA	United Nations Office for Outer Space Affairs
5.	UNOSAT	UNITAR's Operational Satellite Applications Programme
6.	UNOOSA-UNSPIDER	UN office of Outer Space affairs - platform for Space-based information for Disaster Management and Emergency Response
7.	UNICEF	United Nations International Children's Emergency Fund
8.	WFP	World Food Programme
9.	WHO	World Health Organisation, Public Health Information and GIS (GIS), Health Statistics and Informatics (HSI), Information Evidence and Research (IER)
10.	WB	World Bank
11.	ICRC	International Committee of the Red Cross
12.	IFRC	International Federation of Red Cross and Red Crescent Societies



Event types (disaster) covered:

- Forest fire, wild fire
- Flood
- Wind storm
- Earthquake
- Industrial accident
- Other: geophysical (tsunamis, landslides, severe storms/hurricanes, volcanic eruptions), humanitarian crisis, other hazards that are considered to be covered by emergency management



GUIDE number: N/A
 Application ID: 000000-000
 Product ID: 000000-000

Lozenets, BULGARIA **Industrial accident - 05/06/2012** **Delineation Map - Detail**



Cartographic information

1:5 000 Full color (SDAT, low resolution (150 dpi))

Map Coordinate System: WGS 1984 UTM Zone 15N

Grid: WGS 84 geographical coordinates

Legend

- Area of interest
- Explosion Locations
- Points of Interest
- Industrial
- Commercial
- Residential
- Transportation
- Primary Road
- Secondary Road
- Local Road
- Buildings
- Not Affected
- Affected

Estimated AOI population		Consequences within the AOI less than 100 inhabitants			
Affected assets	10 Buildings				
Residential	0	Educational	0		
Industrial	19	Medical	0		
Commercial	0	Recreational	0		
Institutional	0	Religious	0		
Multifunctional	0	Transportation	0		
Other	0	Military	0		

Map information

On Tuesday, June 05 2012, early in the afternoon, a series of explosions rocked an arms depot, owned by a private company, near the village of Lozenets, some 200 km (125 miles) west of Sofia, Bulgaria's capital.

The explosions caused serious damage to the depot's stock and caused injury to the depot's staff. The depot's staff were not injured. The depot's staff were not injured.

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Data Sources

On Tuesday, June 05 2012, the depot's staff were not injured. The depot's staff were not injured.

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Dissemination/Publication

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Framework

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Map production

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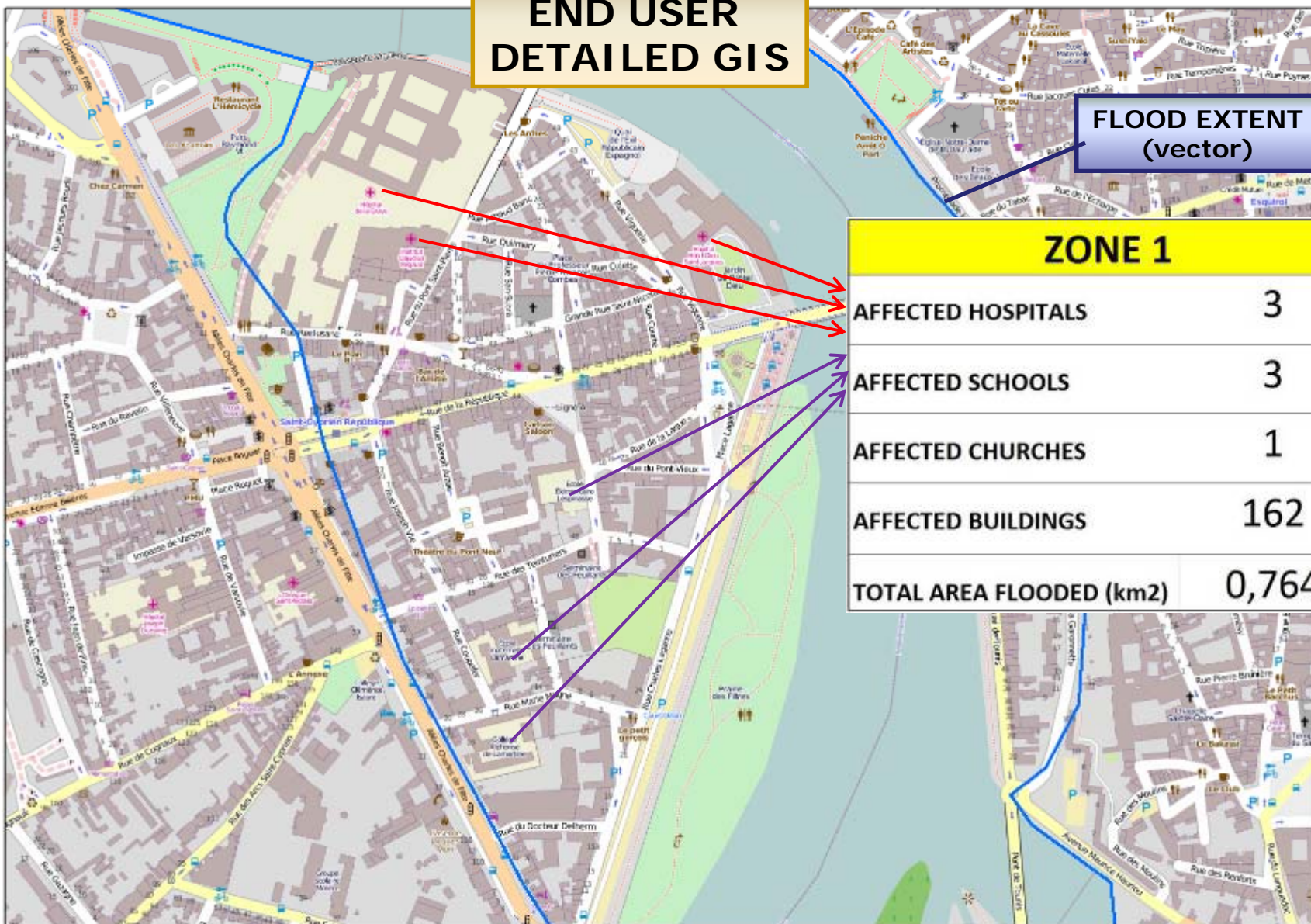
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END USER DETAILED GIS

**FLOOD EXTENT
(vector)**





GMES EMERGENCY MANAGEMENT SERVICE

EMS - MAPPING PORTAL

Home

What is GMES

The Emergency Management Service

GIO EMS-MAPPING

- The service
- Who can use the service
- How to use the service
- Products
- Quality Control/Feedback
- User Guide

Early Warning

- The European Flood Awareness System



Welcome to the portal of the GMES Emergency Management Service

A service in support of european emergency response

List of submitted GIO Rush Mode activations - showing the last 5 activations (within the last 90 days)



The GMES Emergency Management Service (EMS) is the first GMES service to become operational.

EMS started operations on April 1st, 2012 and consists of a set of services funded by the European Commission.

Access Rush Mode

connection

Authorised users only

Non-rush mode

Access

Authorised users only

Download
Portal User Manual





Conclusions and outlook

GMES Emergency Management Service is aimed at being flexible and adapted to emergency response actors

- **Adapted to the needs of Civil Protection Authorities within Europe**
- **Available also for the benefit of humanitarian aid and disaster management interventions worldwide**
- **‘public good’ data policy: open access and free licensing to general public users; data will soon be publicly available on GMES EMS website (<http://portal.ems-gmes.eu/index.html>)**
 - The crowdsourcing community can benefit from this open data policy