



Copernicus Service

in support to

EU External Action

PRODUCTS PORTFOLIO



Implemented by



Copernicus at a Glance

Copernicus is the European Union's Earth Observation programme: a user driven space programme under civil control. Copernicus monitors the Earth using its own dedicated constellation of satellites – the Sentinels – complemented by other satellites provided by Member States and other third parties, as well as utilising a range of non-space ('in situ') data sources. The Copernicus programme supports the protection of the environment, the efforts of Civil Protection and civil security, and contributes to European participation in global initiatives. Copernicus offers six different service lines: Emergency Management, Atmosphere Monitoring, Marine Environment Monitoring, Land Monitoring, Climate Change, and services for Security applications. More information on Copernicus can be found at the following location:

<http://copernicus.eu>



European
Commission



Implemented by



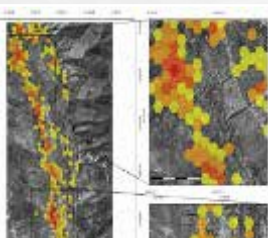
Copernicus Service in Support to EU External Action



Reference Map



Road Network Status
Assessment



Conflict Damage
Assessment



Critical Infrastructure
Analysis



Support to
Evacuation Plan



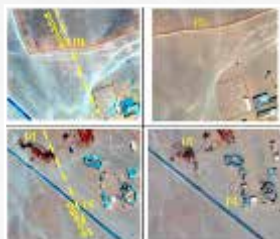
Non-EU Border Map



Camp Analysis



Crisis Situation
Picture



Activity Report

Copernicus Service in Support to EU External Action

As a global actor, Europe has a responsibility in promoting stable conditions for human and economic development, human rights, democracy and fundamental freedoms. In this context, a main objective of the EU is to assist third countries in a situation of crisis or emerging crisis and to prevent global and trans-regional threats having a destabilising effect.

In particular the Support to EU External Action (SEA) component will assist the EU in its operations outside EU territory, providing decision makers with geo-information on remote, difficult to access areas, where security issues are at stake. It targets mainly European users but it can also be activated by key International stakeholders, as appropriate under EU International cooperation agreements.

A delegation agreement with the European Union Satellite Centre ([EU SatCen](#)) has been signed on 6 October 2016 to support EU external actions with state-of-the-art satellite data imagery and technologies utilised in a secure mode and environment.



European
Commission



Implemented by



Application Domains

The Copernicus SEA services provide strategic support to EU External Action Security stakeholders through the provision of **Earth Observation** (EO) based information. The services are categorised by their application domain:

Political and Armed Conflicts



Situation Awareness



Humanitarian Support



Border Survey (outside EU)



Activity Monitoring



European
Commission



Implemented by



REFERENCE MAP



Reference Maps are high quality cartographic products including a wide range of observable features

IMAGERY USED

- Optical Imagery (from <1m to 5m)

OBSERVATION MODE

- ☒ On Demand
- ☐ Monitoring

APPLICABLE SCALE

- ☐ 5K – Very Detail (Facilities)
- ☒ 25K – Small Urban Areas
- ☒ 50K – Large Urban Areas
- ☒ 100K – Small Regions
- ☒ 500K – Large Regions

MODE

INFORMATION LAYERS

CRISIS

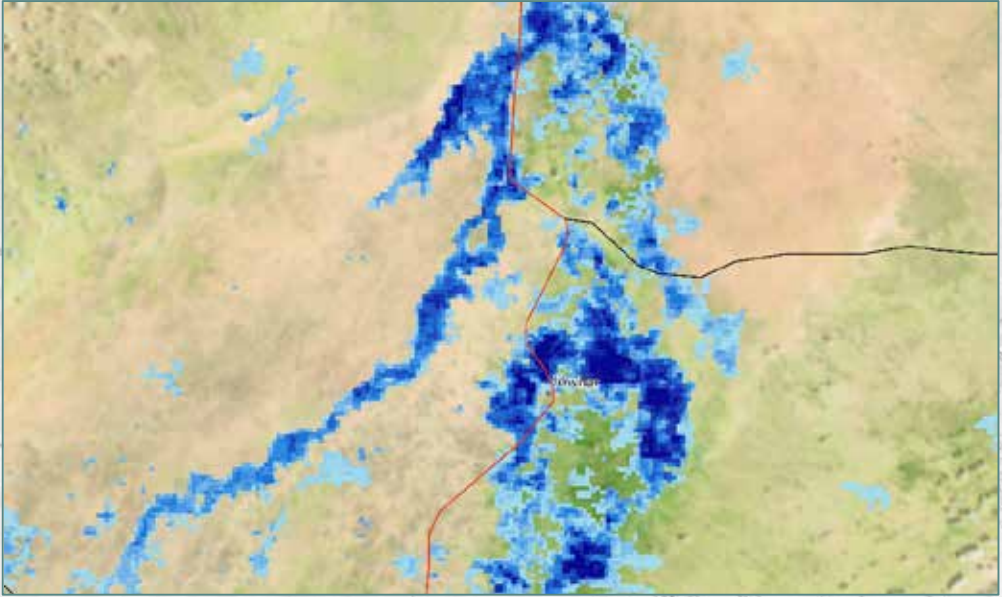
PREPAREDNESS

- Transportation Network (Main Roads, Harbours, Airfields)
- Populated Areas
- Hydrography
- Administrative Boundaries
- Detailed Transportation Network (All roads classified according to hierarchy, checkpoints, harbours, airfields, train and bus stations)
- Points of Interest (industrial, power production, electricity, military, dams, generic enclosed facilities)
- Topography
- Place Names (multilingual support)
- Land Use/Land Cover

OUTPUT TYPES

- ☒ Printable Map Series
(A1 – A3 PDF)
 - ☒ Geo-referenced map
(A1- A3 .tiff or .jp2)
 - ☒ Layer Group (.KML, .gdb, .shp, WMS)
-
- ☐ Report (PDF) (optionally provided by the service in case the complexity of the results require it)

ROAD NETWORK STATUS ASSESSMENT



Road Network Status Assessment provides users with up-to-date information of the status of the road network. This information is designed to support the planning of logistic operations in the field.

IMAGERY USED

- Optical Imagery (5m to 250m)
- SAR Imagery (30m to 250m)

OBSERVATION MODE

- ☒ On Demand
- ☐ Monitoring

APPLICABLE SCALE

- ☐ 5K – Very Detail (Facilities)
- ☐ 25K – Small Urban Areas
- ☒ 50K – Large Urban Areas
- ☒ 100K – Small Regions
- ☒ 500K – Large Regions

MODE

INFORMATION LAYERS

CRISIS

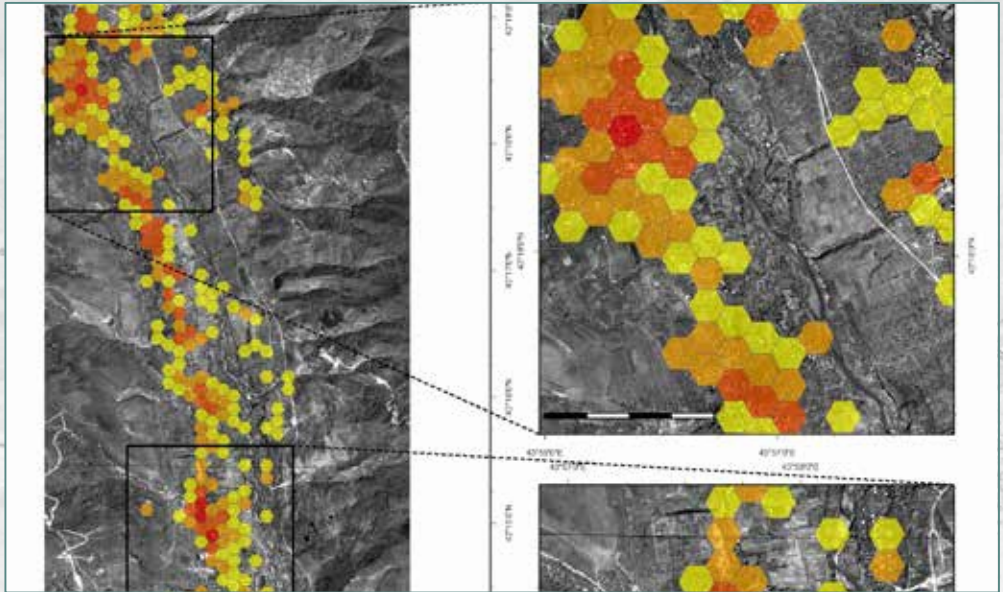
PREPAREDNESS

- Road Network (basic)
- Populated Areas
- Road Blocks (checkpoints, destroyed, debris, etc.)
- Bridges (operational status)
- Detailed Road Network (Roads classified according to surface)
- Wet Season Impact (optionally added for the case of logistic deployments in tropical regions)

OUTPUT TYPES

- ☒ Printable Map Series
(A1 – A3 PDF)
 - ☒ Geo-referenced map
(A1- A3 .tiff or .jp2)
 - ☒ Layer Group (.KML, .gdb, .shp, WMS)
-
- ☒ Report (PDF) (optionally provided by the service
in case the complexity of the results require it)

CONFLICT DAMAGE ASSESSMENT



Conflict Damage Assessment product uses change detection in order to provide visual interpretation containing information on distribution of damage in a crisis area.

IMAGERY USED

- Optical Imagery (1m to 5m)
- SAR Imagery (1m to 5m)

OBSERVATION MODE

- ☒ On Demand
- ☐ Monitoring

APPLICABLE SCALE

- ☐ 5K – Very Detail (Facilities)
- ☒ 25K – Small Urban Areas
- ☒ 50K – Large Urban Areas
- ☒ 100K – Small Regions
- ☐ 500K – Large Regions

MODE

INFORMATION LAYERS

CRISIS

PREPAREDNESS

- Transportation Network
- Populated Areas
- Distribution of damage (per urban block in urban areas, heat map in disperse areas)
- Damaged buildings
- Points of Interest operational status (Airports, Harbours, Industrial Facilities, Specific buildings, etc.)
- Damage on sites of cultural heritage

OUTPUT TYPES

- ☒ Printable Map Series
(A1 – A3 PDF)
 - ☒ Geo-referenced map
(A1- A3 .tiff or .jp2)
 - ☒ Layer Group (.KML, .gdb, .shp, WMS)
-
- ☐ Report (PDF) (optionally provided by the service
in case the complexity of the results require it)



European
Commission



Implemented by



CRITICAL INFRASTRUCTURE ANALYSIS



Critical Infrastructure Analysis identifies the relevant components of an infrastructure (e.g. power plants, industrial sites, transportation facilities) considered to be critical and assess their operational status.

IMAGERY USED

- SAR and/or Optical Imagery (from <1m to 5m)

OBSERVATION MODE

- ☒ On Demand
- ☒ Monitoring

APPLICABLE SCALE

- ☒ 5K – Very Detail (Facilities)
- ☒ 25K – Small Urban Areas
- ☐ 50K – Large Urban Areas
- ☐ 100K – Small Regions
- ☐ 500K – Large Regions

MODE

CRISIS

PREPAREDNESS

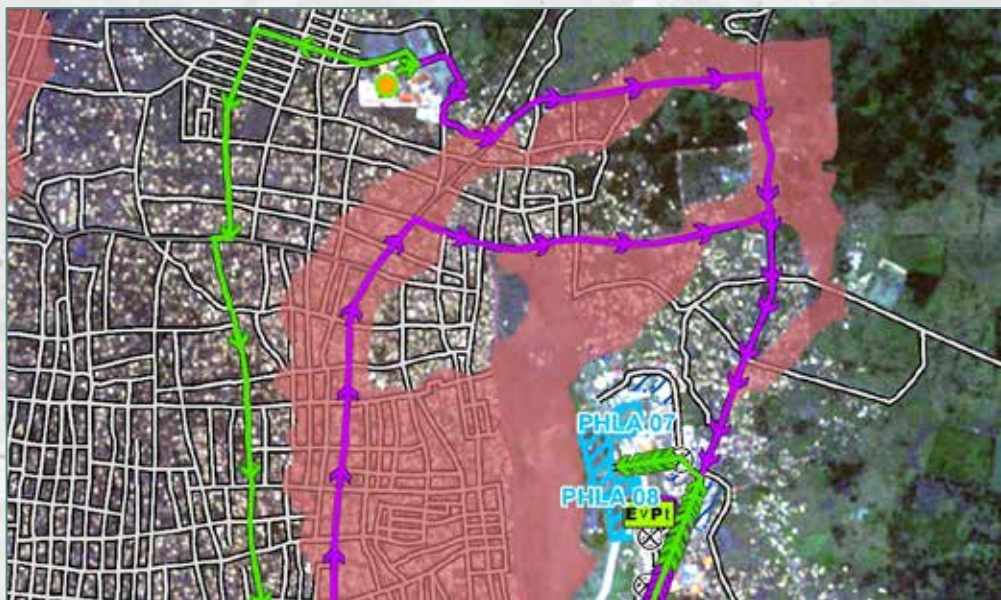
INFORMATION LAYERS

- Critical Infrastructure Operational elements (with operational status)
- Transportation Network
- Enclosure and security measures
- Populated Areas
- Changes in the infrastructure or in the operational status (for monitoring mode)

OUTPUT TYPES

- ☒ Printable Map Series
(A1 – A3 PDF)
 - ☐ Geo-referenced map
(A1- A3 .tiff or .jp2)
 - ☒ Layer Group (.KML, .gdb, .shp, WMS)
-
- ☒ Report (PDF) (optionally provided by the service
in case the complexity of the results require it)

SUPPORT TO EVACUATION PLAN



Support to Evacuation Plan provides geospatial information to support the evacuation of EU citizens from crisis areas.

IMAGERY USED

- SAR and/or Optical Imagery (from <1m to 5m)

OBSERVATION MODE

- ☒ On Demand
- ☒ Monitoring

APPLICABLE SCALE

- ☒ 5K – Very Detail (Facilities)
- ☒ 25K – Small Urban Areas
- ☐ 50K – Large Urban Areas
- ☐ 100K – Small Regions
- ☐ 500K – Large Regions

MODE

INFORMATION LAYERS

CRISIS

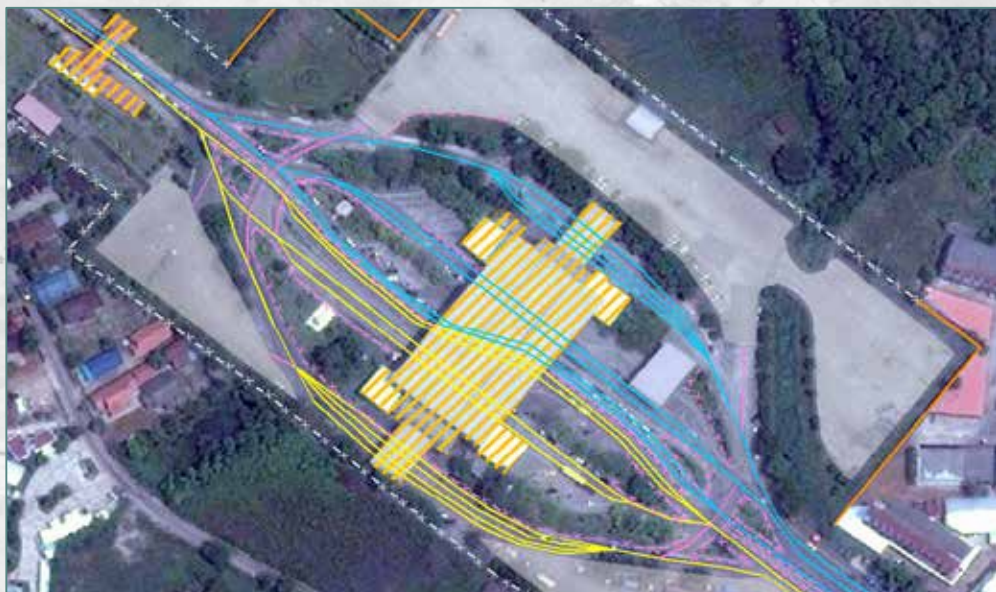
PREPAREDNESS

- Transportation Network (basic)
- Points of Interest
- Evacuation Routes
- Potential Helicopter Landing Areas
- Gathering Areas
- Road Blocks (checkpoints, destroyed, debris, etc.)
- Detail Transportation Network (classified according to hierarchy, bridges, culverts, tunnels)
- Tools to input Rally Points and generate automatically evacuation routes and convoy routes to the Evacuation Point.

OUTPUT TYPES

- ☒ Printable Map Series
(A1 – A3 PDF)
 - ☐ Geo-referenced map
(A1- A3 .tiff or .jp2)
 - ☒ Layer Group (.KML, .gdb, .shp, WMS)
-
- ☒ Report (PDF) (optionally provided by the service
in case the complexity of the results require it)

NON-EU BORDER MAP



***Non-EU Border Map** provides users with the possibility of acquiring information specific to support decisions about non-EU border issues.*

IMAGERY USED

- Optical Imagery (from <1m to 5m)

OBSERVATION MODE

- ☒ On Demand
- ☐ Monitoring

APPLICABLE SCALE

- ☒ 5K – Very Detail (Facilities)
- ☒ 25K – Small Urban Areas
- ☒ 50K – Large Urban Areas
- ☐ 100K – Small Regions
- ☐ 500K – Large Regions



European
Commission



Implemented by



MODE

INFORMATION LAYERS

CRISIS

PREPAREDNESS

- Transportation Network (Roads, bridges, fords, ferry crossing points)
- BCPs (Checkpoints, enclosure, capacity, current activity)
- Facilities (power generation, harbours, airports)
- Administrative Boundaries
- Hydrography
- Built up Areas
- Point of Interest
- Land Use/Land Cover (forested areas, swamps, mangroves)

OUTPUT TYPES

- ☒ Printable Map Series
(A1 – A3 PDF)
 - ☒ Geo-referenced map
(A1- A3 .tiff or .jp2)
 - ☒ Layer Group (.KML, .gdb, .shp, WMS)
-
- ☒ Report (PDF) (optionally provided by the service
in case the complexity of the results require it)

[illegible]

Camp Analysis is a product oriented to support decision making regarding displaced population (either internally displaced or refugees).

IMAGERY USED

- Optical Imagery
(from <1m to 5m)

Aerial optical satellite imagery of a coastal region, showing land, water, and infrastructure. The image is in grayscale and shows a large body of water on the left, with a coastline on the right. There are various land features, including what appears to be a road or railway line running diagonally across the land. The image is somewhat blurry, typical of satellite imagery from that era.

- OBSERVATION MODE**

 - ☒ On Demand
 - ☒ Monitoring

OBSERVATION MODE

- ☒ On Demand
- ☒ Monitoring

- OBSERVATION MODE**

 - ☒ On Demand
 - ☒ Monitoring

APPLICABLE SCALE

- ☒ 5K – Very Detail (Facilities)
- ☒ 25K – Small Urban Areas
- ☒ 50K – Large Urban Areas
- ☐ 100K – Small Regions
- ☐ 500K – Large Regions

- ## APPLICABLE SCALE
- ☒ 5K – Very Detail (Facilities)
 - ☒ 25K – Small Urban Areas
 - ☒ 50K – Large Urban Areas
 - ☐ 100K – Small Regions
 - ☐ 500K – Large Regions

MODE

INFORMATION LAYERS

CRISIS

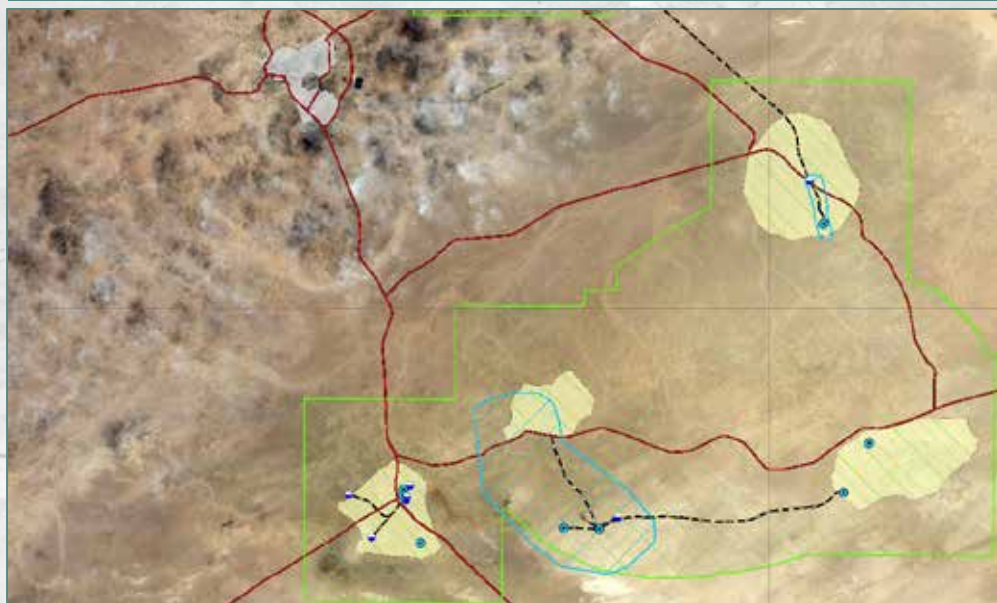
PREPAREDNESS

- Camp dwellings
- Camp non-dwelling buildings
- Changes in the camp (if applicable)
- Transportation Network
- Trends in population changes
- Hydrography
- Enclosure
- Urban areas (non-camp)
- Land Cover/ Land Use (agricultural exploitation)

OUTPUT TYPES

- ☒ Printable Map Series
(A1 – A3 PDF)
 - ☐ Geo-referenced map
(A1- A3 .tiff or .jp2)
 - ☒ Layer Group (.KML, .gdb, .shp, WMS)
-
- ☒ Report (PDF) (optionally provided by the service
in case the complexity of the results require it)

CRISIS SITUATION PICTURE



Crisis Situation Picture is a product designed for the overall assessment of the severity of a conflict/crisis and its consequences.

IMAGERY USED

- Freely available ancillary information
- Optical Imagery (10m to 500m)

OBSERVATION MODE

- ☒ On Demand
- ☒ Monitoring

APPLICABLE SCALE

- ☐ 5K – Very Detail (Facilities)
- ☐ 25K – Small Urban Areas
- ☐ 50K – Large Urban Areas
- ☒ 100K – Small Regions
- ☒ 500K – Large Regions

MODE

INFORMATION LAYERS

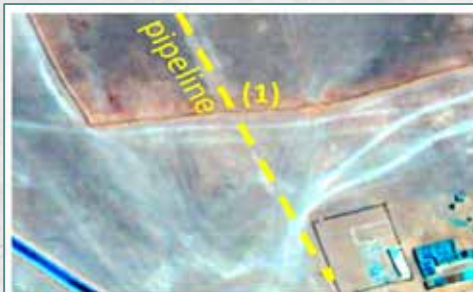
CRISIS

- Ancillary information related to the triggering crisis
- Human Geography layers
- Administrative boundaries
- Land use/land cover
- Other ancillary data (transportation network, hydrography, etc.)

OUTPUT TYPES

- ☒ Printable Map Series
(A1 – A3 PDF)
 - ☐ Geo-referenced map
(A1- A3 .tiff or .jp2)
 - ☐ Layer Group (.KML, .gdb, .shp, WMS)
-
- ☒ Report (PDF) (optionally provided by the service
in case the complexity of the results require it)

ACTIVITY REPORT



Activity Report is a product focused in providing the user with an analysis of a given human activity. By its nature, this product is very flexible and can be applied to a variety of situations.

IMAGERY USED

- Optical Imagery (from <1m to 5m)
- SAR Imagery (from <1m to 5m)
- Pre and post event

OBSERVATION MODE

- ☒ On Demand
- ☒ Monitoring

APPLICABLE SCALE

- ☒ 5K – Very Detail (Facilities)
- ☒ 25K – Small Urban Areas
- ☒ 50K – Large Urban Areas
- ☐ 100K – Small Regions
- ☐ 500K – Large Regions

MODE

INFORMATION LAYERS

CRISIS

- Indicators of activity
- Areas under construction
- Areas abandoned or without activity
- Detected changes
- Features relevant to the activity monitored

OUTPUT TYPES

- ☒ Printable Map Series
(A1 – A3 PDF)
 - ☐ Geo-referenced map
(A1- A3 .tiff or .jp2)
 - ☐ Layer Group (.KML, .gdb, .shp, WMS)
-
- ☒ Report (PDF) (optionally provided by the service
in case the complexity of the results require it)



<http://copernicus.eu/main/security>