

COPERNICUS Emergency

Contribution du
“Risk and Recovery”
mapping service au
RO post Mathieu

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Copernicus is the European Union's Earth observation programme

coordinated and managed by the European Commission in partnership with the European Space Agency (ESA), the EU Member States and EU Agencies

Copernicus Emergency Management Service (EMS)

managed by the European Commission via the Joint Research Centre and DG ECHO,

delivers warnings and risk assessments of floods and forest fires and provides geospatial information derived from satellite images on the impact of natural and man-made disasters all over the world (before, during or after a crisis). Through timely and accurate geo-spatial information derived from satellite remote sensing and completed by available in situ or open data sources, it supports crisis managers, civil protection and hydro-meteorological authorities, humanitarian aid actors dealing with crises, as well as those involved in recovery, disaster risk reduction and preparedness activities.



Risk & Recovery Mapping

- Serves prevention, preparedness, disaster risk reduction, reconstruction, recovery
- Service is customised to suit the user requirements, specific to each activation
- Product delivery in weeks/month



Post-disaster Mapping

- Changes of Vulnerability & resilience of urban settlements
- Risk status for new assets
- Post-disaster needs assessment
- Recovery plans
- Reconstruction/rehabilitation monitoring

Pre-disaster Mapping

- Hazard exposure
- Vulnerability & resilience of buildings or people
- Risk status for population and assets
- Evacuation plan
- Probabilistic risk assessment based on likely hazards



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Haiti Risk and recovery mapping activation

SRF from CNIGS/CIAT sent to ERCC (DG ECHO)
by EU Delegation in Haiti 

Ad hoc interaction with CNIGS/CIAT to
obtain necessary ancillary data sets.

Transforming SRF into a technical annex by DG JRC

Tender procedure by DG JRC

Multiple framework contract with **3 consortia** :
Indra, Geoapikonisis, Airbus D&S+Sertit

Evaluation of proposals and selecting winning bid

Product generation and delivery





Tender timeliness and results in RO Haiti

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Tender procedure :

7 days :
questions

10 days: offer
preparation

3 days :
JRC
evaluation

5 days:
contract
preparation

20 days:
Map
compilation

2 ACTIVATIONS PERFORMED IN 2018 :

Activation EMSN 050 - Post Matthew damage assessment and monitoring of settlements and populated places.



Activation EMSN 051 - Post Matthew monitoring on rural areas (agriculture, protected areas, mangrove).





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How CEMS supported CEOS RO pilot Haiti



Copernicus Emergency Management Service. Risk and Recovery Mapping

POST MATTHEW DAMAGE ASSESSMENT AND MONITORING OF RECOVERY ACTIVITIES IN THE SOUTH REGION OF HAITI (EMSN-050)

Risk assessment products: post-event damage assessment and monitoring of reconstruction activities and of the evolution state of the IDP camps from the moment of the event up to one year after.

Product Output:

- Maps with scale of 1:5,000 and overview
- Coordinate Reference System UTM18N (datum WGS84) (EPSG:32618)
- OGC and ArcGIS compliant
- Geometric / thematic accuracy and file formats according EMS standards

Reference Map:

- Topographic elements, admin., hydrography.
- Physiography
- Settlements and Populated places
- Transport Network
- Industry and utilities and Points of interest
- Land Use / Land Cover

Risk and Recovery Products:

- Post-event Damage Assessment
- Monitoring of reconstruction activities
- Monitoring of the evolution state of the IDP camps

EO data:

- IGN ortho-imagery
- WorldView, Pleiades and SPOT imagery

Elevation data:

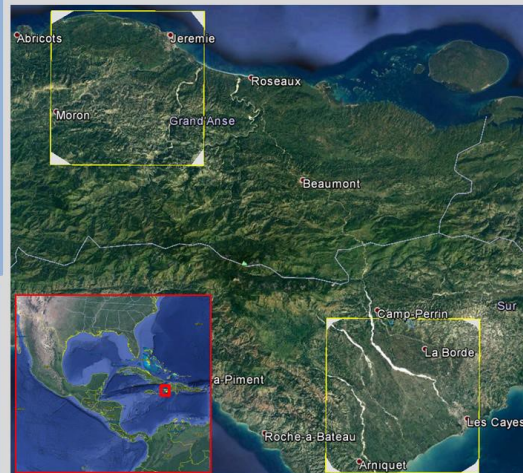
- MNT Lidar, 20cm (Service Provider)

Non-EO data:

- CNGIS data and data from the Service provider for topography, populated places, transportation network, POIs, industry and utilities and LU/LC.
- Open source data (OSM, wikimapia, Google Earth)

Area of Interest

The activation includes two Areas Of Interest (AOI) located in Southern Haiti: one around *Jeremie* (400 Km²); and another around *Les Cayes* (400 Km²).



indra



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Copernicus Emergency Management Service. Risk and Recovery Mapping

POST MATTHEW MONITORING ON RURAL AREAS, SOUTH REGION OF HAITI (EMSN-050)

Risk assessment products: agricultural activities including changes (Jérémie, Les Cayes and Port Salut); 2017 coastline (Les Cayes-Jérémie); forest degradation and evolution 12 months after event (Macaya Park); and mangrove analyses.

Product Output:

- Maps with scale of 1:5,000 and overview
- Coordinate Reference System UTM18N (datum WGS84) (EPSG:32618)
- OGC and ArcGIS compliant
- Geometric / thematic accuracy and file formats according EMS standards

Reference Map:

- Topographic elements, admin., hydrography.
- Physiography
- Settlements and Populated places (building footprints)
- Transport Network
- Industry and utilities and Points of interest
- Land Use / Land Cover

Risk and Recovery Products:

- Agricultural activities and changes
- 2017 Coastline
- Forest degradation and evolution
- Mangrove analyses

EO data:

- IGN ortho-imagery
- WorldView, Pleiades and SPOT imagery

Elevation data:

- MNT Lidar, 1,5m (Service Provider)

Non-EO data:

- CNGIS data, Unostat agriculture analyses, and UNEP Haiti ground measurements.

Open source data (OSM, wikimapia, Google Earth)

Area of Interest

The activation includes six Areas Of Interest (AOI) located in Southern Haiti:

- Areas 1 (14 Km2), 4 (47 Km2) and 5 (268 Km2): agricultural activities.
- Areas 2 (15 Km2) and 3 (87 Km2): forest degradation.
- Area 6 (8 Km2): Mangrove analyses.

It also includes the coastline from Les Cayes to Jérémie.



Thank you for your attention

tribution of
pernicious CEMS to RO

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