EMSA CleanSeaNet service: monitor oil pollution, support to emergencies and polluter identification

Teresa Cunha
Earth Observation Services
Unit 2.2 Surveillance

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CleanSeaNet is the European satellite-based oil spill monitoring and vessel detection service. It analyses images, mainly from synthetic aperture radar (SAR) but also from optical missions, to:

- detect possible oil on the sea surface, including illegal discharges of mineral oil
- identify potential polluters
- monitor the spread of oil during maritime emergencies

The service was developed and is operated by EMSA, and is available to all EU member states, EFTA/EEA member states, candidate countries and European Neighbourhood Policy (ENP) participating countries.
CSN Key Facts and Figures 2022\(^{(1)}\)

**Activities Covering**

- **1 231 MILLION KM\(^2\)** MONITORED IN QRT/NRT
- **6700** IMAGES DELIVERED
- **4934** POSSIBLE OIL SPILLS DETECTED (approximately 4 spills per million km\(^2\) monitored)

(1) 36 coastal states: 22 coastal European Union (EU), 2 European Free Trade Association (EFTA), 2 candidate countries, 10 countries in the context of the European Neighbourhood Policy (ENP) SAFEMED and BCSEA projects
CleanSeaNet service results

Average monthly coverage of CleanSeaNet service

Coverage requirements are being fulfilled by EMSA

☑️
CleanSeaNet Alert Report

In case a possible oil spill is detected in the alert area of a Coastal State, an alert report is automatically sent in near real time (less than 20 minutes after the satellite pass).
MRCC Delgada requested satellite imagery to monitor possible oil spills, from the Ro-Ro Felicity Ace, after the vessel was caught on fire.

A spill was detected after the sinking of the vessel.

All 22 crew members were rescued, by the M/V Resilient Warrior, after being contacted MRCC Delgada.

Potential spill detected over the wreck of Ro-Ro FELICITY ACE © EMSA, contains modified Copernicus Sentinel-1 data, 2022.
CleanSeaNet
Long-term deterrent effect

- The EU-wide satellite surveillance operated by EMSA enables:
  - Comprehensive detection of possible oil spills at sea
  - Tracking and tracing of suspected ship source pollution
  - Identification of potential polluters
- Continuous surveillance and enforcement efforts provide a clear deterrent effect of concerning illegal discharges of oil and other polluting substances.
- Despite the detection efforts, oil and other polluting substances still regularly occur in European waters.
- Reduced visibility of the administrative and criminal law prosecutions based on oil spill detections follow-up.
CleanSeaNet
Long-term deterrent effect

Number of possible oil spills detected by CleanSeaNet

Number of possible oil spills detected per million km2 monitored

- Number of CSN detections
- Average of CSN detections per Million km2

- Long-term deterrent effect
Contact: cleanseanet@emsa.europa.eu

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