# **COPERNICUS** MARITIME SURVEILLANCE

# **USE CASE**

## MARINE POLLUTION MONITORING



# USE CASE: ROUTINE MONITORING OFF THE COAST OF GREENLAND

A primary mission of the Joint Arctic Command (JACO) of the Danish Defence Command is to monitor the seas around Greenland. From January 2018, CMS began delivering services for pollution detection off the coast of Greenland. These services comprise routine monitoring for the detection of illegal shipsource discharges, with regular images taken across defined areas throughout the year, in order to detect possible pollutions whenever and wherever they occur. The detection capabilities of CMS are integrated in a comprehensive pollution detection and response chain, in which the initial detection of pollution will eventually lead to the successful prosecution of a violator.

In cooperation with JACO, EMSA plans and orders satellite imagery to meet service coverage requirements. After image acquisition trained operators assess the images with supporting information (e.g. vessel position data), to identify possible pollutions and determine the likelihood of the presence of oil on the sea surface, and to assist in identifying the source of the pollution.

When a possible oil spill is detected, an alert message is sent to the Danish authorities and the analysed images are available in the user portal in near-real time (approximately 30 minutes after satellite overpass). These near-real time service capabilities are crucial to enable a rapid response by the user, as well as to increase the likelihood of catching the polluter red-handed. were arrested.<sup>4</sup>



SAR images covering the coast of Greenland across several days



Satellite images provide a safe and reliable detection method in Greenland, a vast and inhospitable region

Copernicus, the European Union's Earth Observation Programme, delivers operational data and information services to support a broad range of environmental and security applications. The European Maritime Safety Agency (EMSA) is responsible for implementing the Copernicus Maritime Surveillance Service.

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