

DEFENCE AND SPACE
Intelligence

Maritime Domain Awareness Services

We make the invisible visible
2020 Service Catalogue



AIRBUS

Service Description

How we are increasing safety in the maritime domain

Effective monitoring of a country's entire Exclusive Economic Zone (EEZ) using only traditional means is now almost impossible so new solutions must be found to cost-effectively reset the balance in favour of the authorities and the communities that are often the worst affected.

Satellites provide the ideal tools to remotely extend surveillance capabilities from coastal areas to open seas. With our expertise in big data and predictive analysis, Airbus is able to support improved surveillance capacities across a range of applications, such as fleet management, piracy, illegal fishing,

search and rescue, marine pollution, tracking, locating hijacked vessels and more.

The experience of our analysts is augmented with the latest in machine learning, artificial intelligence and automated analytics to rapidly process a variety of data sources, producing cross-cueing analysis and pinpointing specific vessels and assets. In summary, Airbus offers intelligence as a service, with highly skilled in-house experts, including former naval officers and military intelligence experts, capable of identifying and analysing specific behaviours and activities.

Our satellite-derived solutions increase safety and protection of customers' assets at sea

On demand, Airbus' analyst team offers a broad spectrum of data sources – including owned assets and those of our partners – to better meet your requirements. Airbus has, for example, a strong partnership with exactEarth, the world leader in Satellite AIS data services, allowing us to provide global shipping and vessel-tracking information to our customers in near real time. In addition, Airbus is now one of the most important investors of Hawkeye 360, the first commercial company to use formation-flying satellites to create a new class of radio frequency (RF) data and analytics.

Through this collaboration, Airbus and HawkEye 360 will deliver high-impact geospatial intelligence solutions not currently available, to evaluate potential threats and protect borders, locate ships engaged in smuggling or illegal fishing, support emergency rescue or identify interferences. We provide an unprecedented level of detection quality and AIS correlation to support institutional and governmental customers, such as navies or coastguards.



Our References



Our Partners



Our Sensors

The most advanced constellation for maritime surveillance

Airbus' proprietary commercial access to Pléiades Neo, Pléiades, SPOT, TerraSAR-X and TanDEM-X optical and radar satellites, combined with comprehensive application experience, means we can deliver a broad product and services portfolio spanning the entire geo-information value chain:

- **Pléiades Neo:** Airbus' highest resolution optical constellation, with four identical 30cm satellites and optimum reactivity, will allow you to get high-detailed imagery.

- **Pléiades:** Offers very high-resolution imagery for detection of small vessels and identification of specific vessels. Context information on the vessels' activity can also be extracted.

- **SPOT 6/7:** Designed for daily collection with an ideal resolution to identify larger ships and detect/classify small to medium-sized vessels.

- **TerraSAR-X:** Suited for near real-time detection of small to large vessels, independent of cloud cover and lighting conditions, a semi-automated detection capability also allows for rapid delivery.

Over 50% of the worldwide maritime traffic is monitored with our unique STYRIS maritime safety and security solution, which offers Vessel Traffic Services (VTS), Coastal Surveillance Systems (CSS), and Critical Maritime Infrastructure Protection. Equally, with more than 30 years' experience in data acquisition, processing, data management and hosting, Airbus is uniquely placed to deliver sustainable solutions that deliver exactly what you need, when and where you need it, addressing defence and security, commercial and civil institutional requirements.

Airbus supports decision makers worldwide to increase security, optimise mission planning and operations, boost performance, improve management of natural resources and, last but not least, protect our environment.



Service Catalogue

		Services	Number of Acquisitions	Formats
1	Detection and Activity Report	· Tasking/Archive · Vessel Detection Report	1	· KMZ
		· Tasking/Archive · Vessel Detection Report · Satellite Imagery	1	· Vessel Detection Report (KMZ/KML/GEOJSON) · ZIP (containing DIMAP V2, orthorectified, 8-bit colour display) · RADAR ZIP (GeoTiff, orthorectified)
		· Tasking/Archive · Vessel Detection Report · Detailed report	1	· Vessel Detection Report (KMZ/KML/GEOJSON) · PDF (one page summary and one page on suspicious behaviour)
		· Tasking/Archive · Vessel Detection Report · Satellite imagery · Detailed report	1	· KMZ · PDF (one page summary and one page on suspicious behaviour)
2	Situational Awareness Report	· Tasking/Archive · Situational awareness report	1	· PDF (one page summary and one page on structure)
3	Oil Rig Report	· Tasking/Archive · Oil Rig report (outline and situation)	1	· KMZ · PDF
4	Oil Spill Report	· Tasking/Archive · Oil spill outline · Vessel situation report	1	· KMZ
		· Tasking/Archive · Oil spill outline · Vessel situation report · Report	1	· KMZ · PDF
		· Tasking/Archive · Oil spill outline · Potential polluter targets	1	· KMZ · PDF
5	Monitoring	· Tasking/Archive · Vessel detection report · Situational awareness report	1–10	· PDF/by satellite imagery (one page summary + one page on suspicious behaviour + AIS analysis)
6	SpatioMap	· Tasking/Archive · SpatioMap	1	· PDF (one page by satellite imagery)

Service Descriptions

Detection and Activity Report

Our detection and activity reports service provides maritime stakeholders with tangible information on vessel detections and contexts. To achieve fast and highly accurate object intelligence, the service involves an innovative combination of a state-of-the-art automated detection component and an optimised image analyst interaction. Airbus Intelligence is constantly evaluating available vessel detection algorithms to ensure the best detection performance.



Situational Awareness Report

This summary and analysis report conveys all elements to understand the area of interest after operations.

This report includes a description of marine infrastructures and activities observed from satellite imagery. Additional information layers based on ‘open source’ searches can be integrated into the report. The report includes an annotated vector layer based on optical satellite imagery and mapping data. The very high resolution optical imagery allows a detailed analysis of the situation needed for deployment of ground missions and logistics support. As complementary sensors, radar satellites will detect any ships whatever the weather.



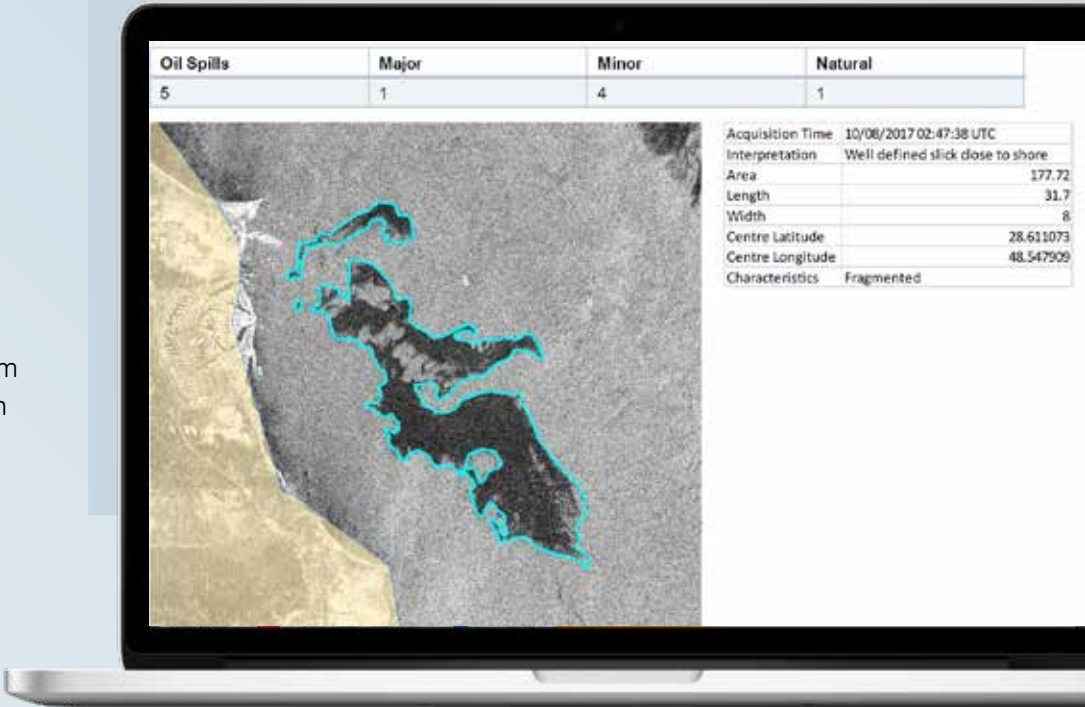


Oil Rig Report

The Oil Rig report includes infrastructure information and pollution detection, if requested. It gives maritime situation awareness in case of incidents and monitors operation activity.

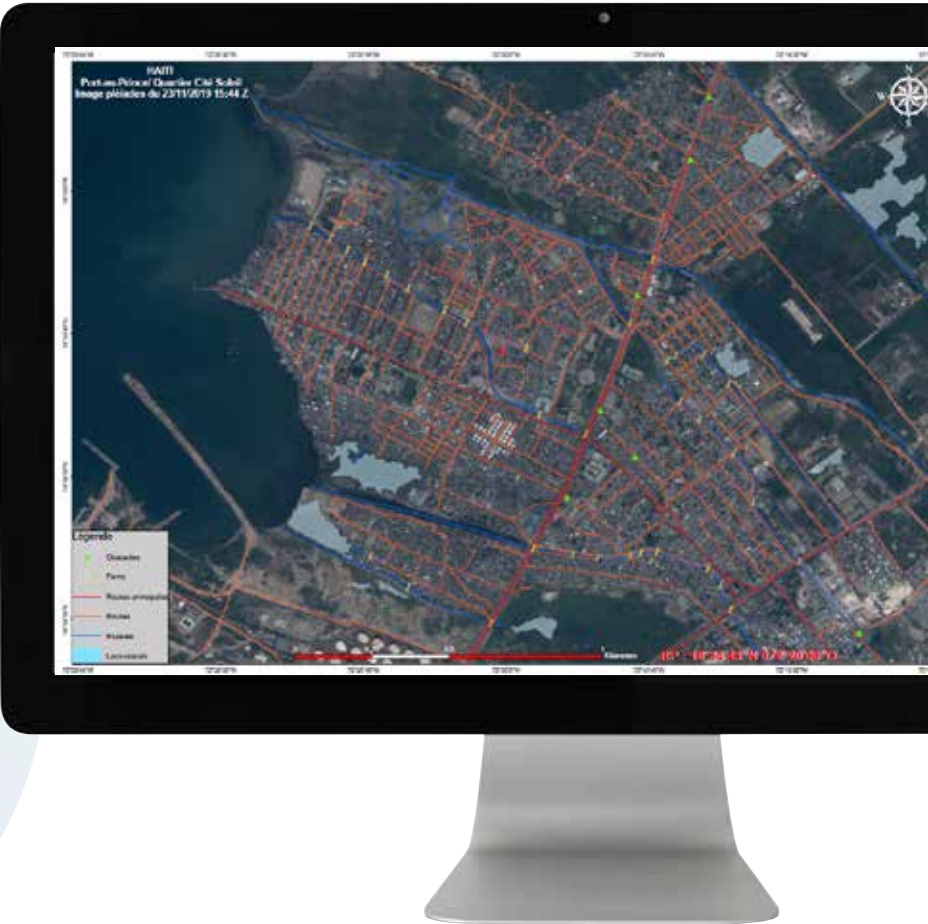
Oil Spill Report

With this report, you will be able to determine pollution impacts as well as oil spill characteristics. In addition, our image analyst team can provide a situation report with a list of potential polluters.



SpatioMap

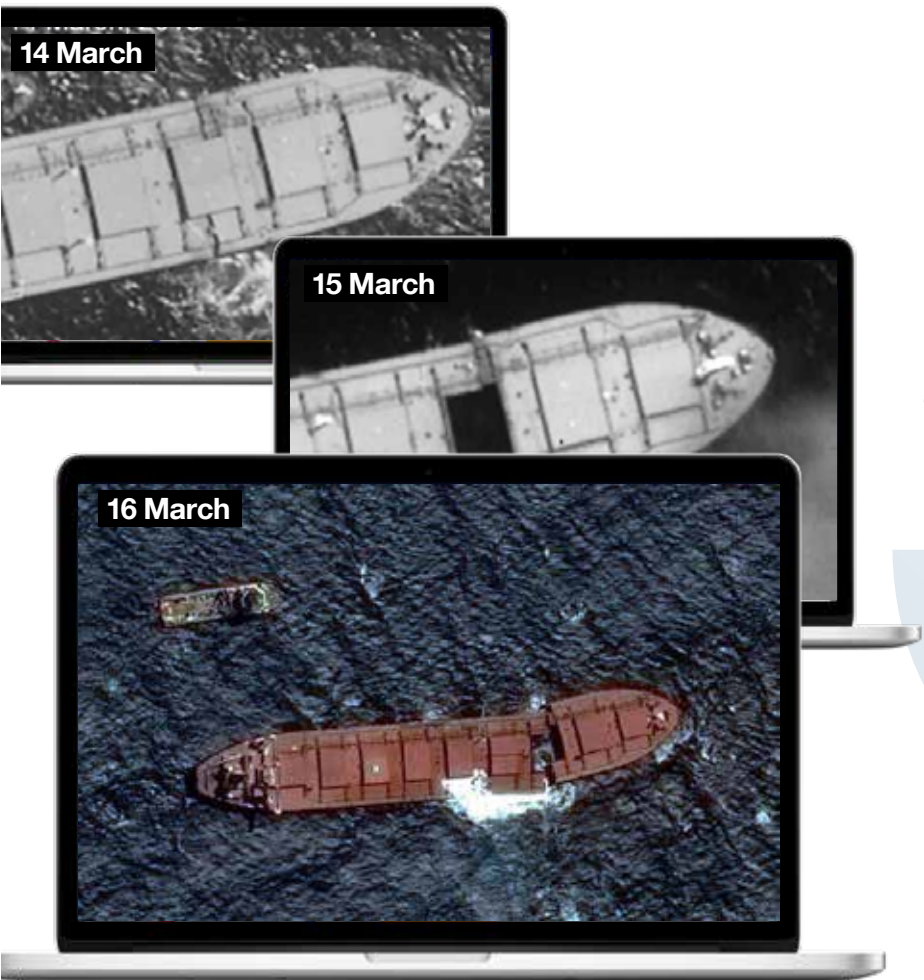
Satellite Imagery with geospatial information, such as coordinates and analytics. In this example, we provided escape route information (in case of emergencies) to local authorities.




Monitoring

This report provides a detailed customised analysis over a two-week period (archives and/or to come) for a maximum area of interest of 5,000km². Due to its duration, this type of analysis provides you with thorough knowledge of your maritime area. It can be defined in terms of a specific theme and/or highlight seasonal or emerging trends throughout your area of interest.

The analysis is produced using satellite imagery (radar and optical), SIGINT data, AIS data as well as open source data if available. Report contents are established in close collaboration with the requester after an initial trend analysis phase. Depending on needs, the report may also include maps, statistics, activity and analysis reports.



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France, Germany, Hungary, Singapore,
Spain, United Kingdom, United States

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