COPERNICUS (CMS SERVICE) IN SUPPORT OF ICELANDIC COAST GUARD FUNCTIONS

Copernicus Info Session, Reykjavik

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SUPPORTED FUNCTIONS

- Maritime Safety and Security
- Law Enforcement
- Fisheries Control
- Customs Support
- Protection of the Marine Environment
AREAS OF RESPONSIBILITY

TERRITORIAL WATERS:
12 nautical miles

EXCLUSIVE ECONOMIC ZONE:
200 nautical miles

SEARCH & RESCUE REGION
ICELAND SRR:
1.9 million km²
CHAIN OF ACTION

**Chain of Action**

- Satellite Images are Ordered → Availability, Time of Acquisition, AOI, Resolution vs. Size
- Satellite traces something → Noise, Iceberg, Whale, etc. Requires investigation!
- Dedicated Surveillance a/c → Availability, Weather, Hidden Activity?
- Other Assets for Further Investigation → Availability? Weather?

**PROGRAM OF ACTION**

A Chain is Only as Weak as its Weakest Link

Matters of Concern Can Only be Reduced into Matters of Fact through Due Process

All Links, All Connections Have to be Accounted for

Deployment of Assets Must Complement How They Assemble in a Collective
CHAIN OF ACTION

Earth Observation Services

Data from Earth Observation satellites offer a unique view of our oceans, seas, and coasts. Satellites, and their on-board sensors, provide routine, cost effective, reliable and wide area maritime surveillance. Alternatively satellites can be pointed to a targeted location for monitoring specific operations or to gather data in response to intelligence information. Satellites have access to remote areas, are independent of air traffic control and need no permission to fly, in comparison with traditional manned aircraft and Remotely Piloted Aircraft Systems (RPAS). These characteristics are extremely important considering that this information is used for coordination and support of on-scene assets, such as patrol vessels and aircraft.
CHAIN OF ACTION

Near-real-time satellite data
Increased situational awareness

Improved reaction time

Reduced reaction time

Increased area coverage and observation time

More focused reaction
End users: Coast Guard, Transport Authority, Environment Agency

Where? Operations Centre, Operations Department, Flight Department, on board ICG vessels.

GUI System Benefit: Operational users direct use.

Service Requests Submissions: Regularly adapted to specific needs.

System development and Improvements: Evaluation and feedback for each operation.
In situ detection

Dead whale found
Danger to ships traffic

Uncorrelated target
Estimated length 31 m
Confidence level 75%

Image
August 24
Service: IMS_Customs
Sensor resolution: small boats

IN-SITU INVESTIGATION
IN-SITU INVESTIGATION

Image
June 1
Service: IMS_Fisheries
RADARSAT-2
Sensor resolution: medium size vessels

Value added product
Uncorrelated target
Estimated length 63 m
Confidence level 100%

Surveillance a/c diverted
In situ detection
Foreign state fishery survey vessel
Actual length 76 m
MARITIME SAFETY

Images
September 10
Service: IMS_LAW and CLEANSEANET
Satellites: RADARSAT and SENTINEL
Sensor resolution: medium

Uncorrelated targets
Estimated length 100 - 170 m
Confidence level 30% - 100%

Icebergs
Cost-effective way to detect icebergs being a hazard to navigation
2017
- 26 separate cases
- 0 cases assessed as linked to mineral oil
- No notifications/alerts were investigated by ICG air assets
- 11 cases assessed as linked to natural phenomena
- Assessed sources: new sea ice formation, weather patterns, current fronts, algae
- 12 cases assessed as linked to fishing activity
- Assessed sources: Mackerel, herring, capelin, mud/clay
- 3 cases were not categorized
- Cases # 12, 16, 19
THANK YOU!

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