

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

Copernicus Info Session,  
Reykjavik

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LANDHELGISGÆSLA ÍSLANDS  
ICELANDIC COAST GUARD



# 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

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## EXCLUSIVE ECONOMIC ZONE:

200 nautical miles

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## SEARCH & RESCUE REGION

### ICELAND SRR:

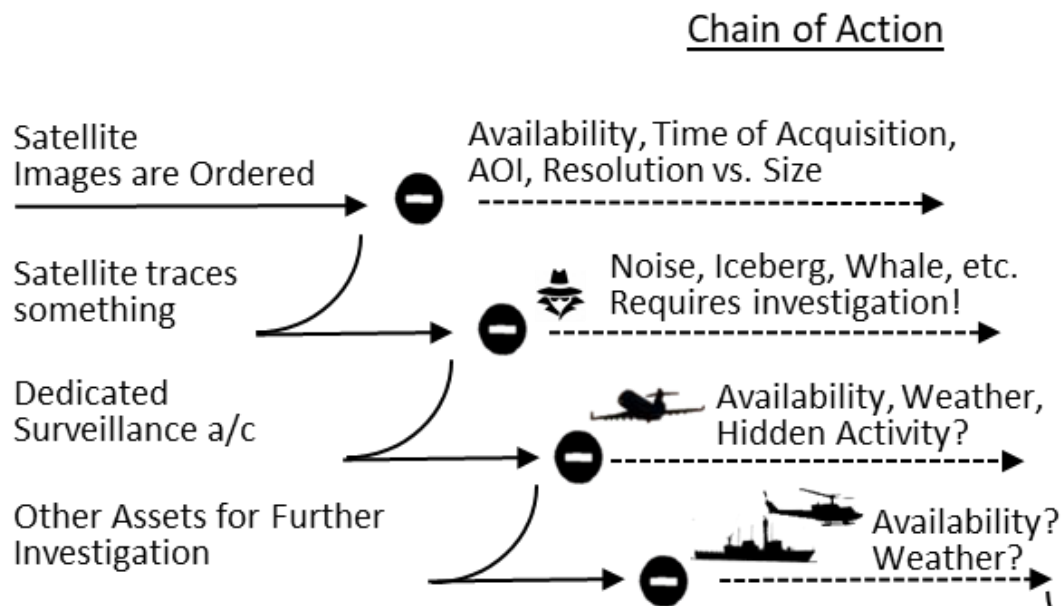
1.9 million km<sup>2</sup>

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# CHAIN OF ACTION



## 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



Fig. Inspired by Bruno Latour,  
On Technical Mediation, 1994



# CHAIN OF ACTION

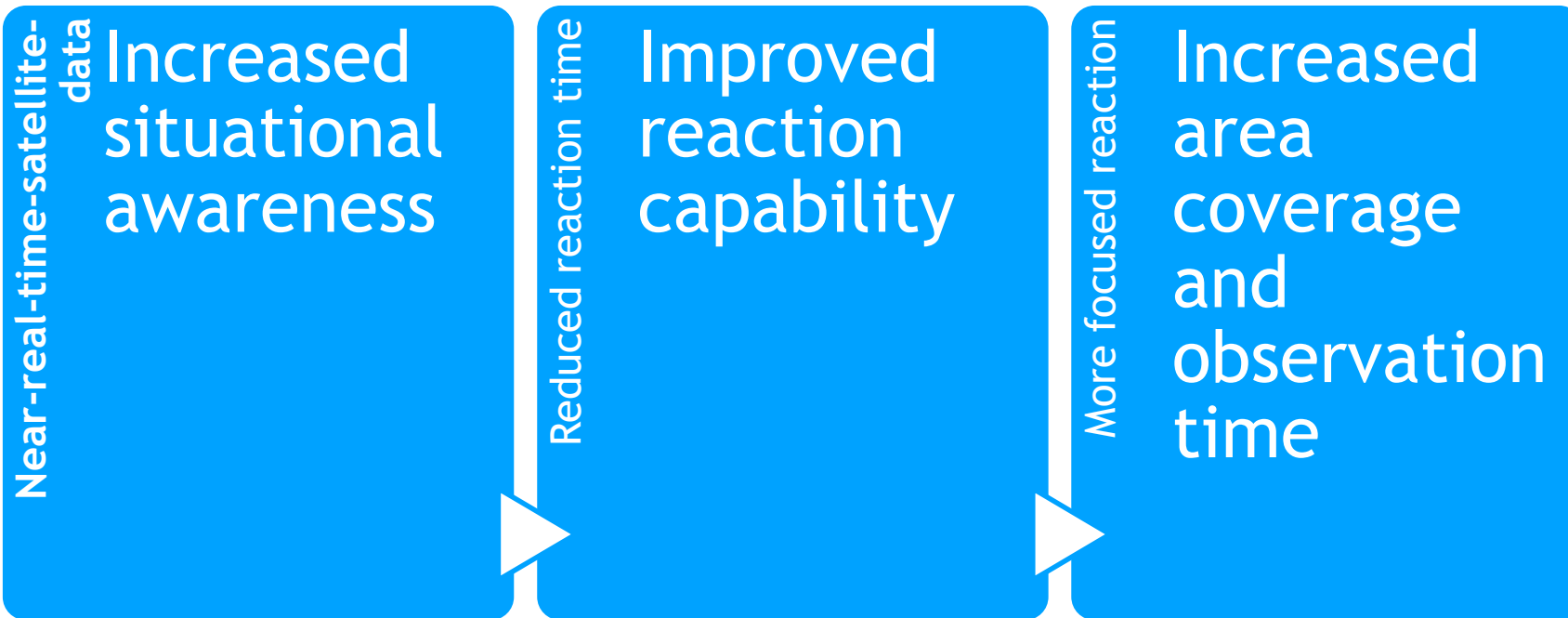
## Earth Observation Services

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

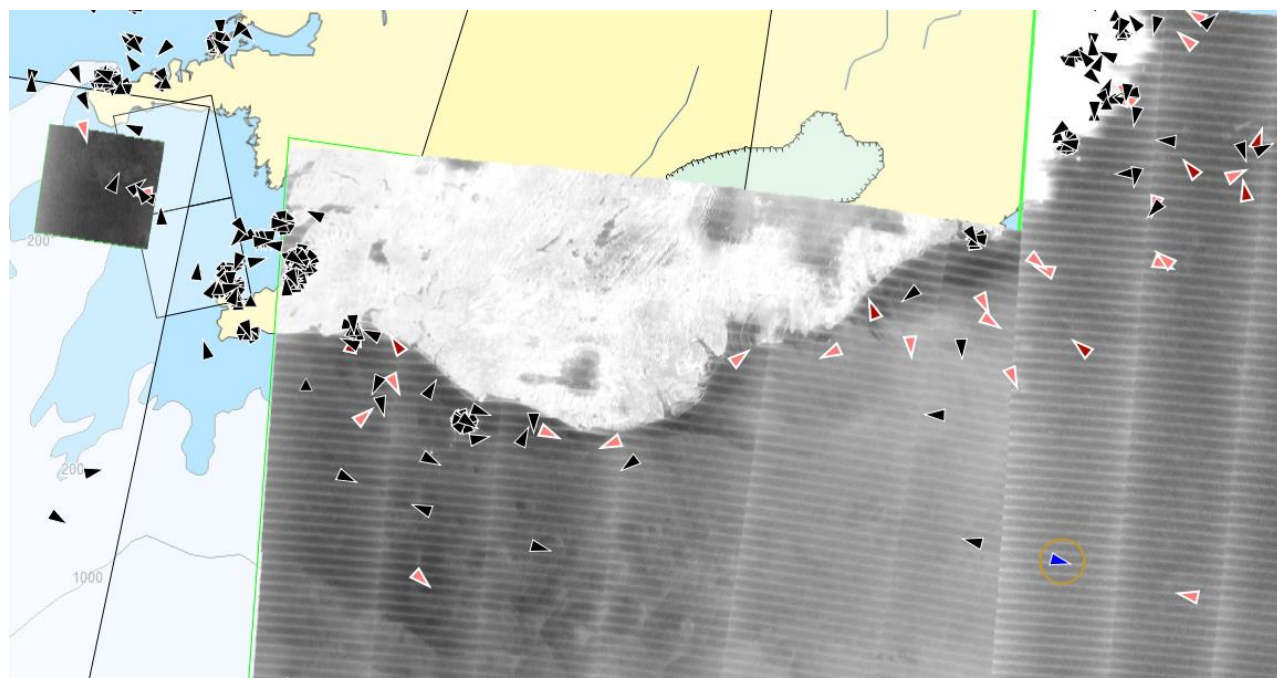




## DELIVERY APPROACH:

SafeSeaNet Ecosystem  
Graphical User Interface  
(SEG)

- 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 INVESTIGATION



## Image

August 24

Service: IMS\_Customs

Sensor resolution: small boats

## Uncorrelated target

Estimated length 31 m

Confidence level 75%

## In situ detection

Dead whale found

Danger to ships traffic







# 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

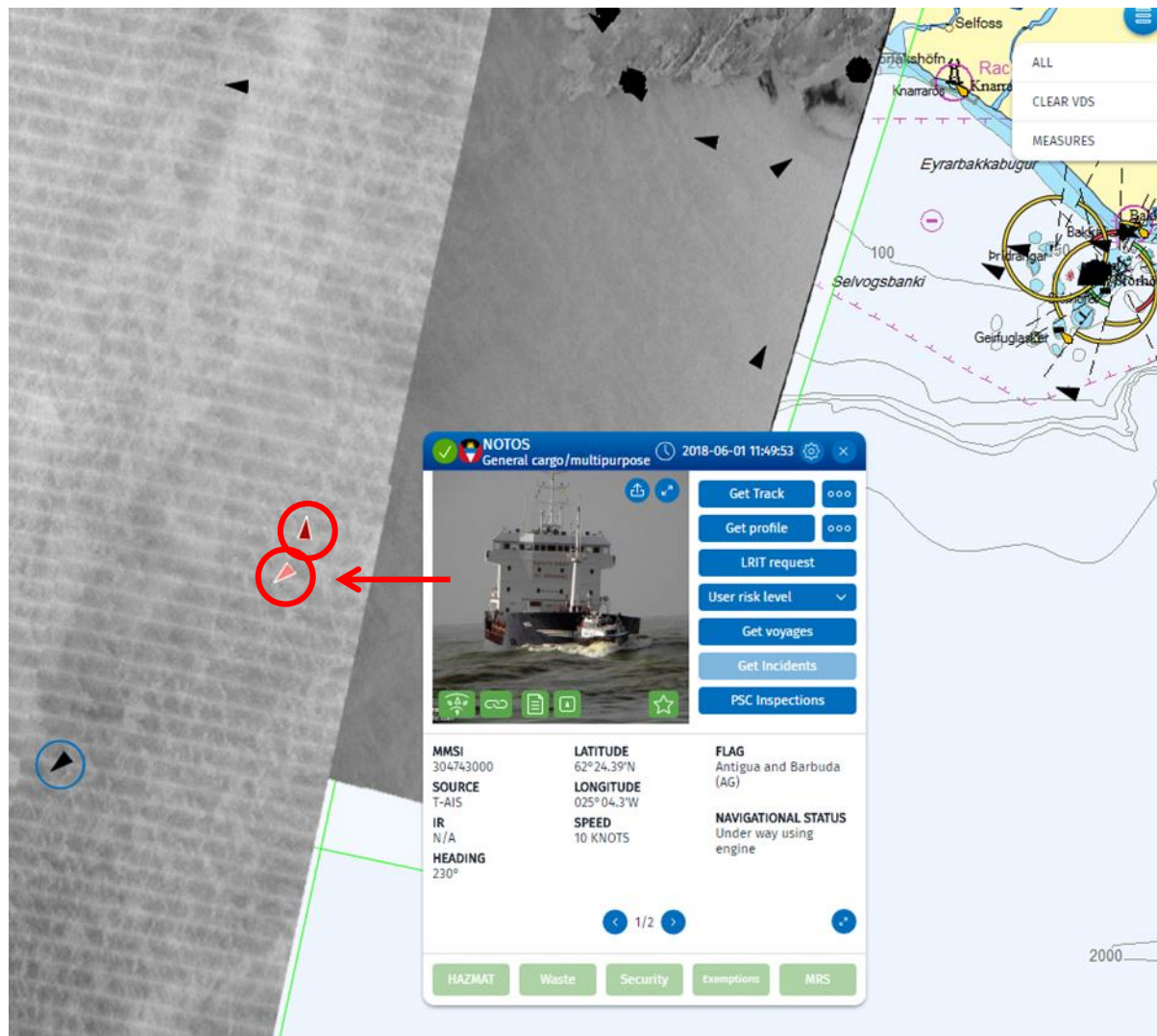
Confidence level 100%

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

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## Uncorrelated targets

Estimated length 100 - 170 m

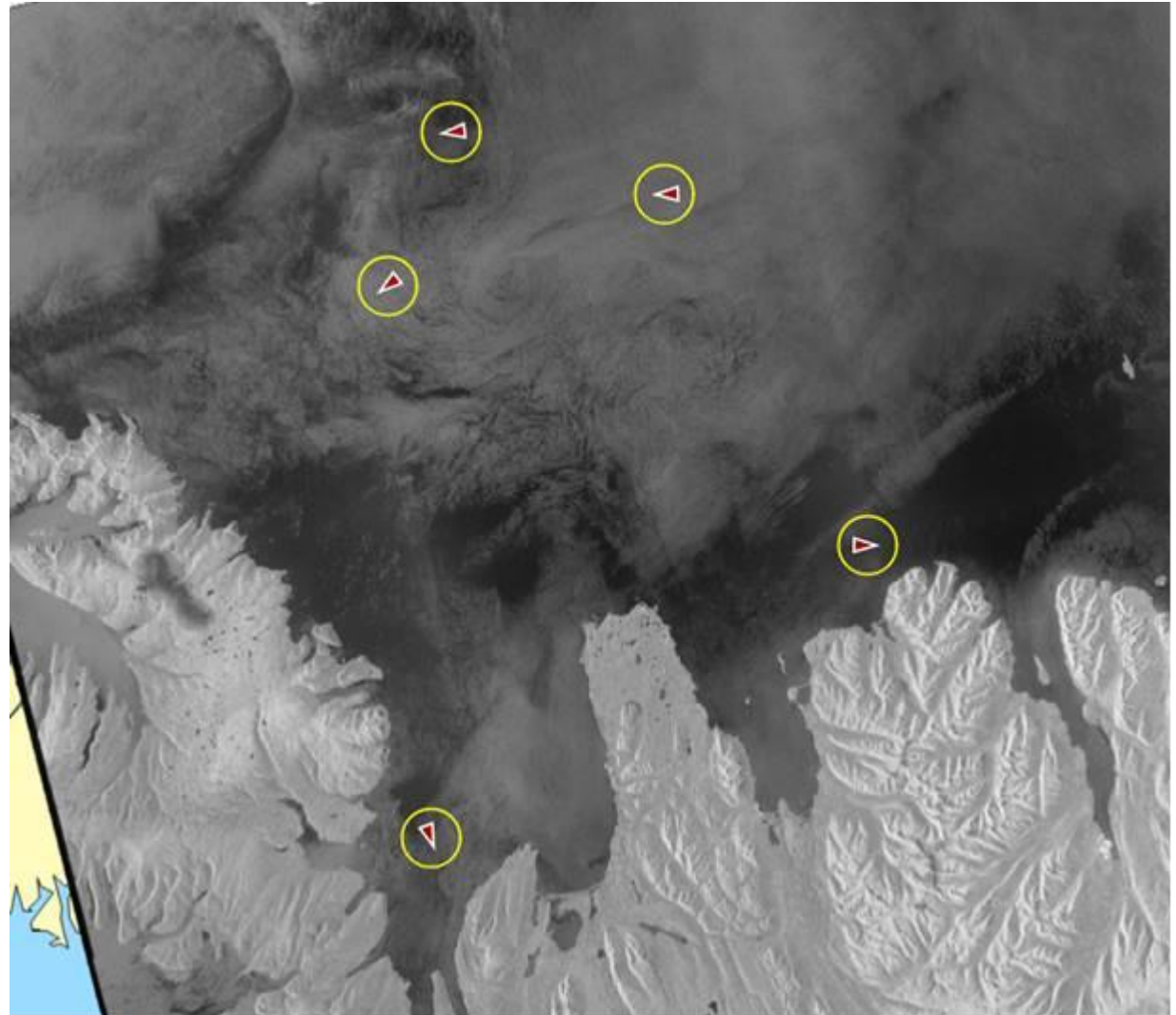
Confidence level 30% - 100%

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## Icebergs

Cost-effective way to detect  
icebergs being a hazard to navigation

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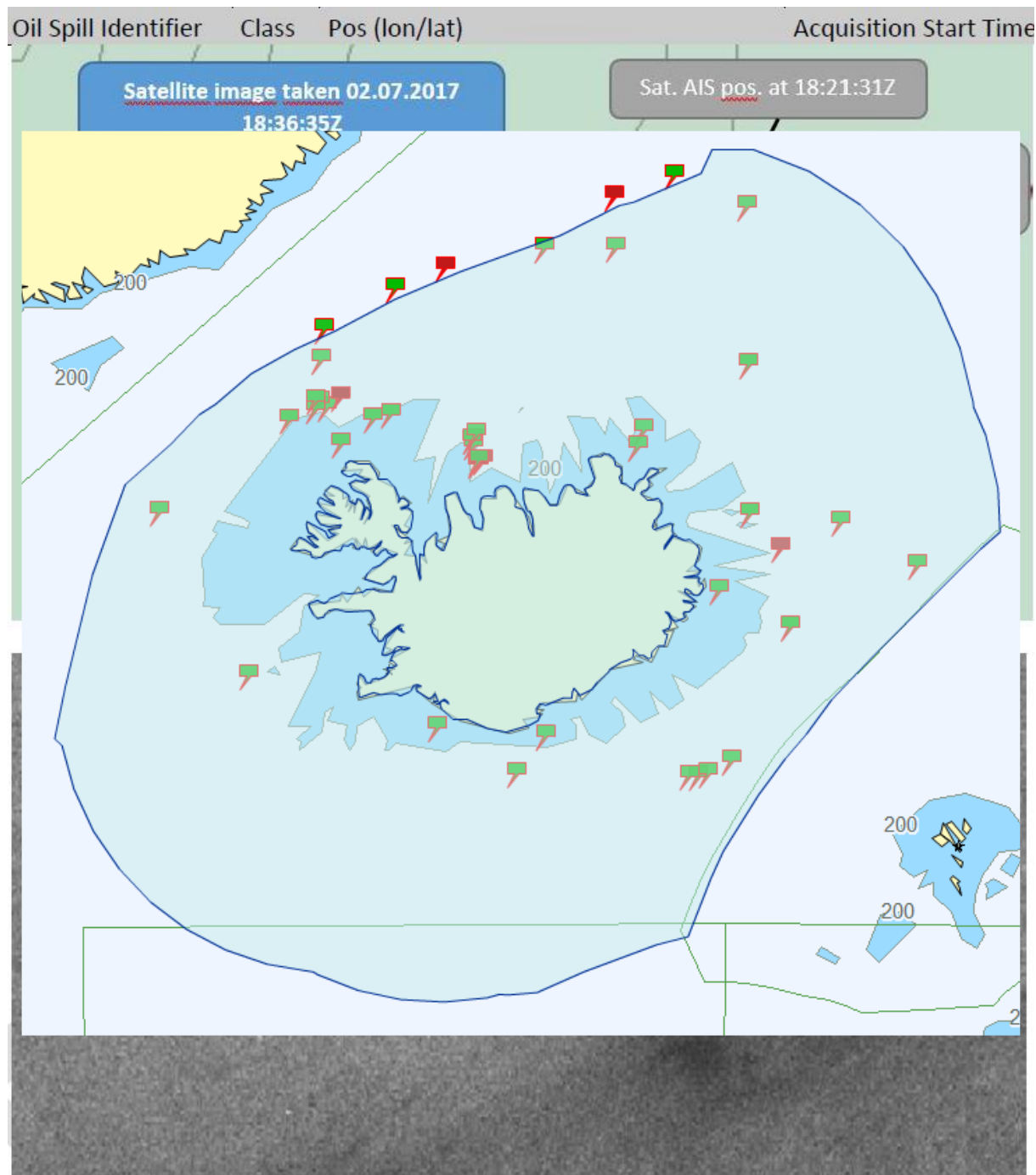




# OIL SPILL DETECTION

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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