CLS' services to support Maritime Domain Awareness
Deticated Software Solution integrating AIS – Satellite and RPAS data

Map menus:
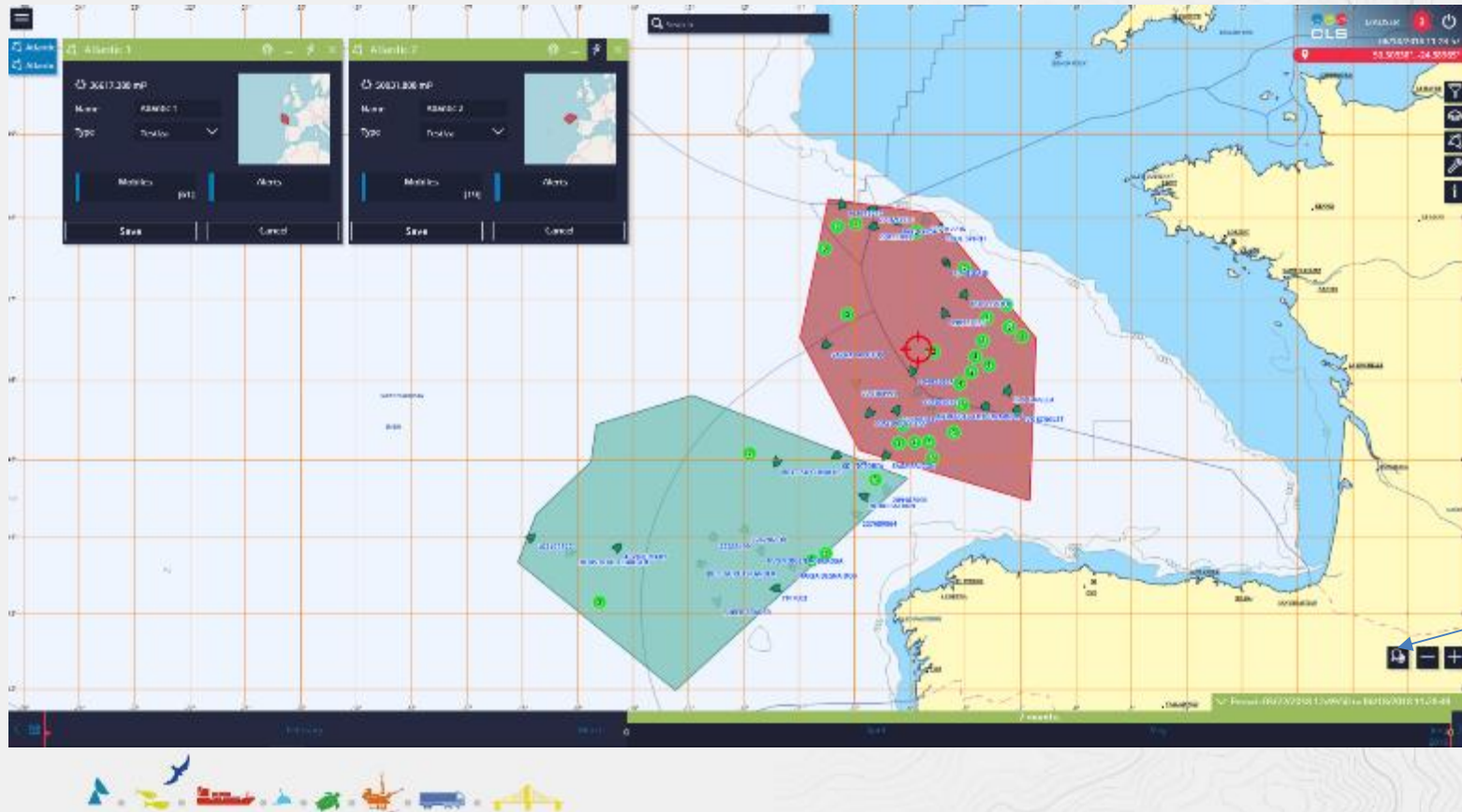- **Search**
- **Layer**
- **Area management**
- **tools**

Areas / Zones

Alerts

Positions

Area centric / ship centric

Search Timeline

CLS' services to support Maritime Domain Awareness
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Area centric view
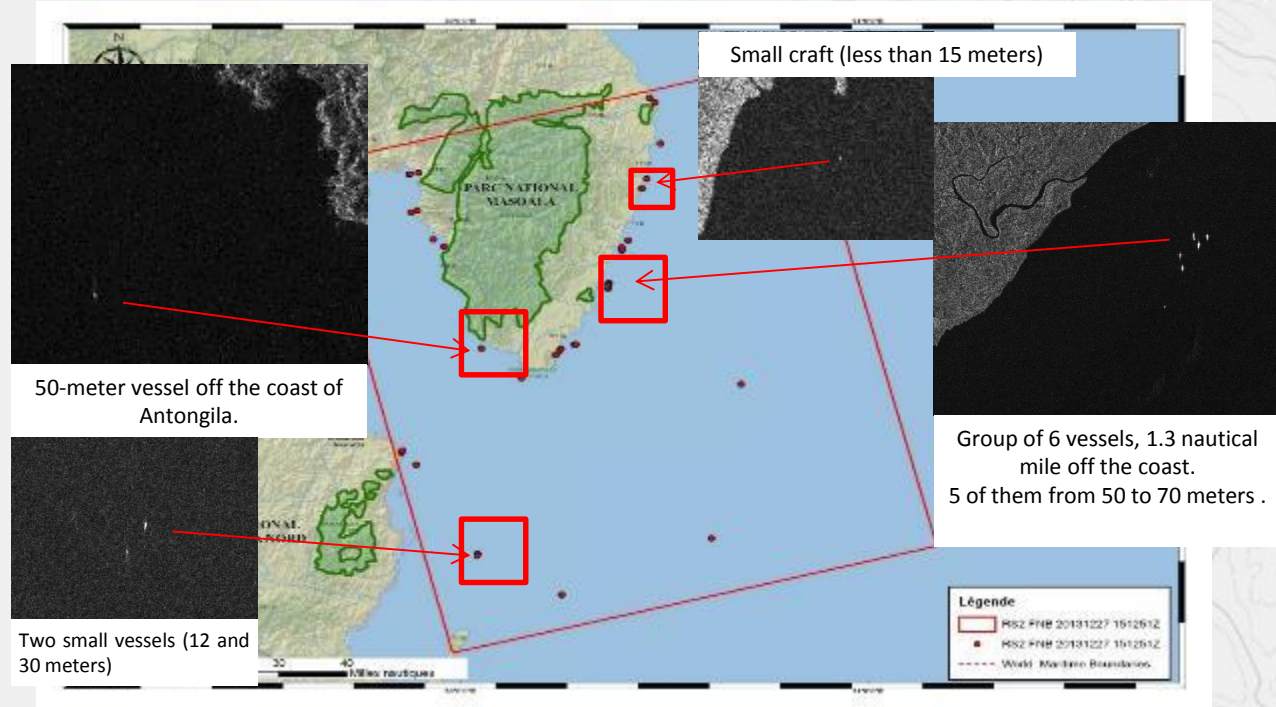
CLS' services to support Maritime Domain Awareness
Illegal traffic of Rosewood

Identification of maritime traffic of rosewood from Madagascar

Detect mooring areas near the national parks using satellite radar images

Radarsat-2
Wide Fine
150 x 150 km – 8-m resolution
© MDA 2013

Small craft (less than 15 meters)

50-meter vessel off the coast of Antongila.

Group of 6 vessels, 1.3 nautical mile off the coast.
5 of them from 50 to 70 meters .

Two small vessels (12 and 30 meters)

CLS' services to support Maritime Domain Awareness
IUU detection

Objectives: detecting illegal fishing boats of Patagonian tooth fish

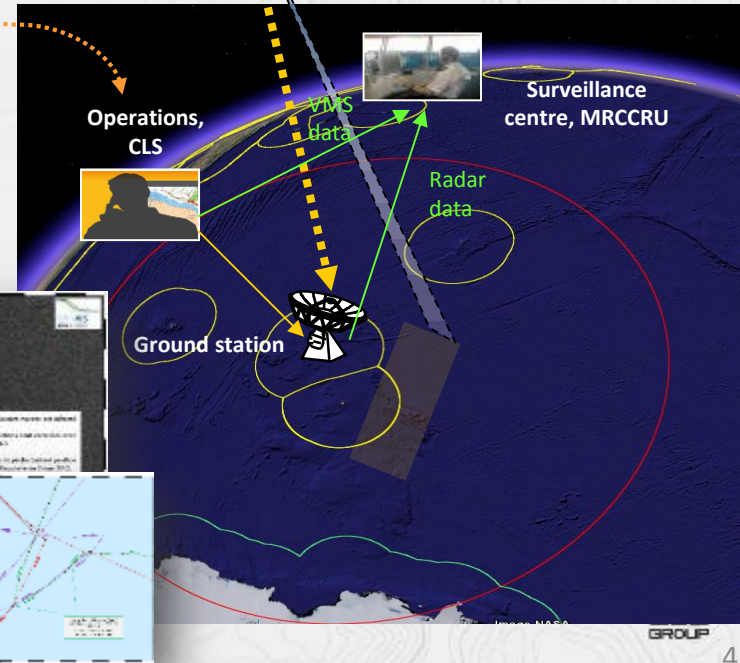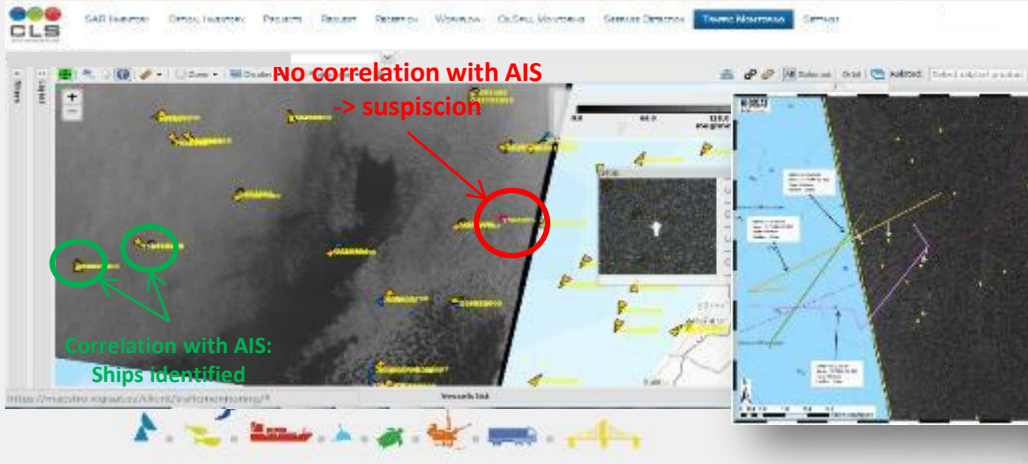**Context:** French Maritime Affairs + international collaboration with Australia

AIS/VMS tracks analysis → SAR + tracking systems surveillance → Final report/ intervention
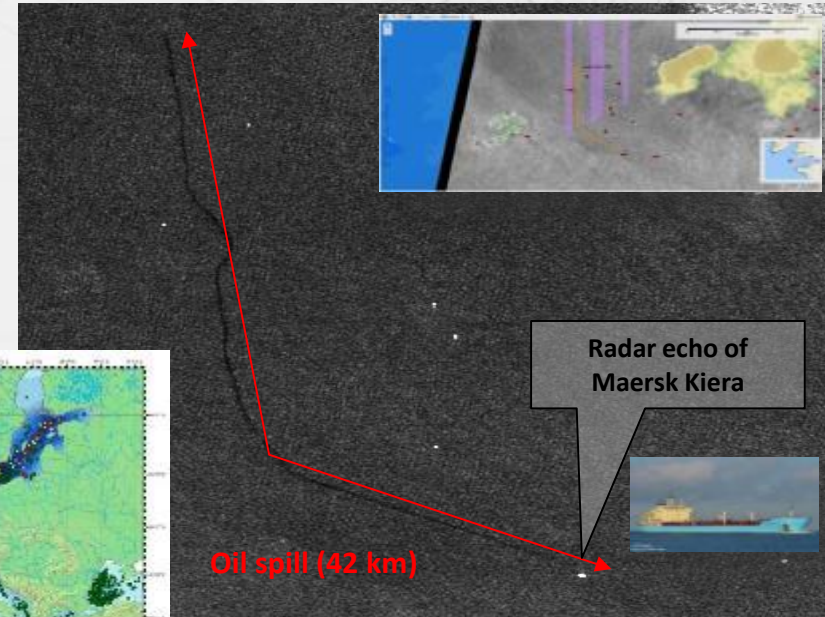
VMS: Argos (or Iridium)

Radar Satellite

No correlation with AIS -> suspiscion

Correlation with AIS: Ships identified

Operations, CLS
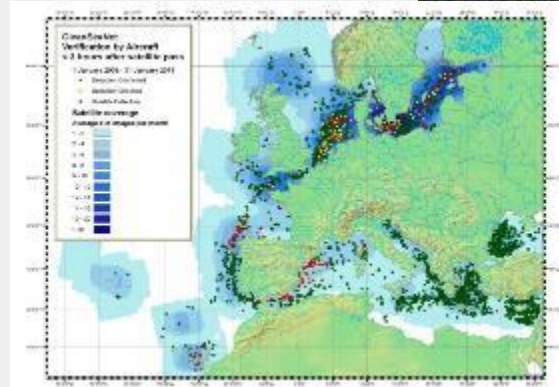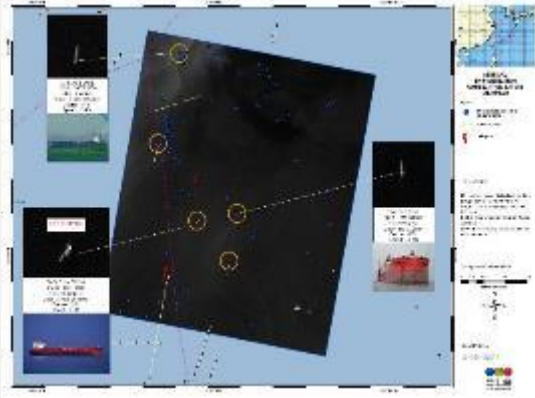
VMS data

Surveillance centre, MRCCRU

Radar data

Ground station

CLS' services to support Maritime Domain Awareness
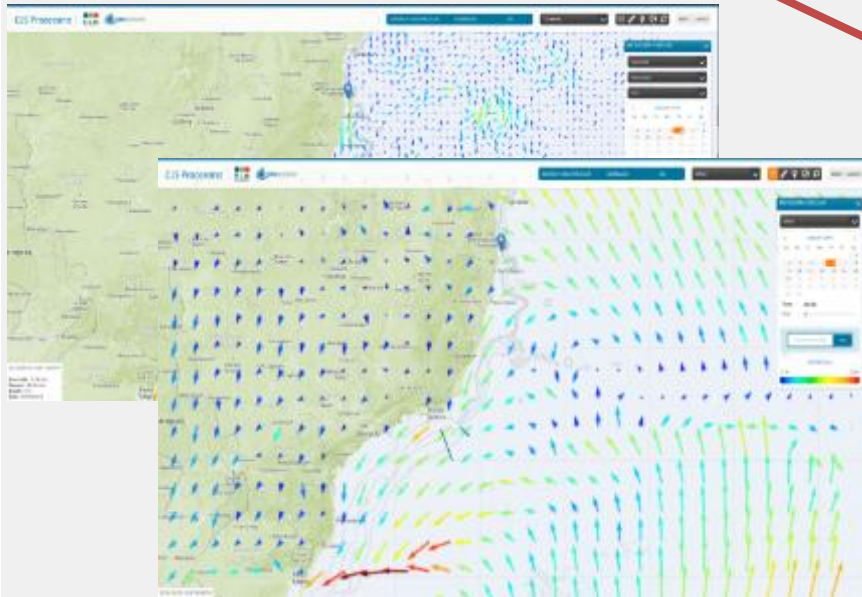## Oil spill monitoring – Clean Sea Net/EMSA

▪ **<u>Services</u>:** programming, acquisition, processing, analysis and interpretation of high-resolution satellite-based radar imagery

▪ **<u>Objectives</u>**: detecting, tracking and monitoring accidental or intentional oil slicks, (polluter-identification module)

Radar echo of Maersk Kiera

Oil spill (42 km)

EMSA
European Maritime Safety Agency

CLS' services to support Maritime Domain Awareness
Drift modeling & SAR operations mgmt / AMSA for Sri Lanka – Maldives – Mauritius

1- Met-ocean datasets

2- Declare a SAR case

3- Drift calculation

4 - Search and Rescue Unit + Search Recommendations