



Oil Spill Response



Aerial Surveillance Technology and Capability



Surveillance

- 💧 Critical component of an effective response & regulatory communication
- 💧 Key learning point from Macondo.
- 💧 Recent incidents confirmed requirement:
 - Bohai Bay - China
 - Gannet - UK
 - Bonga – Nigeria
 - Frade – Brazil

UKCS Surveillance



- All weather capability
- Improved navigation systems
- Enhanced sensor
- Live video and voice feed
- High Quality Geo Referenced Resolution Digital stills



19MY2011 AUTO
12:19:38
UTC+0.0

200 DFLT AUTO 50 ∞



01-
- 00-
-01-



ACFT
60:27:00N
1:20:49W

182°
2291FT

'8' '19' '20' '21' '22' '2'

0FT

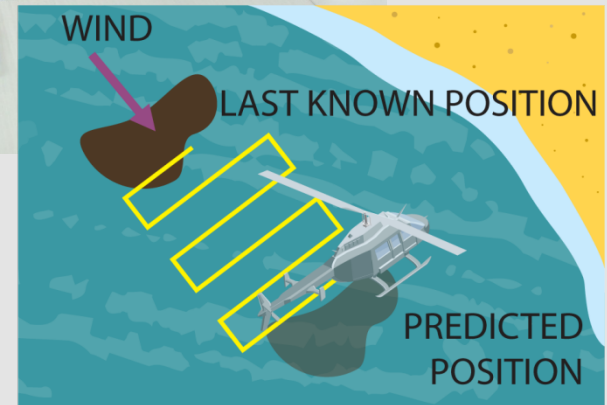
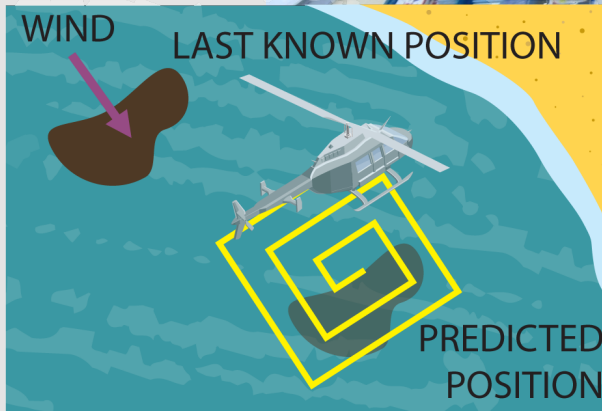
027°
7.9NM

TGT LOS
60:33:58N
1:13:36W

Conducting Effective Aerial Missions

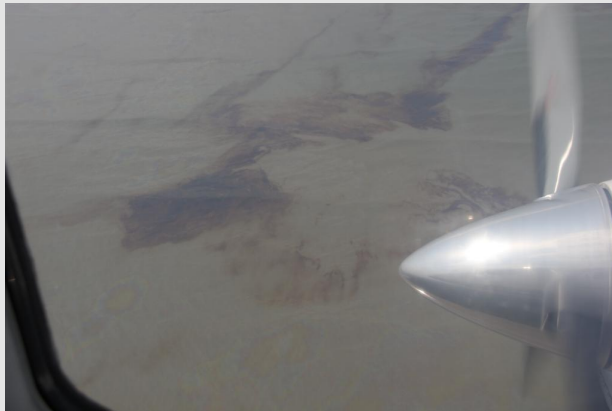
- 💧 Notification
- 💧 Operational Environment
- 💧 Aircraft availability and suitability
- 💧 Clarity of mission
- 💧 Clarity of outputs

Mission Planning



Missions

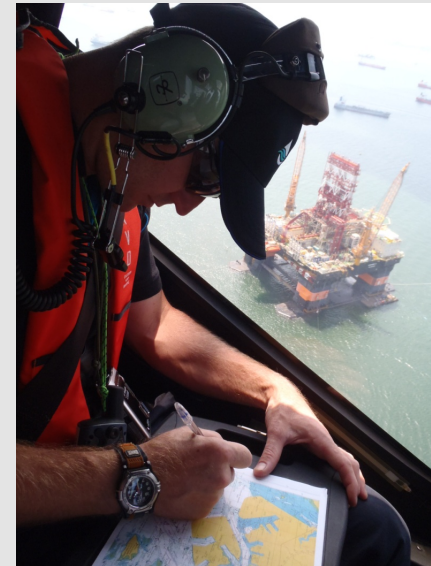
Verification



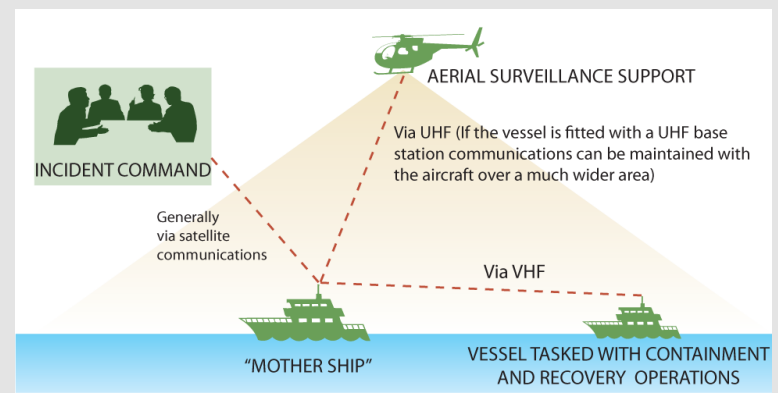
Monitoring



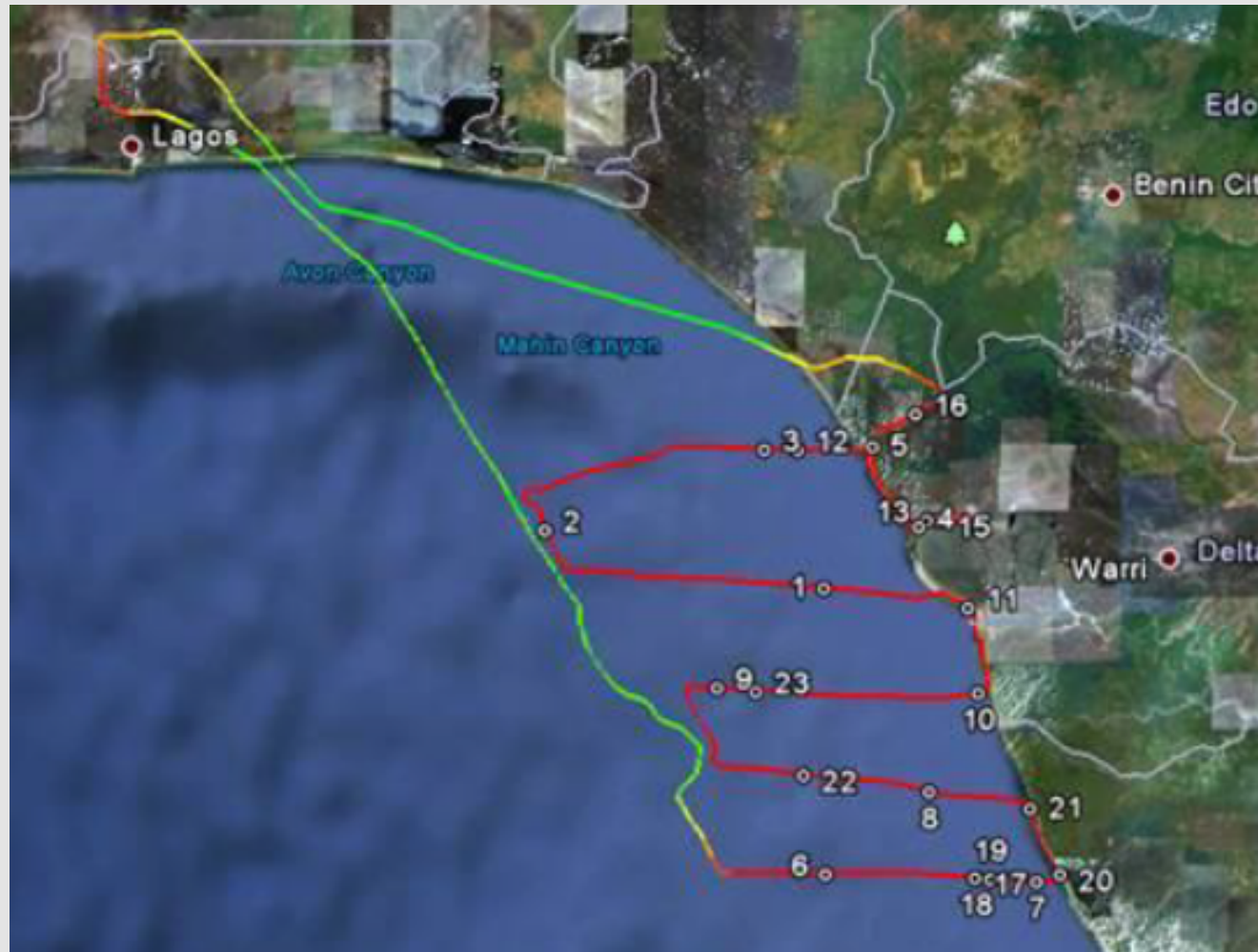
Quantification



Operational Support



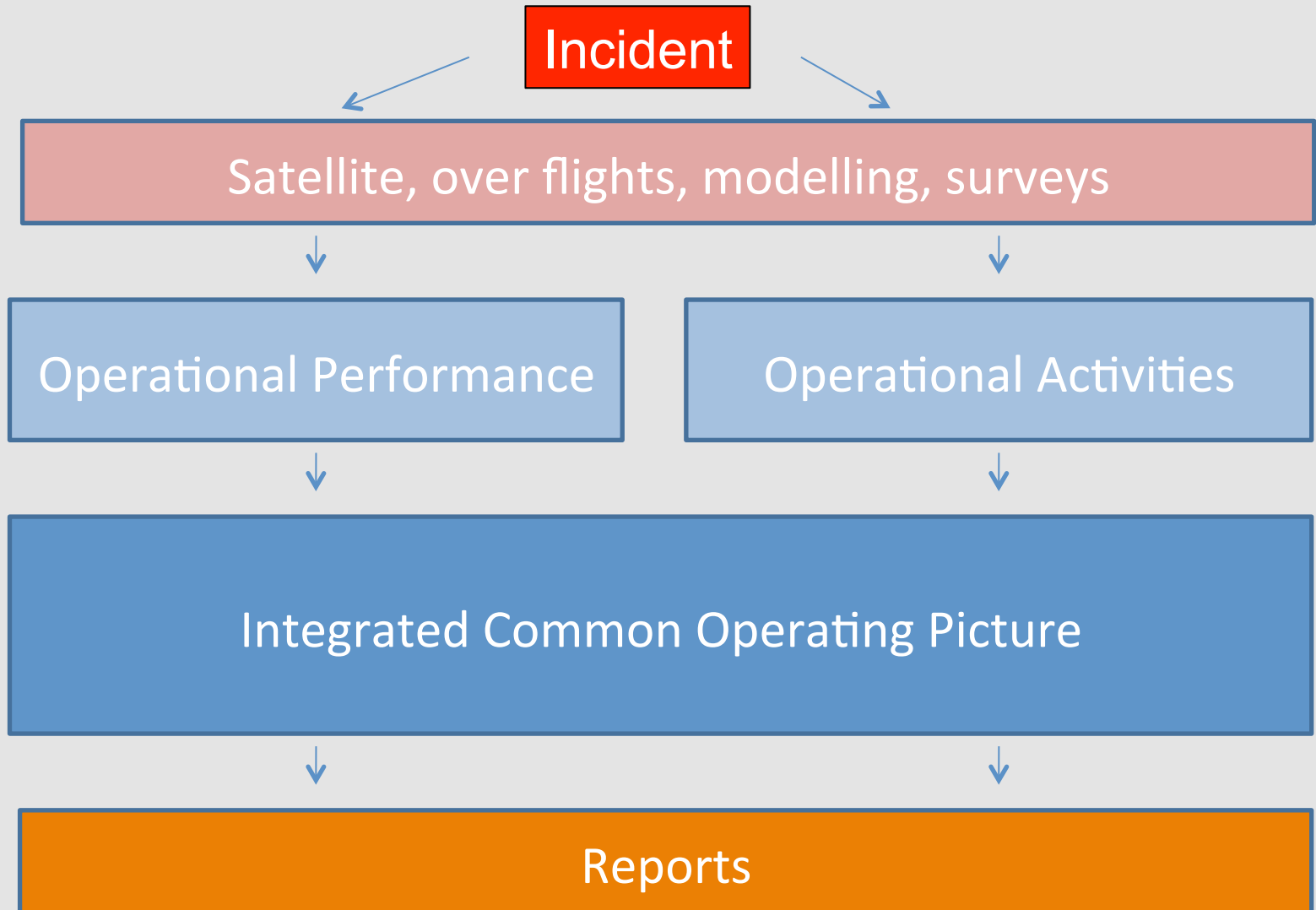
Mission Execution & Record



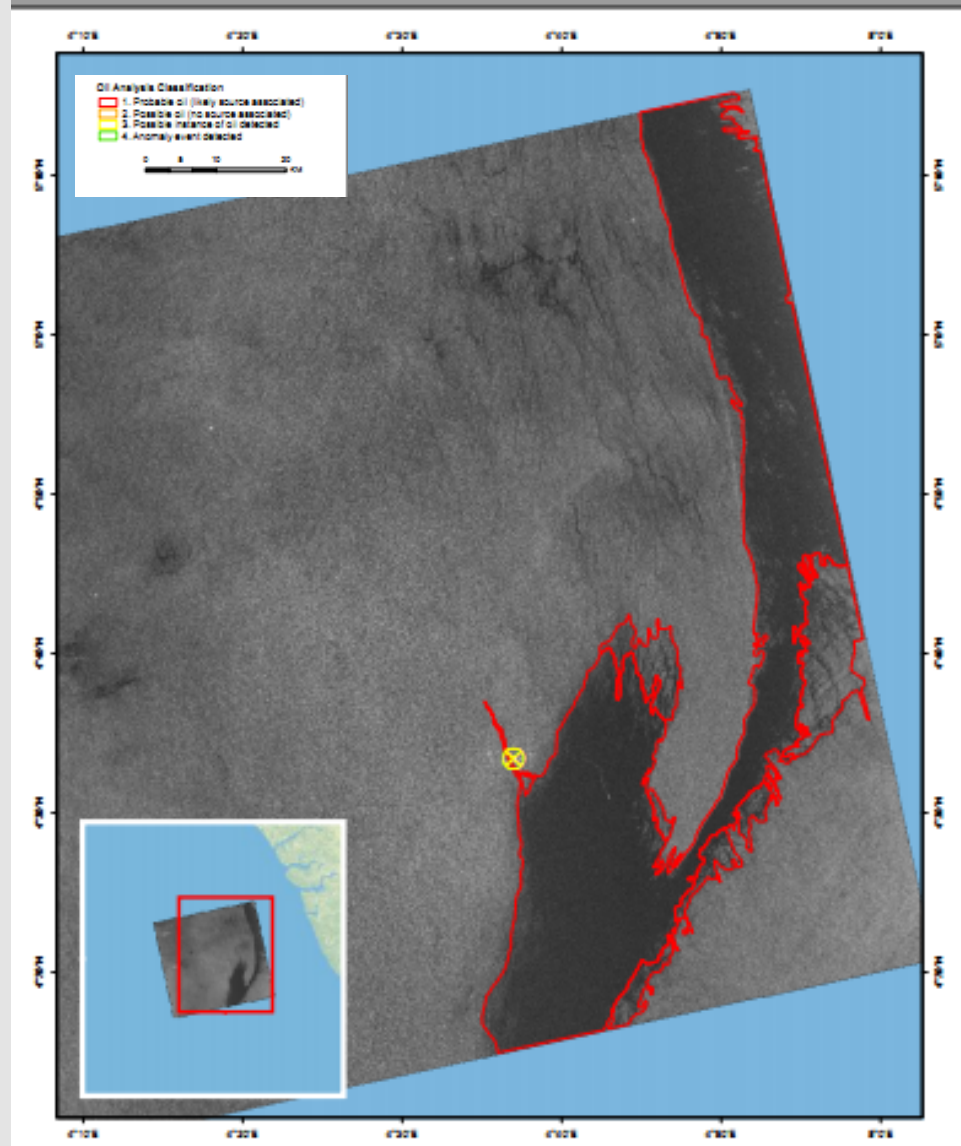
Geo-Referenced Images



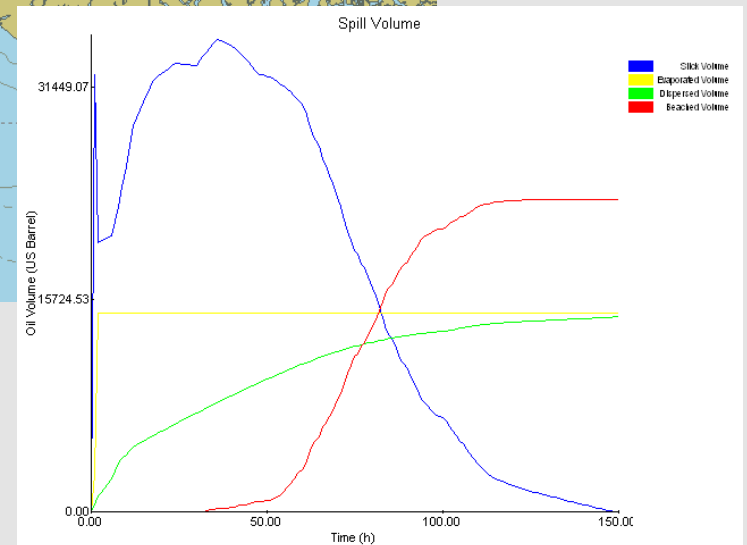
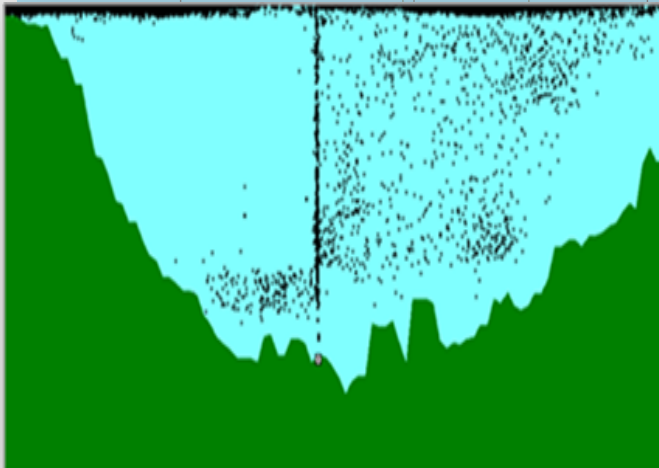
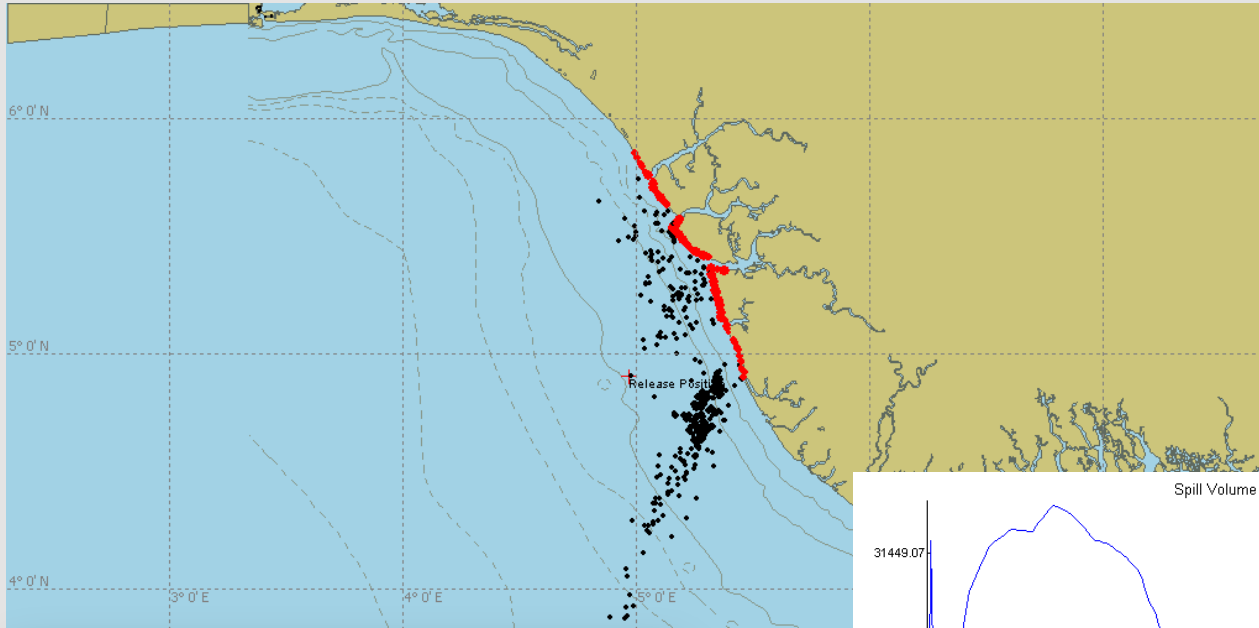
Integrating Inputs

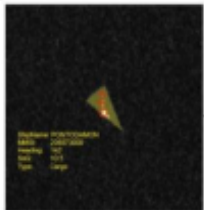


Satellite Images

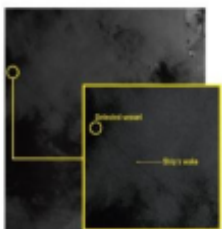


Modelling

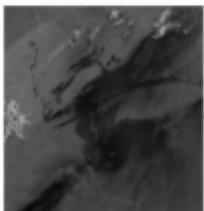




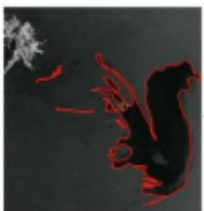
Generated Products



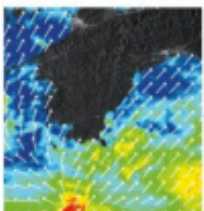
Blue water wake/oil detection



Spill and leak detection



Extent measurement/location



Environmental factors



Automatic Identification System (AIS)
satellites for accurate vessel geolocation
and correlation with slick extent, movement

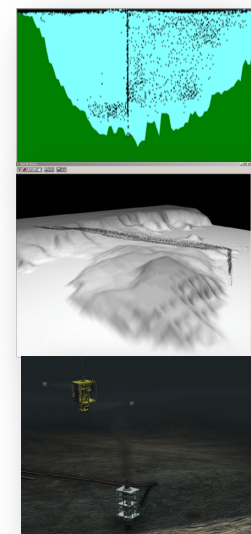
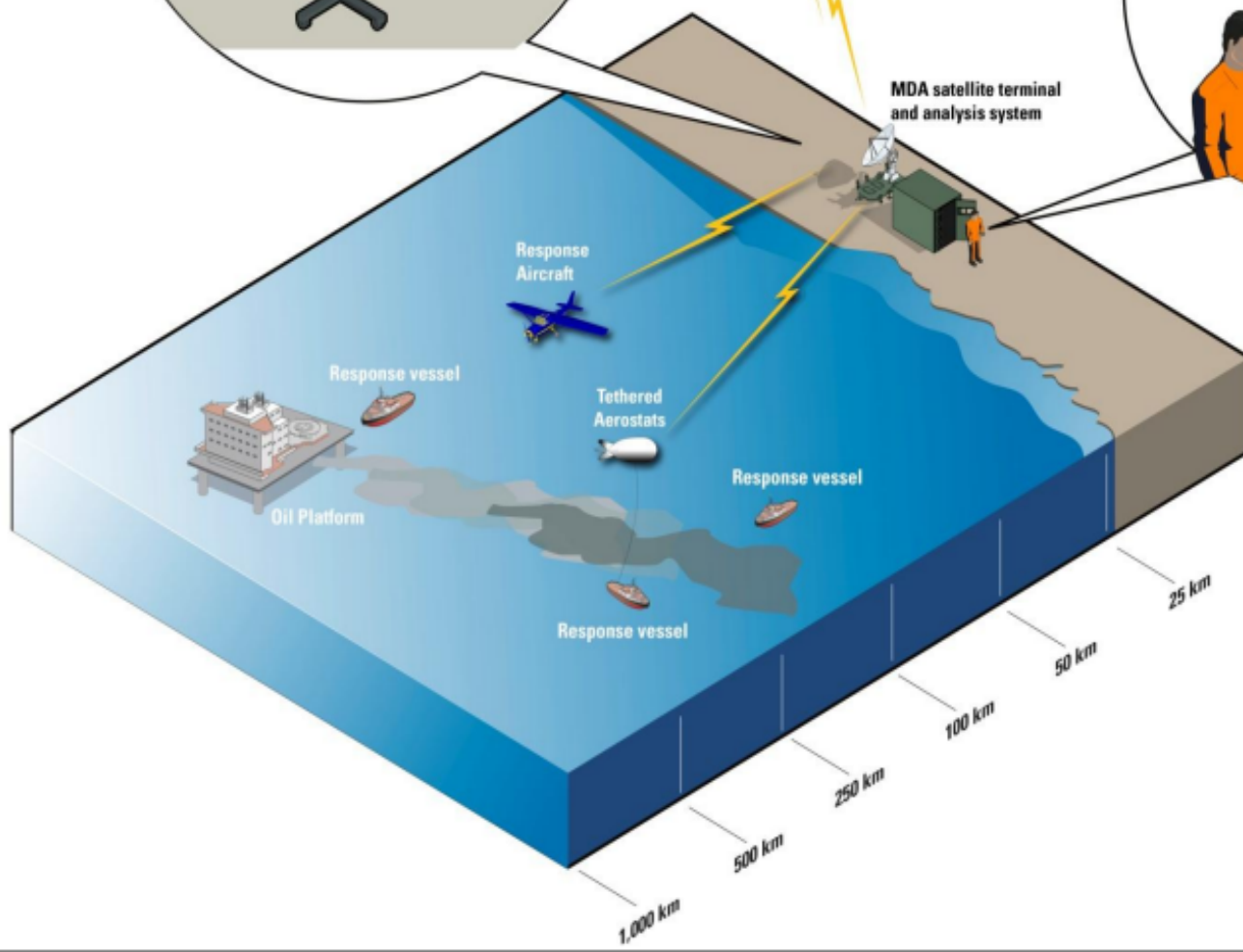
RADARSAT-1, RADARSAT-2
Synthetic Aperture Radar (SAR) satellites

Other SAR satellites

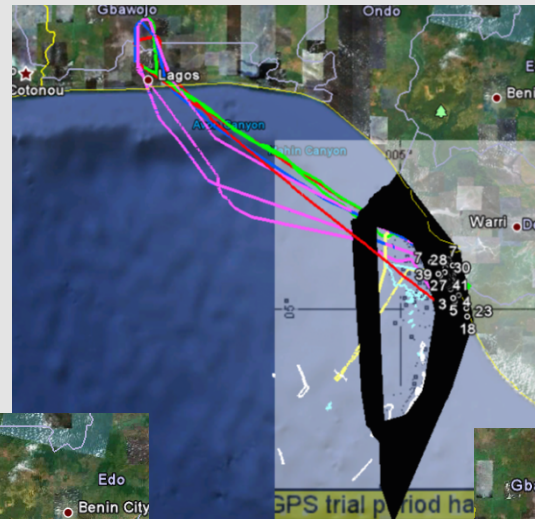
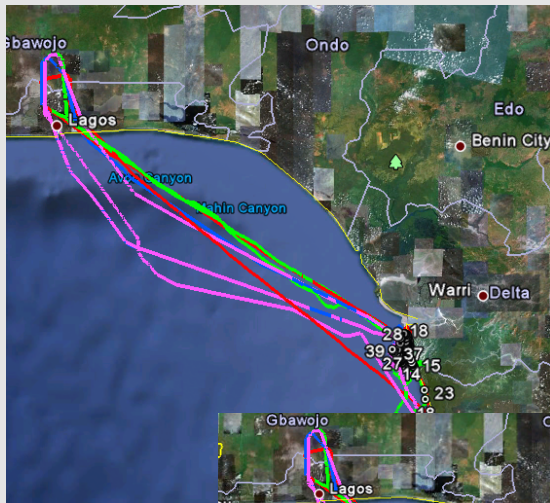
MDA satellite terminal
and analysis system



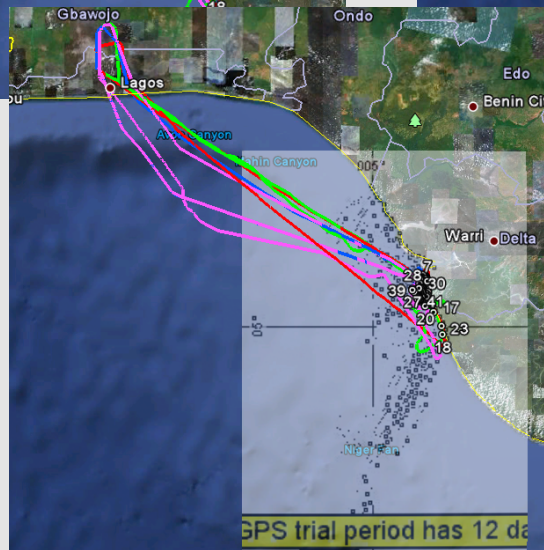
Polygon product
on iPad



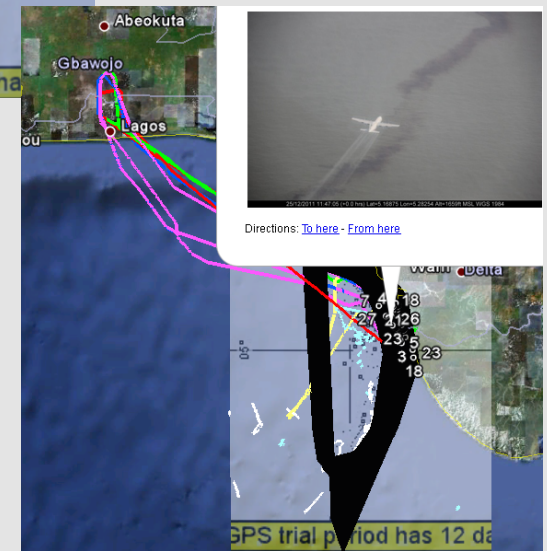
A Picture Speaks a 1000 words!



Satellite



Modelling Overlay



Aerial Surveillance

Summary

- The Common Operating Picture unifies the command.
- Outputs need to be agreed before the mission.
- Properly integrated expert skills improves the quality of results.
- Understand the end users.