

NPA Satellite Mapping

Proactive satellite monitoring for enhanced offshore situational awareness

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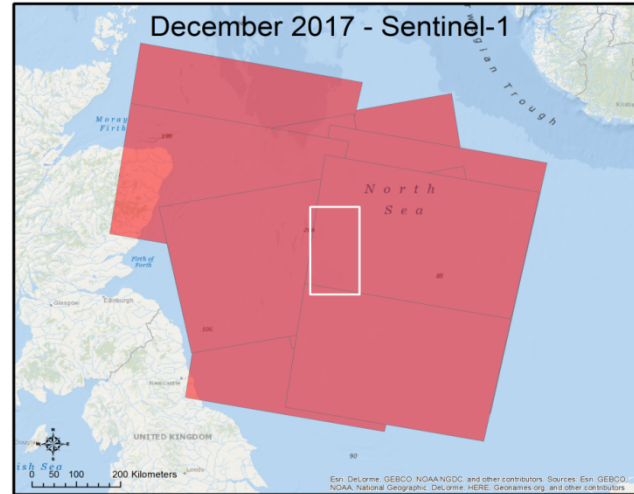
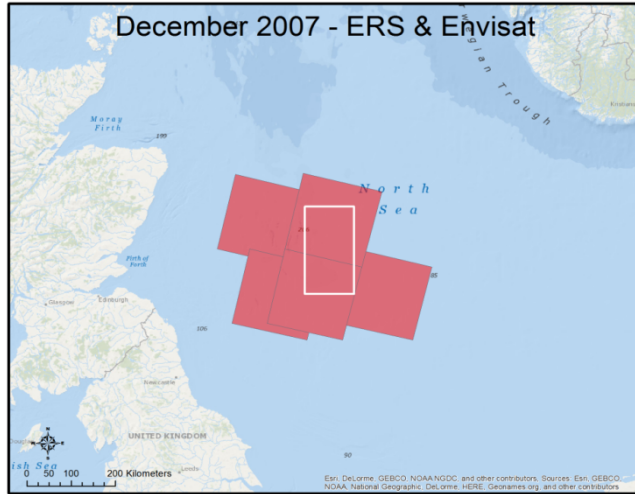


The current situation

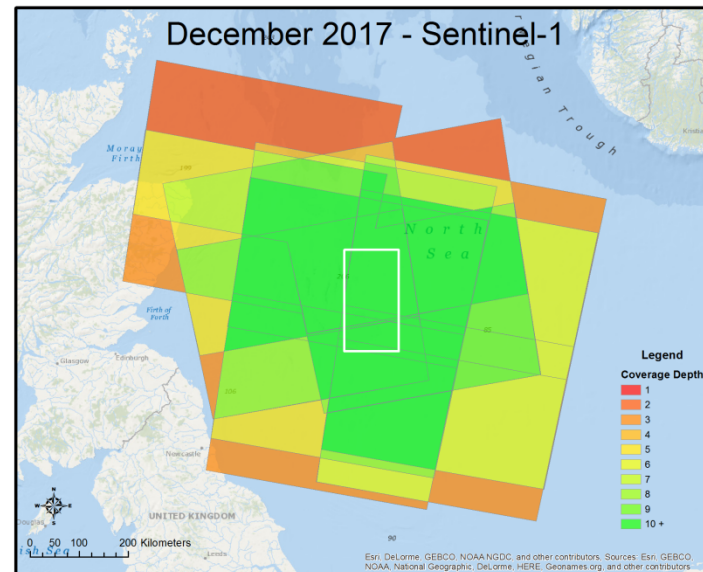
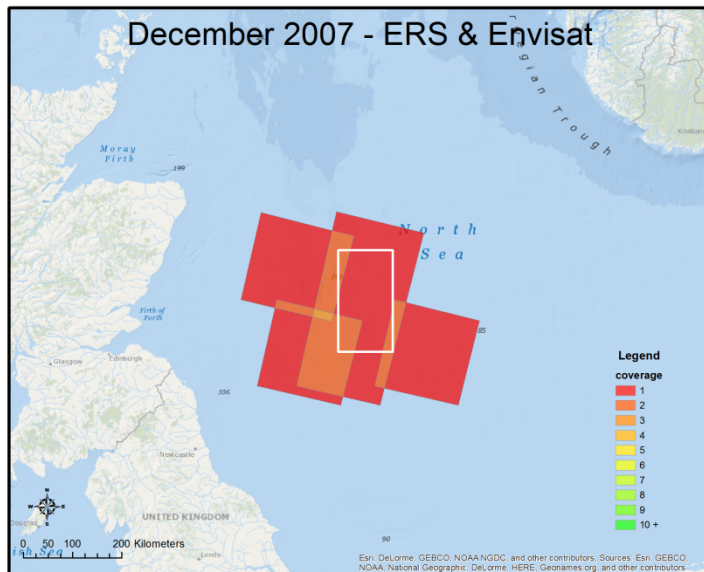
- Range of scenarios currently in existence
 1. No routine satellite observation
 2. Government sponsored observation
 3. Regulations requiring operators to monitor
- Some operators are being proactive
- Can the situation improve?



What a difference a decade makes

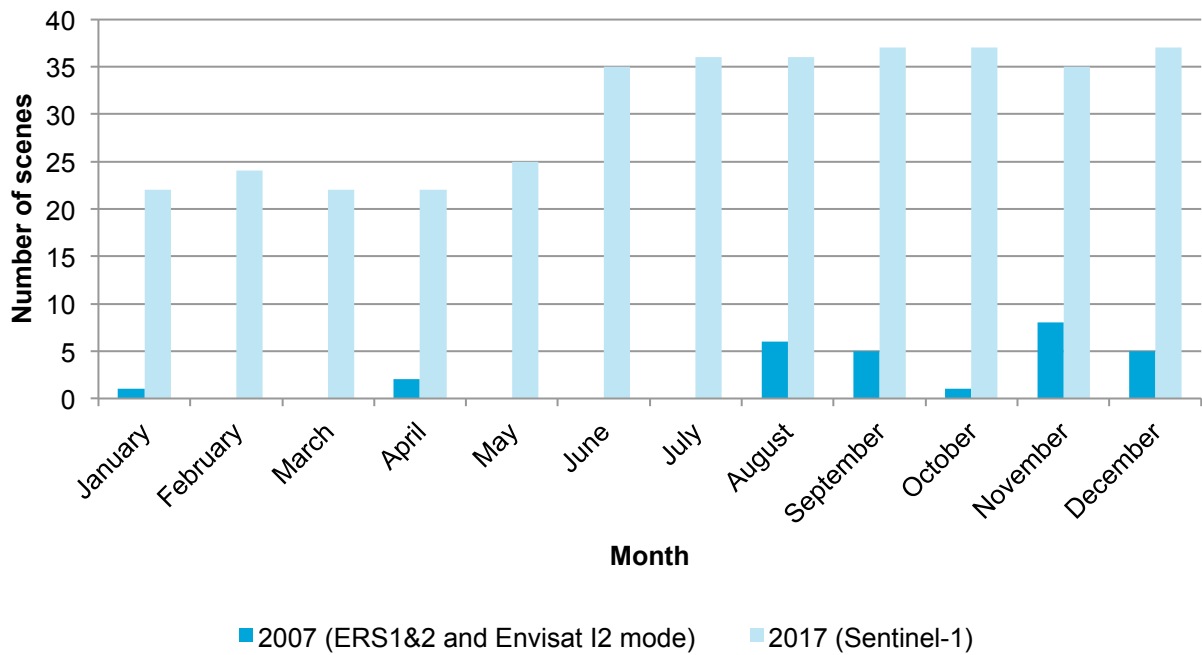


What a difference a decade makes



Large data volume increases

Comparison of data acquisition between 2007 and 2017

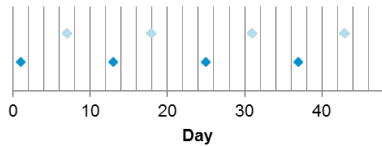




Multiple satellites provide improved coverage

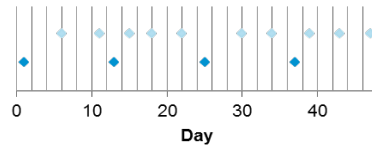


1 image per week



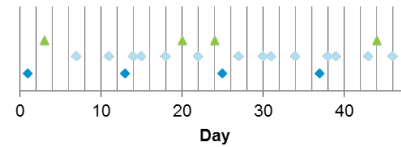
◆ Sentinel-1 ◆ Cosmo

2 images per week



◆ Sentinel-1 ◆ Cosmo

3 images per week



◆ Sentinel-1 ◆ Cosmo ▲ Radarsat-2



Technological advancements

- Sentinel-1
 - 250km swath
 - ~20m spatial resolution
 - FREE!
- Microsatellites
 - High temporal revisit
 - e.g. ICEYE
 - 18 satellite constellation
 - 3 hour revisit

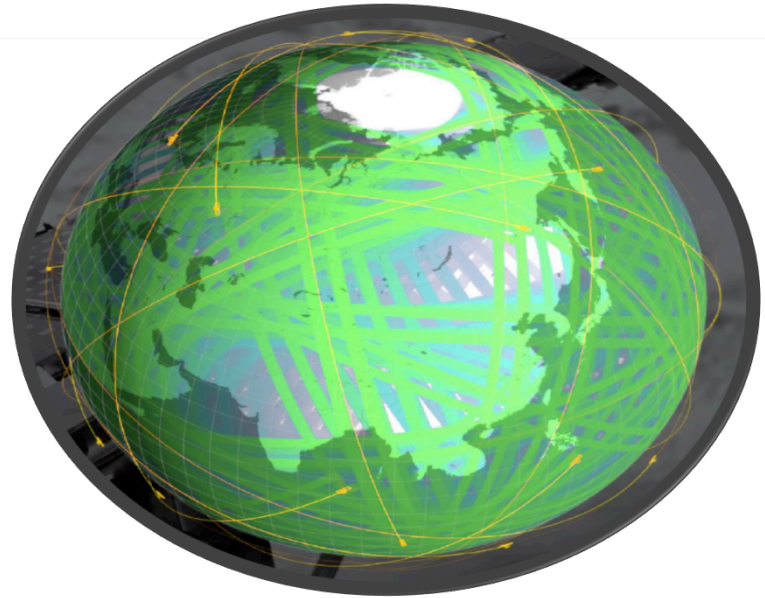
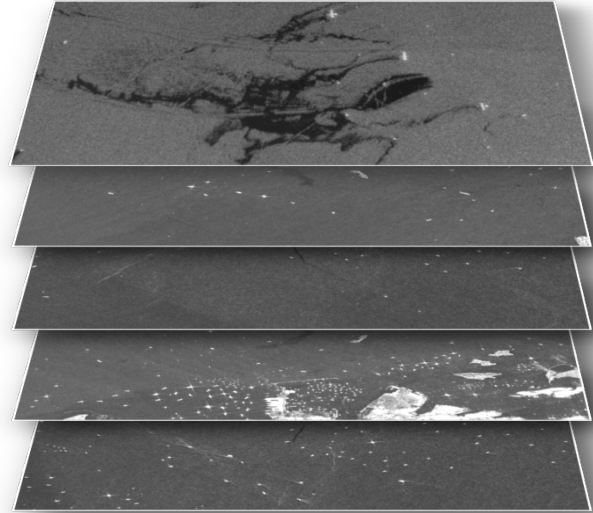


Image courtesy of IceEye



Routine monitoring

- The new norm
- Low cost imagery available
- Sentinel is FREE
- Plan ahead – identify a suitable plan – buy imagery at a lower cost
- Provide/Enhance situational awareness
- Data collection over:
 - Offshore infrastructure
 - Environmentally sensitive areas



Value of routine satellite imagery

- Environmental benchmarking
- Evidence of good practice
- Enhanced situational awareness
- Flag technical problems
- Identify incidents caused by third parties
- Reduce human presence in remote and hazardous locations
- Monitoring offshore operations
- What happens when operations cease?





Conclusions

- Scope for using EO satellites for routine monitoring is expanding
- Improved systems (acquisition, processing etc.)
- Proactive monitoring supports emergency tasking
- Enhanced situational awareness
- Establish an evidence base





Thank you

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