

C-CORE 2.4 Detection and monitoring of pollutant discharges

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Challenge

Challenge ID	C-CORE_OFF2.4
Title	Detection and monitoring of pollutant discharges
Challenge originator:	
General Description	
What data/products do you use?	Models, aerial surveillance, satellite imagery, drifter buoys, in situ monitoring at platforms
When do you use this kind of dataset?	<p>To aid in trajectory modeling, spill response and protection of important ecological and archeological areas</p> <p>Monitor coastal and offshore oil pollution to assess the impact of pollution on the marine environment</p> <p>Monitor discharges of cement, cuttings and mud</p> <p>Monitoring of pollution arising from gas flaring</p>
What are your actual limitations and do you have a work around?	Validations of trajectory models is difficult and in case of a spill in situ monitoring is limited to aerial surveillance, weather limitations of current technology
Needs and expectations on EO data	High resolution imagery capable of detecting and tracking slicks and plumes of discharged materials
Challenge classification	
Pre license	1
Exp.	3
Dev.	3
Prod.	3
Decom.	3
Geographic context/ restrictions	All Regions
Topographic classification / Offshore classification	Ocean
Activity impacted /concerned	Operational, response capability enhancement
Technology Urgency	Short term (2-5 years)
Information requirements	
Update frequency	1-6 h during time of discharge
Temporal resolution	1-6 h during time of discharge

Spatial resolution	10-100m
Data quality	High
Data Coverage and extent	Regional
Example format	High resolution image
Timeliness	As close to real-time as possible
Existing standards	<p>ERT Scotland. 2008. Third strategic environmental assessment for oil and gas activity in Ireland's offshore Atlantic waters: IOSEA3 Rockall Basin. Prepared for Department of Communications, Energy and Natural Resources</p> <p>Galil B. and Herut B. 2011. <i>Marine environmental issues of deep-sea exploration and exploitation activities (oil and gas) off the coast of Israel</i>. IO LR Report H15/2012.</p> <p>RPS Energy. 2009. <i>Environmental Impact Assessment for Offshore Drilling The Falkland Islands</i>. Report prepared for Rockhopper Exploration PLC.</p> <p>Huang, Weigen, Fu, Bin. 2002. <i>Remote Sensing for Coastal Area Management</i>. Laboratory of Ocean Dynamic Processes and Satellite Oceanography Second Institute of Oceanography State Oceanic Administration Hangzhou, People's Republic of China in China. <i>Coastal Management</i>, 30:271–276, 2002.; UNEP, 2005. Wilkinson, C., DeVantier, L., Talaue-McManus, L., Lawrence, D. and D. Souter. South China Sea, GIWA Regional assessment 54. University of Kalmar, Kalmar, Sweden.</p> <p>BOBLME (2011) Country report on pollution – Myanmar. BOBLME-2011-Ecology-13; Ramamurthy, V.D. and J. Sreenivasan. 1983. Sources of Oil Pollution along the Indian Coasts of Arabian Sea, Bay of Bengal Indian Ocean, and its Impact on Commercial Fisheries. <i>Anales Del Instituto de Ciencias del Mar Y Limnología</i>.</p> <p>Akpomuvie, Orhioghene, Benedict. 2011. Tragedy of Commons: Analysis of Oil Spillage, Gas Flaring and Sustainable Development of the Niger Delta of Nigeria. <i>Journal of Sustainable Development</i>. Vol. 4, No. 2.</p> <p>IPIECA publications on oil spill avoidance, preparedness response and best practices (http://www.ipieca.org/topic/oil-spill-preparedness/oil-spill-report-series)</p>

Relevant products

Content by label

There is no content with the specified labels