

C-CORE 2.15 Coastal upwelling

Coastal upwelling

Challenge

Challenge ID	C-CORE_OFF2.15
Title	Coastal upwelling
Challenge originator:	
General Description	
What data/products do you use?	Ship-based measurements; satellite images
When do you use this kind of dataset?	To determine timing and magnitude of productivity in the area - would help with assessing change in ocean climate on a regional basis that would be reflected in environmental effects monitoring (EEM) data around the operation without causal linkage; includes index of seasonal and inter-annual variations of summer upwelling
What are your actual limitations and do you have a work around?	To detect timing and extent of upwelling would require extensive ship surveys which are time consuming and expensive
Needs and expectations on EO data	Satellite imagery to detect upwelling features such a productivity, SSH, temperature
Challenge classification	
Pre license	1
Exp.	1
Dev.	1
Prod.	1
Decom.	1
Geographic context/restrictions	- South China Sea, Morocco / Western Sahara
Topographic classification / Offshore classification	Ocean
Activity impacted /concerned	Possible reduction of environmental liability
Technology Urgency	Immediately (0-2 years)
Information requirements	
Update frequency	Weekly-seasonal South China Sea Daily-seasonal (Morocco / Western Sahara)
Temporal resolution	Weekly-seasonal South China Sea Daily-seasonal (Morocco / Western Sahara)
Spatial resolution	100m
Data quality	Medium to high
Data Coverage and extent	Regional
Example format	Ocean colour imagery
Timeliness	Within a month South China Sea As close to real-time as possible (Morocco / Western Sahara)

<p>Existing standards</p>	<p>Xie, S.-P., Q. Xie, D. Wang, and W. T. Liu. 2003. <i>Summer upwelling in the South China Sea and its role in regional climate variations</i>. J. Geophys. Res., Vol. 108 (3261), doi:10.1029/2003JC001867, C8.</p> <p>Pelegrí, J.L. et al. 2005. <i>Coupling between the open ocean and the coastal upwelling region off northwest Africa: water recirculation and offshore pumping of organic matter</i> . Journal of Marine Systems, Volume 54, Issues 1–4, February 2005, Pp. 3-37 Available online at: http://www.sciencedirect.com/science/article/pii/S0924796304002027</p>
----------------------------------	---

Relevant products

Content by label

There is no content with the specified labels