OTM-032: Detecting ecosystem damages

Detecting ecosystem damages

Challenge

	Challenge ID	OTM:032				
1	Title	Detecting ecosystem damages				
2	Theme ID	ON 4.2: Environmental monitoring - Continuous monitoring of changes throughout the lifecycle				
3	Originator of Challenge	Onshore: OTM				
4	Challenge Reviewer / initiator	PEMEX, Statoil, Tullow, Petronas				
	General description	Overview of Challenge				
5	What is the nature of the challenge? (What is not adequately addressed at present?)	Construction of sites, extension of the site as well as emissions can have direct impact on the ecosystem. This can lead to direct damages from site construction or indirect damages from emissions. Those damages can be reversible or irreversible. In both cases the damage needs to be monitored and valuated. For this challenge monitoring multi-temporal, continuous, unbiased and consistent environmental data is often difficult to obtain. Change mapping is essential in context of environmental certificates, climate change, etc.				
6	Thematic information requirements	3. Obtain detailed vegetation information, 4. Obtain detailed land-use information, 6. Identify inland water bodies and determine water quality, 10. Fauna and presence and patterns,				
7	Nature of the challenge - What effect does this challenge have on operations?	Obtaining land cover information and their changes over a large area is time consuming and expensive. We must ground survey parts of the area, but this can lead to bias or unrepresentative results because there is a tendency to target the most importa				
8	What do you currently do to address this challenge?/ How is this challenge conventionally addressed?	Existing mapping, although this often lacks sufficient detail				
9	What kind of solution do you envisage could address this challenge?	Very high to medium resolution land cover products based on EO data. Resolution depends on covered area and size of monitoring objective				
10	What is your view on the capability of technology to meet this need? – are you currently using EO tech? If not, why not?	EO could be a useful complimentary technology				
	Challenge classification					
11	Lifecycle stage	Pre license	Exp.	Dev.	Prod.	Decom.
	Score from impact quantification [1]	0	2	2	4	4
12	Climate classification	NOT CLIMATE SPECIFIC				
13	Geographic context/restrictions	Generic onshore (Unspecified)				
14	Topographic classification / Offshore classification	Generic onshore (Unspecified)				
15	Seasonal variations	Any season				
16	Impact Area	Environmental				
17	Technology Urgency (How quickly does the user need the solution)	Immediately (0-2 years)				
	Information requirements					
18	Update frequency	depending on sensor and application				
19	Data Currently used					
20	Spatial resolution					
21	Thematic accuracy	80-90%				
22	Example formats	Standardized geo-spatial formats (e.g. shapefile, geotiff or KML)				
23	Timeliness	within a month				
24	Geographic Extent					
25	Existing standards					

[1] Impact quantification scores: *4 – Critical/ enabling; 3 – Significant/ competitive advantage; 2 – Important but non-essential; 1 – Nice to have; 0 – No impact, need satisfied with existing technology*

Relevant products

Content by label

There is no content with the specified labels