

# OTM-061: Forecasting river migration patterns

## Forecasting river migration patterns

### Challenge

Challenge ID	OTM:061				
1 Title	Forecasting river migration patterns				
2 Theme ID	ON 5.3: Logistics planning and operations - Facility siting, pipeline routing and roads development				
3 Originator of Challenge	Onshore: OTM				
4 Challenge Reviewer / initiator	BP, Statoil, PetroSA				
General description		Overview of Challenge			
5 What is the nature of the challenge? (What is not adequately addressed at present?)	Predicting the location of geohazards is an important consideration for pipeline routing and facility siting and this information is particularly critical in the planning phase.				
6 Thematic information requirements	1. Obtain detailed topographic information, 3. Obtain detailed vegetation information, 4. Obtain detailed land-use information, 6. Identify inland water bodies and determine water quality, 13. Monitor ground movement, 14. Obtain detailed image				
7 Nature of the challenge - What effect does this challenge have on operations?	If the migration patterns of geohazards such as rivers are identified, appropriate mitigation can be arranged. This may be via re-routing or re-enforcement of particular pipeline lengths.				
8 What do you currently do to address this challenge?/ How is this challenge conventionally addressed?	To be completed by ML				
9 What kind of solution do you envisage could address this challenge?	Very high to medium resolution EO data to monitor changes of rivers and lakes as well as coast lines.				
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]	3	2	4	0	0
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	Health and Safety, operational cost reduction, strategic decision maker				
17 Technology Urgency (How quickly does the user need the solution)	Immediately (0-2 years)				
Information requirements					
18 Update frequency	Varies depending on location and risk, anywhere from 60-5m				
19 Data Currently used	Varies				
20 Spatial resolution	Varies				
21 Thematic accuracy					
22 Example formats					
23 Timeliness	Within a month				
24 Geographic Extent	District area				
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

