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|  | Challenge ID | OTM:035 |
| 1 | Title | Assessing the social impact of construction work |
| 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, Shell, Chevron |
|  | General description | Overview of Challenge |
| 5 | What is the nature of the challenge? (What is not adequately addressed at present?) | Monitoring the social impact of O&G development e.g. displacement of communities/ tribes, changes in land use or impacts caused by construction activity |
| 6 | Thematic information requirements | 4. Obtain detailed land-use information, |
| 7 | Nature of the challenge - What effect does this challenge have on operations? | The construction site and its impact on the environment can be relatively intense during the early E&P phases, particularly when the site is being constructed. This may impacts both the immediate, local society in or distant societies such as those along |
| 8 | What do you currently do to address this challenge?/ How is this challenge conventionally addressed? | This manly done by field surveys which is costly, labour intensive and because it's "point-based", the context of the larger ecosystem can be misunderstood. |
| 9 | What kind of solution do you envisage could address this challenge? | EO-based products can provide consistent, timely information on social impacts of O&G development. High to very high resolution land cover products based on EO data would be useful for analysis of areas in the close proximity to particular assets. For la |
| 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 providing information on population density, building inventory, exposure mapping, settlement mapping and site location |
|  | Challenge classification |  |
| 11 | Lifecycle stage | Pre license  | Exp. | Dev. | Prod. | Decom. |
| Score from impact quantification [[1]](#footnote-1) | 4 | 4 | 4 | 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 | Social impact |
| 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 six months |
| 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* [↑](#footnote-ref-1)