P38: Surveillance of Oil and Gas Pipelines for Geohazard and Ground Subsidence Vulnerabilities

Maturity score

Mean: 2.6	**STD:** 0.70

Constraints and limitations

- SAR signal coherence can be reduced in vegetated areas, making it challenging to monitor dam stability in regions with dense vegetation.
- SAR signals have limited penetration through certain materials, which can obstruct the measurements of ground movement beneath these surfaces.

Relevant user needs

UN37: Projection of risk to portfolio assets into the future.

R&D gaps

- Not cost-effective as needs very detailed height data and an understanding of subsidence risks.

Potential improvements drivers

- Develop automated algorithms and systems for the detection of any subsidence. These algorithms can process large datasets quickly and provide real-time or near-real-time alerts to users when subsidence is detected, enabling prompt responses.
- Provide tools and services for long-term trend analysis, enabling users to assess subsidence patterns over extended periods.

Utilisation level review

Utilisation score

Mean: 2.25	**STD:** 1.09

No utilisation

- Unawareness of the existence of this EO product.

Low utilisation

Medium utilisation
High utilisation

- Only this product satisfies the technical and usability requirements.

Critical gaps related to relevant user needs

Guideline gap

UN37: Projection of risk to portfolio assets into the future.