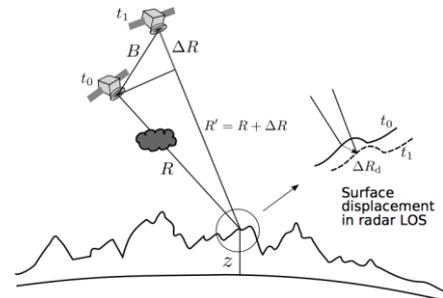


Globesar AS – a Norwegian provider of ground movement mapping and monitoring of large land areas.

Globesar AS is a Norwegian Earth Observation (EO) company located in Tromsø. The company is a spin-off from the Northern Research Institute Tromsø (Norut). Globesar holds an exclusive commercial license of the SBAS-InSAR software that enables us to map and monitor ground stability over large land areas. By processing satellite radar data (SAR-data) it is possible to detect, measure and monitor relative ground movements of large areas of natural terrain and urban areas.

Interferometric SAR (InSAR)

By studying two (or more) radar images it is possible to detect potential phase difference in the radar signals (see image to the right). This phase difference is proportional to ground displacement in the radar line-of-sight (LOS). If there are SAR scenes available having different geometry it is possible to retrieve both vertical and horizontal displacement in the area of interest.



SBAS-InSAR technique:

The SBAS-InSAR is a method highly suitable for mapping and monitoring of large areas of natural terrain. It has the following features:

- **Large Areas** – The results has extensive spatial coverage (exceeding 10 000 km²).
- **Comprehensive Results** – The software provides substantial results over large areas of natural terrain.
- **Accurate** – Estimated annual displacement rate; millimeter/year.
- **Historical Analysis** – Due to archived data it is possible to retrieve historical ground movement information since 1992 and onwards.

Example: Active Rockslide in Lyngen, Norway

An active rockslide area in northern Norway was mapped using the SBAS-InSAR software. Yellow and red area indicates subsidence of 2-5 mm/year. Each point in the image to the left is supplemented by a time displacement series that illustrates the specific point's movement over the time period analyzed. The image to the right illustrates a displacement time series, in this example, for point C. The triangles in the time series illustrate measurements from different satellite scenes acquired throughout the time period. The line illustrates annual mean displacement for point C.

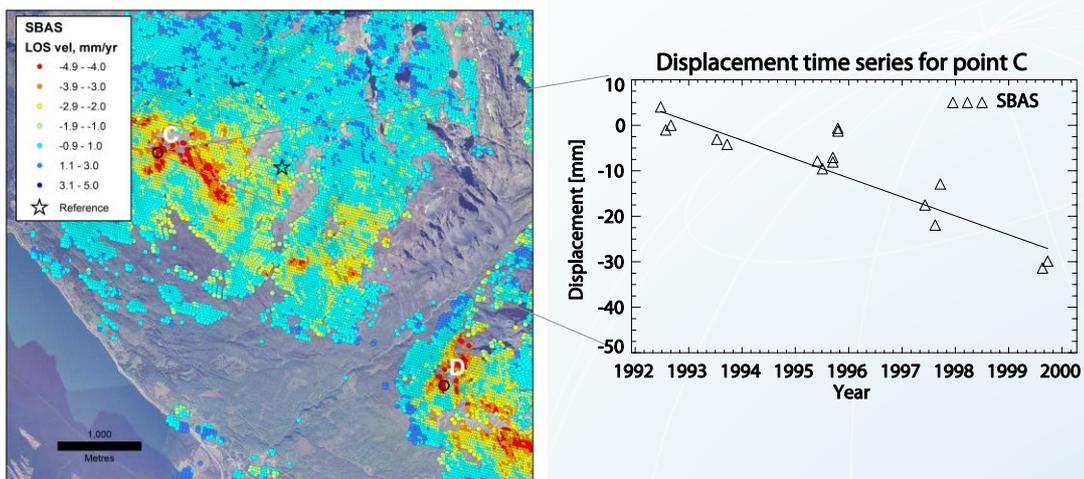


Figure 1 - Project example from an SBAS-InSAR analysis performed over an active rockslide area in northern Norway. Source: T.R. Lauknes, et al., "Detailed rockslide mapping in northern Norway with small baseline and persistent scatterer interferometric SAR time series methods", Remote Sensing of Environment; 114 (2010) 2097–2109

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