

Who says that the Netherlands are subsiding – a taxonomy of governance arrangements for geodetic deformation measurements

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Geodetic deformation measurements are concerned with determining modifications induced by physical causes in spatial geometry. They can be used to determine soil subsidence by mining activities, sea level variation, subsidence and distortions of civil engineering and architectural constructions (building of underground railways, engineering works in ports and locks, industrial installations, etc.), landslides of hills, mountains, dikes and dams. The measurements are performed because it is a legal obligation, because assurance companies demand it, because security is at stake or because an early warning system is seen as essential by the principal, who may be a private company or a state institution. This presentation is concerned with the governance of geodetic deformation measurements.

If we want to know if and how fast the Netherlands or Germany, or parts of it, are subsiding or rising, who decides that it should be measured and how is the methodology determined? What interests are at stake? How is the proper use and innovation of geodetic methods guaranteed?

To be able to answer such and similar questions a taxonomy of governance arrangements for geodetic deformation measurements is presented. Relevant aspects of activities to measure deformations are put into a classification. By interviewing experts in the field of geodetic deformation measurements in the Netherlands the activities of companies, institutions and other structures that are concerned with geodetic deformation measurements were rated within the presented taxonomy and its adequacy demonstrated.

A view on possible applications of the taxonomy is given.