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3-DIMENSIONAL GEOLOGICAL MAPPING AND MODELING ACTIVITIES AT THE GEOLOGICAL SURVEY OF NORWAY

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Abstract. Geology and all geological structures are three-dimensional in space. Geology can be easily shown as four-dimensional when time is considered. Therefore GIS, databases, and 3D visualization software are common tools used by geoscientists to view, analyse, create models, interpret and communicate geological data. The NGU (Geological Survey of Norway) is the national institution for the study of bedrock, mineral resources, surficial deposits and groundwater and marine geology. The interest in 3D mapping and modelling has been reflected by the increase of number of groups and researches dealing with 3D in geology within NGU. This paper highlights 3D geological modelling techniques and the usage of these tools in bedrock, geophysics, urban and groundwater studies at NGU, same as visualisation of 3D online. The examples show use of a wide range of data, methods, software and an increased focus on interpretation and communication of geology in 3D. The goal is to gradually expand the geospatial data infrastructure to include 3D data at the same level as 2D.

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