



The Swedish Deep Drilling Program (SDDP): An overview

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Knowledge of our bedrock comes mainly from observations on land, providing us with a 2D map of its surface, at best. Boreholes, mines and geophysical investigations provide additional information in the important 3rd dimension, but are not always found at optimal locations. To understand our bedrock, and to possibly take advantage of its economic potential, we need to drill into it at critical locations. The Swedish Deep Drilling Program (SDDP) has been initiated to study fundamental problems of the dynamic Earth system, its natural history and evolution. Many key scientific questions can only be addressed through drilling, some of which are unique for Scandinavia. A number of important targets have been identified, including the Caledonides, the Dellen impact structure, active faulting in northern Sweden, a Paleoproterozoic collision zone and the ore districts in northern Sweden. However, several other potential targets exist, such as geothermal and CO₂ sequestration experiments in crystalline rock, and the program welcomes well formulated proposals that can be integrated into the research plans. At this stage, funds have been made available through the Swedish Research Council for ICDP membership and to bring together scientists and engineers from different fields from both the research community and industry to develop the science and technology plans for the Swedish Deep Drilling Program. This group will (1) pose the important scientific questions that can only be answered by deep drilling into "Swedish" bedrock, (2) integrate much of this science into drilling projects that have societal and industrial applications, and (3) attract the funding required to carry out these drilling projects over a 10 year period. If these goals are achieved then Sweden will have 4 world class boreholes drilled 2-5 km into bedrock at key locations by 2020.