



# Soils as an archive of natural and cultural history

## BÖDEN ALS ARCHIVE DER NATUR- UND KULTURGESCHICHTE

Just like in a document, soils document the history of their formation, the landscape history or cultural history. Parent rock, climate, use of the soils and other effects have left behind diverse traces, which are stored in the "soil archive" as a document of the natural and cultural history. Geological outcrops are time windows and, through the rock composition and the time sequence of the sediment strata, provide evidence of the historical formation of the land surface and landscape. The most significant outcrops and landscape forms are called geotopes and are catalogued. Fossils and minerals and the places where they are found provide insights into the landscape development, as do landscape-forming morphological elements. Traces of cultural development can also be hidden in soils or give them their present-day form. These soils are then archives of cultural history.

According to §§ 1 and 2 of the Federal Soil Conservation Law (BBodSchG), soils must also be protected from negative effects to protect their functions as an archive of natural and cultural history. Planning projects, which involve changes in soil use, can endanger the survival of these archives. According to BBodSchG, soil includes the entire upper strata of the Earth's crust, provided it bears soil functions. Therefore, the legal concept of soil extends beyond the pure soil science area and also includes geological and natural history formations. This brochure provides a detailed description of these archives for the soils in

Baden-Württemberg and is intended to assist planners, local communities, authorities and those responsible for the procedures in their efforts to treat soils carefully.

For the archive function, the form, structure, condition or content of soils or rock sequences, are significant if they occur rarely, contain special features or are of outstanding scientific, landscape history or cultural interest. A special case is the locations of soil monitoring networks, in which investigations into the condition and change in material composition in soils are carried out over long periods of time.

The archives of the natural and cultural history of soils can be divided into five groups according to their significant characteristics. They are explained and described in greater detail on the following pages. The selection of soil archives presented in this brochure is based on evaluations of existing maps and registers of geotopes, monitoring network locations, sites of archaeological and palaeontological finds and on expert knowledge. A summary of the documents taken into account is given on page 19.