

CAVES AND KARST IN DANGER



The village Questenberg in the gypsum landscape of South Harz - PHOTO: M.K.BRUST

PROTECTED AREAS OF RARE GYPSUM KARST IN GERMANY UNDER THREAT

Resolution for the protection of the karst landscape in the southern Harz

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The gypsum karst landscape of the southern Harz is a unique natural area that extends over around 100 km and includes parts of the German federal states of Lower Saxony, Thuringia and Saxony-Anhalt.

Within this region there are 16 areas protected by European Union Natura 2000 Directive, but also many quarries, which have already destroyed large parts of the landscape. Only in the federal state of Saxony-Anhalt is the gypsum karst still completely intact.

This area has therefore been designated as the ‘South Harz Karst Landscape Biosphere Reserve’ by the German federal state Saxony-Anhalt – so far it is the only relevant biosphere reserve in the world in a sulphate karst!

Despite this outstanding position, central parts of this area could soon be destroyed forever. Citing the coalition agreement of the state government of Saxony-Anhalt, the responsible district of Mansfeld-Südharz plans to approve an application by the gypsum company Knauf to drill eight exploratory boreholes to explore the local gypsum deposits. The government of Saxony-Anhalt has reportedly indicated that it would accept quarries if gypsum mining were to be carried out here.

The German Speleological Federation VdHK published this “Resolution for the protection of the karst landscape in the southern Harz” in September 2024. 15 supporting letters arrived in early October. All were sent to local authorities and ministries.

What makes this landscape so important is its special geological situation. In Germany these are the only sulphate (anhydrite and gypsum) deposits of this form and thickness which extend over a large area and are close to the surface. Furthermore, the southern Harz is the only gypsum karst in the world that is richly forested and the combination of remarkable caves, surface karst landforms and their associated ecosystems make this an excellent candidate as a World Heritage Site. If the gypsum is quarried away, then the potential World Heritage Site will be lost together with its bio- and geotopes. Caves, springs and underground flow paths as well as gypsum biocoenoses would be destroyed here forever as it is impossible to restore destroyed gypsum karst areas.

The area of the planned drilling is not only protected by the Natura 2000 Directive but also as a nature reserve and landscape protection area, as well as a nature park. Quarrying would result in destruction

of the core areas of the biosphere reserve and if these test drillings are not stopped, a precedent will be set for gypsum mining in almost all forms of protected areas in Germany and Natura 2000 protected areas in Europe.

Over the course of several 10,000 years, a gypsum karst landscape with extreme karstification intensity, morphological and biological diversity and uniqueness has emerged in the southern Harz. For this reason, it is part of the German Federal Agency for Nature BfN hotspot areas of biodiversity 18 and 19 and is of outstanding importance for numerous bat species, such as the pug bat *Barbastella barbastellus*, the Brandt’s bat *Myotis brandtii* and *Myotis mystacinus*, and the mouse-eared bat *Myotis myotis*, to name just a few.

The structurally rich landscape also provides a habitat for many amphibians such as the fire salamander *Salamandra salamandra*. Other special features include caves like the Questen cave near Questenberg, the highly fluctuating water levels in large sinkholes and poljes, as well as periodic lakes and karst springs. In addition, the southern Harz is characterised by a particularly rich groundwater fauna and groundwater habitats worthy of protection.

In addition to the Natura 2000 habitat types and species, other species with a special protection obligation also occur here. For example, the creeping gypsophila *Gypsophila repens* and the slender cotton grass *Eriophorum gracile* grow here. The slender cotton grass is considered to be threatened with extinction throughout Europe. And the lichens also have something special to offer, such as the colourful soil lichen community or the extremely rare *Psora saviczii*, whose German name ‘Gips-Erdschorf’ (gypsum soil scab) already indicates the special growing place.

We vehemently oppose any new mining project in the gypsum karst of the southern Harz region.



Locations of the 8 planned test drillings (in yellow) of the Knauf Company - in red protected areas. SOURCE: KNAUF



Gypsumkarst South Harz
PHOTO: ELKE BLANKE / BUND NORDHAUSEN

WE ASSERT THAT:

- The state of Saxony-Anhalt must recognise and accept its responsibility for the internationally significant gypsum karst landscape in the South Harz and protect it accordingly. Protected areas must be respected, whether under German legislation or the European Natura 2000 Directive.

- The state of Saxony-Anhalt should not allow any further destruction of the gypsum karst, not only because of the adverse impacts on biotopes and geotopes but because it will impede future development of the region as a tourist destination.

- The state should instead promote future- and climate-oriented plants and companies that produce alternatives to building plaster. Building materials made from renewable materials such as plant fibres and recycled minerals have been on the market for a long time.

The German Speleological Federation is very grateful for the support of the resolution by the:

- International Union of Speleology (UIS);
- International Union for Conservation of Nature (IUCN)/World Commission on Protected Areas (WCPA)/Geoheritage Specialist Group (GSG)/Caves and Karst Working Group (CKWG);
- UIS Karst and Cave Protection Commission;
- European Cave Protection Commission;
- Association for Research, Promotion and Protection of Karst Landscapes;
- Italian Institute of Speleology;
- Speleological Committee of Croatia Mountaineering Association;
- Italian Speleological Society;
- Austrian Speleological Association, and many more.

UIS President Nadja Zupan Hajna wrote on behalf of the UIS: *“The gypsum karst of the South Harz is not only of national importance, but also of global value due to its rare geological formations, including hypogene caves, and its rich biodiversity. The potential destruction of this landscape, especially in a protected biosphere reserve, sets a dangerous precedent for the exploitation of other protected areas in Germany and beyond.”*

John Gunn, Chair of IUCN Caves and Karst Working Group, stated on behalf of the IUCN/WCPA GSG Cave and Karst Working Group: *“In 2023 I was able to visit some of the hypogenic caves in the same area which are developed in both anhydrite and gypsum. The caves are of very high scientific interest and amongst the most spectacular that I have ever seen, not for speleothems or huge passages but for the morphological variety and the beauty of the rock in which they have formed.”*

Paolo Forti, UIS Past President 2013-2017, explained on behalf of the Italian Institute of Speleology: *“I have carried out a detailed bibliographic survey of the 10 areas with sulphate karst most important in our planet. Obviously, the evaporitic karst area of South Harz was among these areas and in my humble opinion it could also aspire to become a new World Heritage in the future.”*

Together we are strong for cave protection – if you would like to support this resolution, please send it to Baerbel Vogel, President VdHK via vorsitz@vdhk.de.

For further information see

<https://www.vdhk.de/en/protected-areas-and-geoparks>






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