

# Conservation work is helping to protect our precious moorland

July 18 2017, by Joe Paxton

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Credit: University of Manchester

Work to protect the iconic moorland of the Peak District and South Pennines is having a positive and statistically significant effect on the environment, research recently launched by The University of

Manchester and the Moors for the Future Partnership has confirmed.

The study brought together 12 years' worth of data, to evaluate how well efforts to improve the environmental health of the moors are working. The aim of the work is to return the moors to an active, healthy state by re-introducing native [plants](#).

It is thought that this work will increase the number of different [plant species](#) living there, raise the water table (make the ground surface wetter) and keep water on the hills for longer.

A wider range of plant species improves the health of the moor, and makes it better able to support animal life including rare moorland birds. Raising the water table makes peaty soil less vulnerable to devastating wildfire, and improved vegetation cover helps slow the flow of water off the hills, especially in high rainfall events.

Monitoring of this work is essential, to make sure that the predicted changes and improvements are becoming a reality. The research looked into the number of different plant species in the area, the depth of the water table and run-off production (how much and how often water flows off the moors).

The research was undertaken by the Moors for the Future Partnership in collaboration with academics from The University of Manchester. It was officially launched at the prestigious European Geosciences Union General Assembly in Vienna, Austria, in April.

"This research, resulting from more than a decade of monitoring, shows that the conservation work we do has a substantial and statistically significant effect on returning blanket bog habitat to a healthy state," said Dr Mike Pilkington, Senior Research and Monitoring Officer at the Moors for the Future Partnership.

"Healthy peatlands provide a wide range of benefits including providing a supply of good quality raw water for the water companies to process for millions of customers; a habitat for rare and beautiful plants and wildlife; a means of absorbing and slowing the flow of storm water, and a store of carbon. Unfortunately over hundreds of years, pollution (dating back to the industrial revolution) and wildfire has had a damaging impact to the services that peatlands provide.

Martin Evans, Professor of Geomorphology at The University of Manchester, is interested in how conservation techniques produce results over time, known as trajectories. A positive trajectory means that as time goes on, outcomes are improving. "Establishing typical restoration trajectories is important in providing insight into the nature of these processes," he said. "The trajectories for plant species, [water table](#) and slowing of storm flow were all positive, and showed that restoration works are helping to return the moors to a healthier condition."

"We're continuing to work closely with the Moors for the Future Partnership as part of the MoorLIFE 2020 project, in particular to consider if the reintroduction of Sphagnum mosses on the uplands has a positive effect on improving water quality while reducing flood risk."

The planting of Sphagnum mosses is the icing on the cake of the [work](#). These incredible mosses can hold up to 20 times their weight in water. The tiny plants play a major role in the health of the bog, keeping water on the hills for longer, reducing the risk of wildfires and of flooding downstream. The plants also act as a filter; cleaning water before it gets into reservoirs and saving on [water](#) treatment costs.

Provided by University of Manchester

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