

Stahlquelle Neudorf



Nothing worked in mining without Kunst (which means 'art' in German)! However, instead of magnificent paintings, 'Kunst' in mining meant machines. Wooden water wheels connected to movable wooden beams provided the drive for bellows in the smelting works, for example. These were found along the major Harz rivers from the 10th century onwards. Wood was also used for their timbered construction.



WALD

Knock on wood

The miners took this literally. The condition of the wood could be guessed by tapping it. The raw material was used in many ways to mine the valuable ores in the Harz Mountains. Over 1,000 years ago, people began searching for minerals - and thus utilising the forest. The dense mixed deciduous forests were cut down and from the 18th century onwards, fast-growing spruce trees were planted in the forest.

This planting of a single species is called monoculture. Unfortunately, monocultures are susceptible to pests (e.g. bark beetles) and do not form a healthy, climate-stable forest. The consequences of centuries of mining in the Harz Mountains for the forest can still be seen today in large parts of the region.

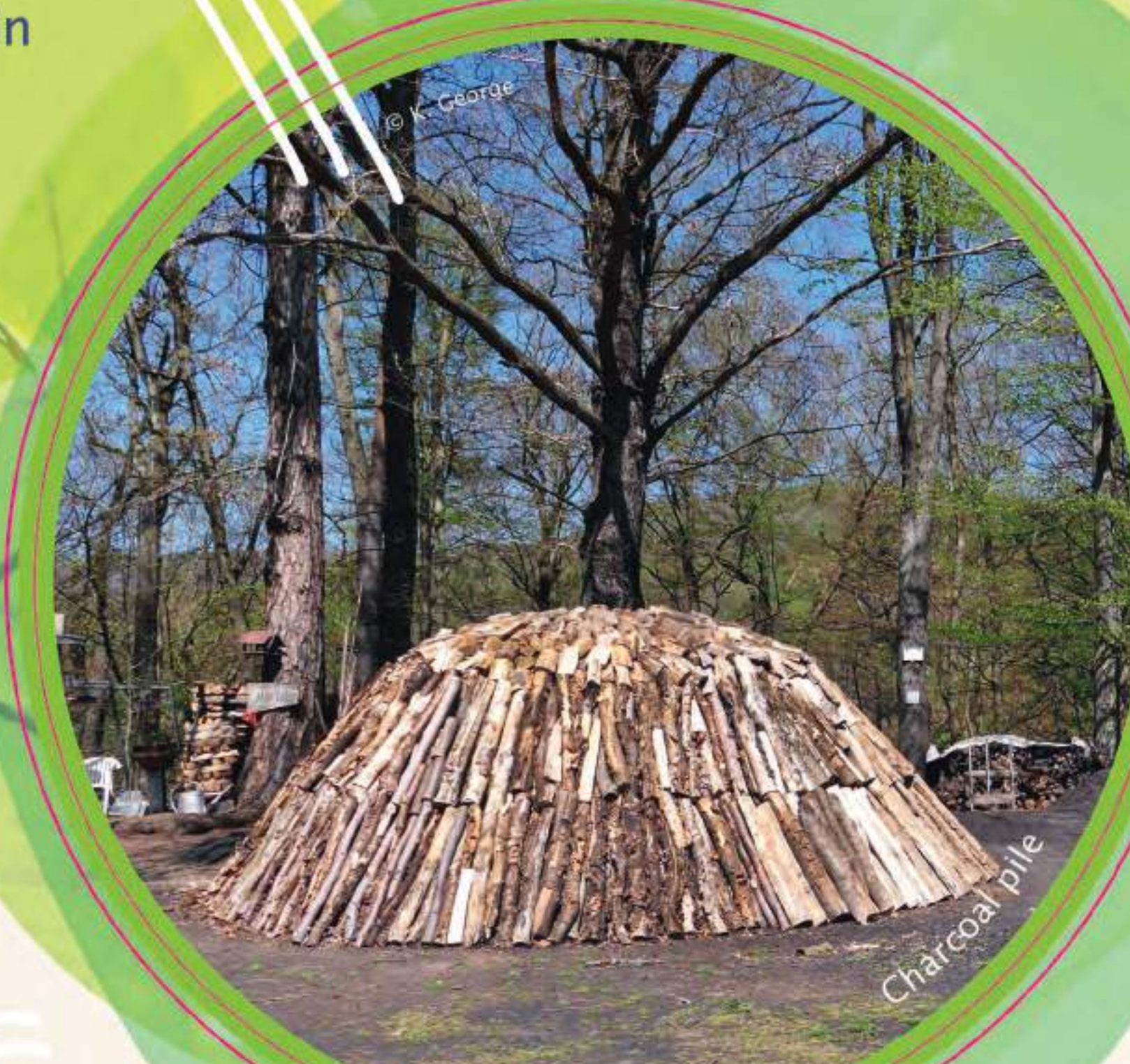
No forest, no mining! Which discs show how wood was used in mining?

'Spruce speaks before it breaks!', as every miner knew. If the timbers that secured the deep tunnels and shafts creaked, it was time to leave the mountain immediately. Hardwood lacks such an 'early warning system'. The long-fibre spruce wood is quite elastic and stretchable, thus it withstood the conditions underground well. Wooden door frames and panelling protected the tunnel from collapse.

The rivers were very busy. From the middle of the 16th century, the waterways were used for around 300 years to transport logs by floating. The main destination was the ironworks, where a lot of timber was needed. In 1721, around 2,500 cubic metres of timber were floated on the Bode River. That's over three swimming pools full of wood! In 2022, UNESCO declared rafting an Intangible Cultural Heritage of Humanity.



Today, charcoal is used at barbecues. In the past, it was used to generate temperatures of over 1,000 °C in sophisticated smelting furnaces to extract ores from rock. The production of charcoal was already described in ancient times and is one of the oldest craft techniques. Charcoal burners stacked low-grade wood (e.g. branches, tree roots) in charcoal piles and charred it into charcoal.



Stahlquelle Neudorf

Got your rubber duck?
Because one square meter of healthy forest soil can store an entire bathtub full of water! The upper, humus-rich layers in particular can absorb a lot of rainwater and slowly release it into rivers and groundwater. Thus, the forest soil also actively protects against flooding. In Germany, forest soils are the largest freshwater reservoir and are therefore often water protection areas.



Take a deep breath!
The oxygen at home is certainly not as fresh as in the forest! Trees produce oxygen as a waste product of photosynthesis, which benefits humans and animals. How much oxygen a tree produces depends on its species, size and the amount of leaves. A mature beech tree, for example, can cover the daily oxygen requirement of 26 people.



WALD

Can't see the forest for the trees?

Then it is time to take a rest! And the forest is an excellent place to do so! After mining became less important in the Harz Mountains, the forest played an increasingly important role in recreation. People were suddenly drawn to the forest to recover from the stress of everyday life. Instead of spruce trees, people in the Harz are now focussing on making the forest more natural again. Deciduous trees, such as beech, are growing alongside old spruce trees more frequently. Mixed deciduous forests are considered healthy. They provide habitats for many different species. This diversity makes mixed forests more resistant to drought or pests. Healthy forests are important ecosystems.

No life without forests! Which discs show the importance of the forest for people and nature?



Breathe! Being in the forest is really good for your health!
Forests are increasingly becoming a destination for those seeking relaxation. Nature attracts them with tranquillity, the scent of essential oils and the fresh air. Science confirms the positive effects of forest bathing: People who spend lots of time in the forest are less stressed, have healthy blood pressure, and increased lung capacity.



Forests are true climate saviors.
During photosynthesis, trees capture carbon as glucose. In doing so, they remove the greenhouse gas carbon dioxide (CO₂) from the atmosphere. On average, two football fields filled with forests remove as much CO₂ from the atmosphere annually as Germany emits per capita. Deciduous trees lead the way in this regard. Compared to a spruce, a fully grown beech can absorb 40% more CO₂.

