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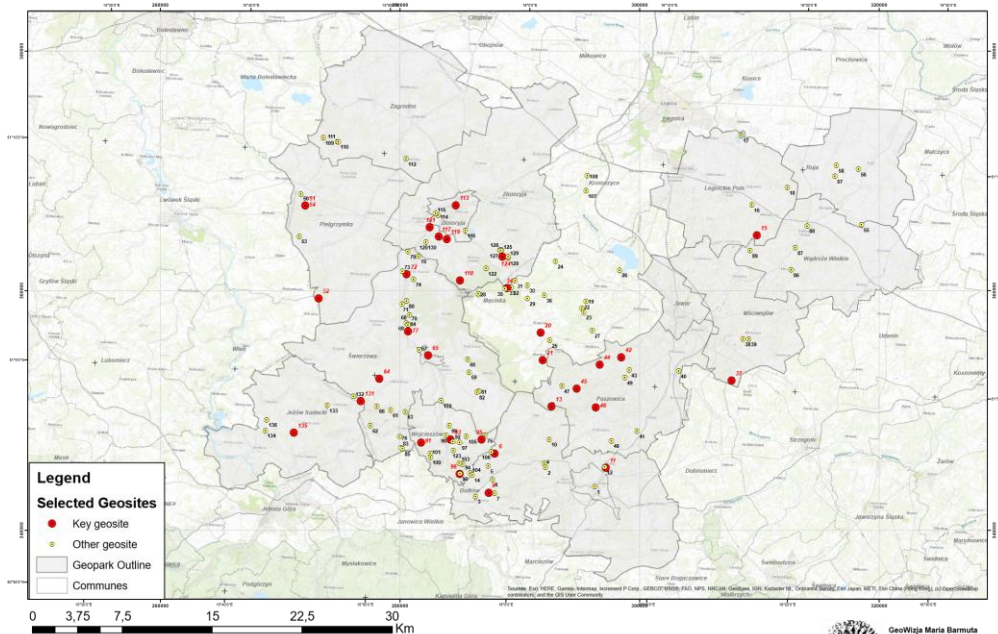


Géoparc
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UNESCO

Applicant UNESCO Global Geopark

Land of Extinct Volcanoes, Poland

Geographical and geological summary



1. Physical and human geography

Proposed geopark is located in the south-west of Poland, in Kaczawskie Mountains and foothills region. It covers the area of 1262,75 km² (14 municipalities). The terrain configuration is very diversified. Southern parts represent relief typical for low mountains. The highest peak is reaching 723 m a.s.l. The relative heights vary from 200 up to 300m. Kaczawskie Foothills are highlands in general, characterised by presence of isolated small ridges and hills, elevated plateaus and rather short but sometimes relatively deep rivers valleys (gorges). The northernmost region of the proposed geopark are typical lowlands, with the minimal elevation equals ca. 115-120 m a.s.l.

The whole region is in the temperate climate zone, with average temperatures of 18°C in July and -4,5°C in January. The sum of precipitation is ca. 600-700 mm for the mountain part and 500-600 mm for the rest of the terrain. The main river is Kaczawa, which is 98 km long. The flora of Kaczawskie Mountains and Foothills reflects complicated geological structure and related diversity of soils. The region is inhabited by 104 694 citizens. The average population density equals 248 person/km²; however, the average density in the rural areas is ca. 56 person/km². The most represented economic sectors are trade, mechanics, construction, industrial processing and transport; however, the majority of existing enterprises are microenterprises. The unemployment rate is around 12%.

2. Geological features and geology of international significance

The area of the proposed Geopark covers the three important geological units of the western part of the Sudety Mountains. Kaczawa Metamorphic Complex (KMC) is built from many folded nappes, which create currently many smaller units. It is a continuous sequence from early Cambrian to late Devonian. The rock material is represented mainly by metamorphosed in low grade siliciclastic sediments, volcanoclastic, carbonates, mafic and volcanic rocks, mudstones and flysch sediments. The rocks of KMC are a basement for North Sudetic Synclinorium (NSS). It started to form in late Carboniferous as a result of vertical movements of smaller block of the KMC. It is filled with Upper Carboniferous, Permian, Triassic, Upper Cretaceous, Tertiary, and Quaternary sedimentary rocks. The NSS is also filled by late Carboniferous and Permian volcanic rocks. This episode of volcanism involved mainly rhyolitic and trachyandesitic lavas. The last episode of volcanism took place about 18-28 million years ago. Most of these outcrops have a form of volcanic necks or lava flows. The rocks occurring on the Fore-Sudetic Block (FSB) are in a significant part an extension of the northern branch of the Kaczawa Metamorphic Complex, however separated from it by the Sudetic Marginal Fault.

Within the borders of planned geopark there are plenty of interesting geosites, including those of international and national importance. From the international perspective, it is worth to mention at least two: outcrop of Permian rhyolites, called Organy Wielisławskie (where thermal cracks are clearly visible in the rhyolitic rock wall) and Wojcieszów crystalline limestones (excavated in several quarries). Besides those geosites, there are over 130 other defined. The outcrops enable studying many structures and issues, mainly from the field of sedimentary geology (laminations, deformations, fossils) and metamorphic geology (foliation, folds, cleavage, lineation, faults, etc.). Several locations offer interesting minerals.

The Geopark area is characterised by truly perplexed geological structure and history. This mosaic type of geological structure creates huge geodiversity. This causes big attractiveness from geotouristic and geological point of view.