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Global Geoparks

11 new UNESCO Global Geopark applications to be evaluated in 2025

China	Changshan Geopark	p 3
China	Mt. Siguniang Geopark	p 5
France	Terres d'Hérault Geopark	p 7
Japan	Miné-Akiyoshidai Karst Plateau Geopark	p 9
Malaysia	Lenggong Geopark	p 11
Malaysia	Sarawak Delta Geopark	p 13
Oman	Al Hajar Geopark	p 15
Portugal	Algarvensis Geopark	p 17
Republic of Korea	Baengnyeong-Daecheong Geopark	p 19
Tunisia	Dahar Geopark	p 21
Uruguay	Manantiales Serranos Geopark	p 23

Two area modifications >10% for existing UNESCO Global Geopark to be evaluated in 2025

China	Yandangshan UNESCO Global Geopark	p 25
China	Zhijindong Cave UNESCO Global Geopark	p 27

Three area modifications <10% for existing UNESCO Global Geopark to be evaluated in 2025

Finland	Lauhanvuori – Hämeenkangas UNESCO Global Geopark	p 29
France	Beaujolais UNESCO Global Geopark	p 30
Germany	Thuringia Inselsberg – Drei Gleichen UNESCO Global Geopark	p 31

Applicant UNESCO Global Geopark

Changshan Geopark, China

Geographical and geological summary

1. Physical and human geography

Changshan Geopark, located in the People's Republic of China, specifically in Changshan County, Quzhou City, Zhejiang Province, is one that is characterized by its Cambrian-Ordovician stratigraphic profiles and paleontological fossils. It lies in the Asia-Pacific region with geographical coordinates between 118° 22' 37" and 118° 48' 48" east longitude, and 28° 15' 26" and 28° 53' 27" northern latitude, encompassing an area of 1,043.10 square kilometers. The terrain of Changshan Geopark is characterized by high altitudes in the northern and southern regions, with a decline in elevation in the central area. The slope extends from the southwest toward the east. The Geopark is located in the northern subtropical monsoon climate zone. The water system of the Geopark is linked to Changshan Port and the Sixi tributary in the Qiantang River Basin, and Qiuchuan Creek in the Yangtze River Basin. The Geopark is situated in the subtropical evergreen broad-leaved forest area. The eastern (humid) evergreen broad-leaved forest sub-region is comprised of the Zhejiang-Anhui hills and the Qinggang *Quercus sclerophylla* cultivation area. The geopark has a forest coverage rate of roughly 73%. Changshan County, where Changshan Geopark is located, boasts a history of more than 1,800 years and a heritage of over 4,000 poems from the Song Dynasty. It is renowned as an "Ancient County Immersed in the River of Song Dynasty Poetry". The Geopark is inhabited by nine ethnic groups, including Han, She, Man, Hui, Zhuang, and Yao. The total population within the Geopark is some 300,000 individuals.

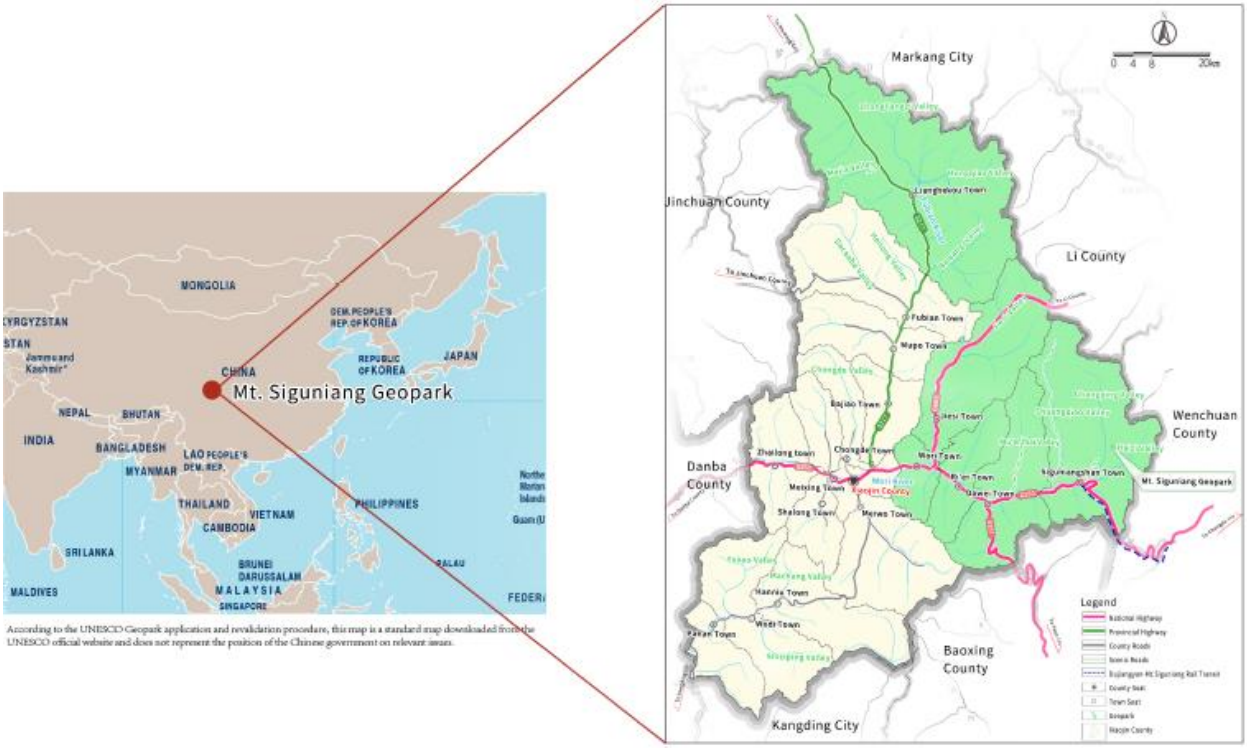
2. Geological features and geology of international significance

Changshan Geopark is situated at the intersection of the southeastern edge of the Yangtze Massif and the Cathaysia Massif, on the western side of the Jiangshan-Shaoxing fractured tectonic belt. The seamless transition from Tonian to Quaternary strata suggests that geological evolution in this region has spanned one billion years. The Tonian-Silurian strata form the most continuous expanse and are broadly distributed. This park is the site where several rock stratigraphic units were named, and it is the location of typical stratigraphic profiles. The development of fossils in this area is continuous and diverse. The Changshan Geopark region serves as a classic area for understanding the entire process of fossil evolution involving trilobite fauna, graptolite fauna, and conodont fauna, with a particular focus on the evolution of trilobite fauna and graptolite fauna. Several biozones have been established as a universal standard for lithostratigraphic classification and determining chronological stratigraphy. Included among these are China's first "Golden Spike" profile of the Ordovician Darriwilian Stage, and the prospective profile for the O/∈ boundary in the Xiyangshan Formation. Changshan Geopark serves as an extraordinary natural geological museum, and ranks among the few exemplary areas worldwide for conducting research in geological tectonics, sedimentary petrology, paleontology, stratigraphy, palaeoecology, and palaeogeoenvironmental sciences. It serves as a significant portal and crucial area for understanding the formation and evolution of the Yangtze Massif, providing precise global correlation of early Paleozoic strata, and exploring the development of prehistoric life and paleogeography.

Applicant UNESCO Global Geopark

Mt. Siguniang Geopark, China

Geographical and geological summary



1. Physical and human geography

Mt. Siguniang Geopark is located in Xiaojin County, Aba Tibetan and Qiang Autonomous Prefecture, Sichuan Province, The People's Republic of China, Asia. The geographical coordinates are N30° 50'39.450" to N31° 42'58.171", E102° 11'32.163" to E102° 59'2.497", with a total area of 2764.01 km^2. The geopark comprises six towns: Siguniangshan, Dawei, Jiesi, Ri'er, Wori, and Lianghekou Town. The geopark's boundaries are clearly defined by county and township administrative borders. It is located only 175 km from Chengdu, the capital city of Sichuan Province. National Highway 350 passes through the southern part of the geopark, making it accessible from Chengdu in just three hours, facilitating Xiaojin County's integration into the Chengdu-Chongqing economic circle. Mt. Siguniang Geopark is situated in the high mountain and valley area on the southern edge of the Qinghai-Tibet Plateau. It's a typical Qinghai-Tibet alpine climate with distinct vertical climatic zones. The geopark is mainly traversed by the Fubian River, Wori River, and Xiaojinchuan River, along with numerous streams, forming a dendritic drainage pattern in the upper reaches of the Yangtze River, specifically within the Qingyi River system of the Dadu River Basin. The geopark is home to many lakes, including cirque lakes, barrier lakes, and marsh lakes. The geopark has a resident population of 21,130 and a transient population of 11,768, totalling 32,898. The inhabitants include Tibetan, Han, Hui, Qiang ethnic groups, with Tibetans making up 52% of the population. It is a major settlement area for the Jiarong Tibetans and boasts a rich cultural and intangible cultural heritage.

2. Geological features and geology of international significance

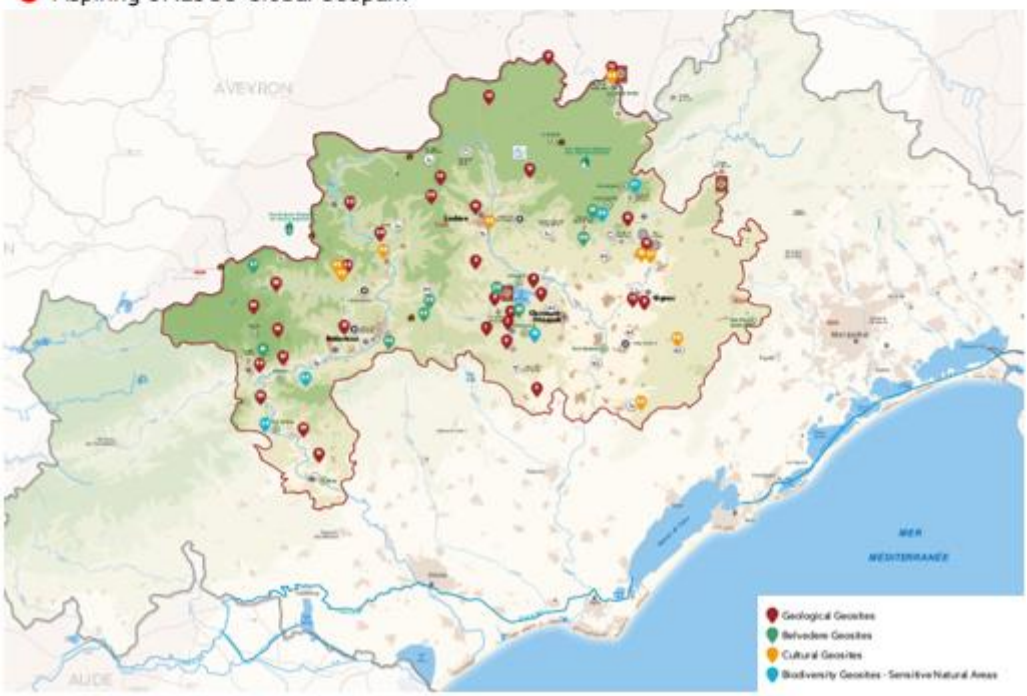
Mt. Siguniang Geopark is located at the junction of the Songpan-Garze Terrane and the Yangtze Block in terms of tectonics. It is characterized by complex folds, flysch deposits, extremely high mountains, and granite horn peaks. The geopark's internationally significant geological heritages include the 'Xikang-type' folds of the Songpan-Garze orogenic belt, the 'Xikang Group' turbidite flysch formation, and the extremely high mountain peaks of Mt. Siguniang. Mt. Siguniang area is situated precisely at the wedge-shaped segment of the Songpan-Garze orogenic belt, one of the regions most concentrated with tectonic stress due to bidirectional compressive continental-continental collision orogeny. This is evidenced by the thick pre-orogenic 'Xikang Group' flysch rock series deposits, the 'Xiaojin arcuate structural belt' and 'Xikang-type' folds formed during the orogenic process, and the post-orogenic intrusion of the 'Mt. Siguniang composite granite pluton'. These features comprehensively record the origin, development, and final formation of the wedge-shaped orogenic belt, making Mt. Siguniang a prominent example of this type of orogenic belt globally and representing a novel type of orogenic belt. At the same time, Mt. Siguniang is located in a crucial region where the Qinghai-Tibet Plateau sharply descends into the Sichuan Basin. It is particularly characterized by its extreme alpine landscape. There are hundreds of snow-capped peaks over 5,000m above sea level. This area comprehensively records the uplift processes and mechanisms of the Qinghai-Tibet Plateau. Mt.Siguniang is a quintessential example of extreme alpine regions on the eastern edge of the Qinghai-Tibet Plateau.

Applicant UNESCO Global Geopark

Terres d'Hérault Geopark, France

Geographical and geological summary

Aspiring UNESCO Global Geopark



1. Physical and human geography

The Terres d'Hérault Geopark spans 2,046km^2 in the Hérault department, Occitanie region, southern France. The geopark encompasses 112 municipalities and is home to 109,000 inhabitants. The territory has rich variety of landscapes: limestone plateaus, alluvial plains nestled among hills, the Massif Central that reaches up to 1,152 m, and deep valleys carved into the landscape. At the heart of the geopark, the Hérault River flows through steep limestone canyons before reaching the plains and continuing toward the Agde coastline. Terres d'Hérault Geopark enjoys a Mediterranean climate characterized by hot, dry summers with temperatures reaching up to 35°C, and mild winters, although harsher winters occur at higher altitudes, particularly on the slopes of the Cévennes mountains. The vegetation is typically Mediterranean, with holm oak and white oak forests at higher altitudes, scrubland on the drier slopes, and chestnut groves in cooler valleys. The territory has a rich biodiversity, hosting protected species such as the griffon vulture and Bonelli's eagle, alongside animals like deer and wild boar. This area has been a hub of human activity for centuries, featuring medieval villages such as Saint-Guilhem-le-Désert, and agricultural practices centered around vineyards and olive groves. Tourism plays a key role in the local economy, attracting visitors with its stunning landscapes and cultural heritage.

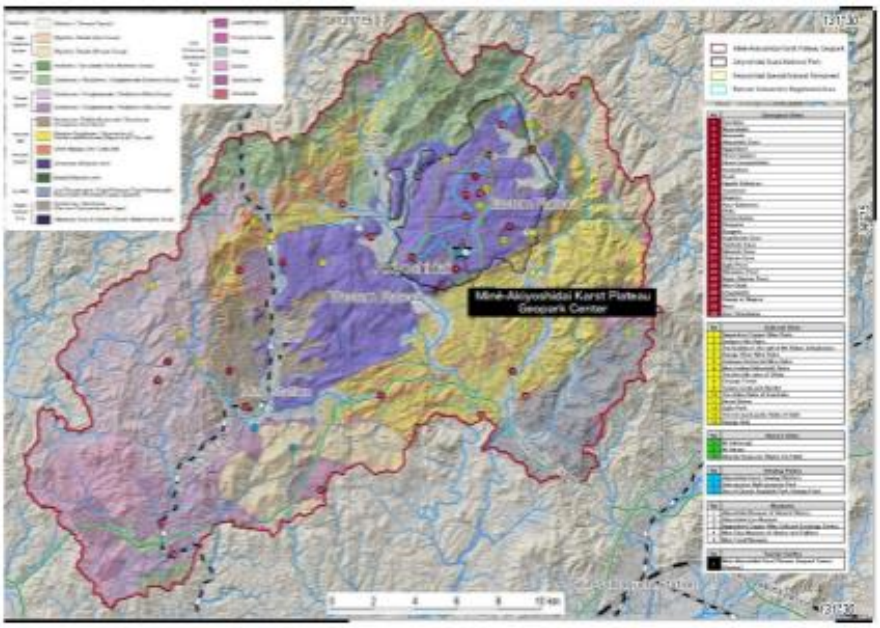
2. Geological features and geology of international significance

The aspiring Terres d'Hérault Geopark stands out for its diverse geological formations spanning 540 million years from the Cambrian to the Quaternary. Illustrating a wide range of geological processes, including sedimentation, tectonics, volcanism, metamorphism, the story of the geopark can be told through three major cycles that include two major mountain building events and sea flooding. The geopark is home to numerous geologically significant sites, like the Frasnian-Famennian stratotype at the Coumiac marble quarry that provides an opportunity to study the transition between the Devonian and Carboniferous periods approximately 360 million years ago. The Navacelles cirque is one of the most iconic geosites in the geopark, representing an abandoned meander formed by the erosive action of the Vis River. This site is a textbook example of fluvial geomorphology, a spectacular demonstration of erosional processes, and a key location for studying the generation of landforms and the evolution of river systems. The Salagou Lake, one of Europe's largest exposures of Permian red pelites, is a gem of the territory, allowing researchers to trace Earth's history and changing climate. Plio-Quaternary basaltic rocks cover much of the area surrounding the lake, with remarkable features like a volcanic dyke and neck demonstrating structures formed by the cooling and solidification of magma at depth. Finally, the Devonian Lieude Slab is a major geological and paleontological site in the geopark, renowned for its Permian-era reptile and therapsid footprints.

Applicant UNESCO Global Geopark

Miné-Akiyoshidai Karst Plateau Geopark, Japan

Geographical and geological summary



1. Physical and human geography

Miné-Akiyoshidai Karst Plateau Geopark is located in Mine City, Yamaguchi Prefecture, Japan. The geopark is home to 20,992 residents and has a total area of 472.64 km^2. It is located 25 km from Yamaguchi City, 98 km from Fukuoka, and 792 km from Tokyo. The geopark contains mountains with elevations of 400 m to 700 m, the Akiyoshidai karst plateau (elevations of 200 to 400 m), and valley plains (elevations of less than 100 m). Numerous dolines have developed on the surface of the karst plateau, whilst limestone caves spread out underground. The karst plateau consists of grasslands that were created through field burning, a tradition that began a few hundred years ago, and is home to many grassland fauna and flora species, as well as creatures that inhabit the limestone caves. The geopark is located between areas of wild nature and larger cities, resulting in what is known as 'satochi satoyama' (areas where farmlands and secondary forests surround human settlements, and which lie between mountainous areas and urban areas), and is inhabited by satoyama creatures. There are many rice fields in the valley plains, since residents have historically used water from rivers and spring water from the karst groundwater system to cultivate rice. Agriculture and forestry have been the core industries of the last 100 years, alongside mining and tourism. The coal industry declined approximately 50 years ago and was replaced by the manufacturing industry, which flourished by attracting factories. Limestone mining began approximately 80 years ago and continues today.

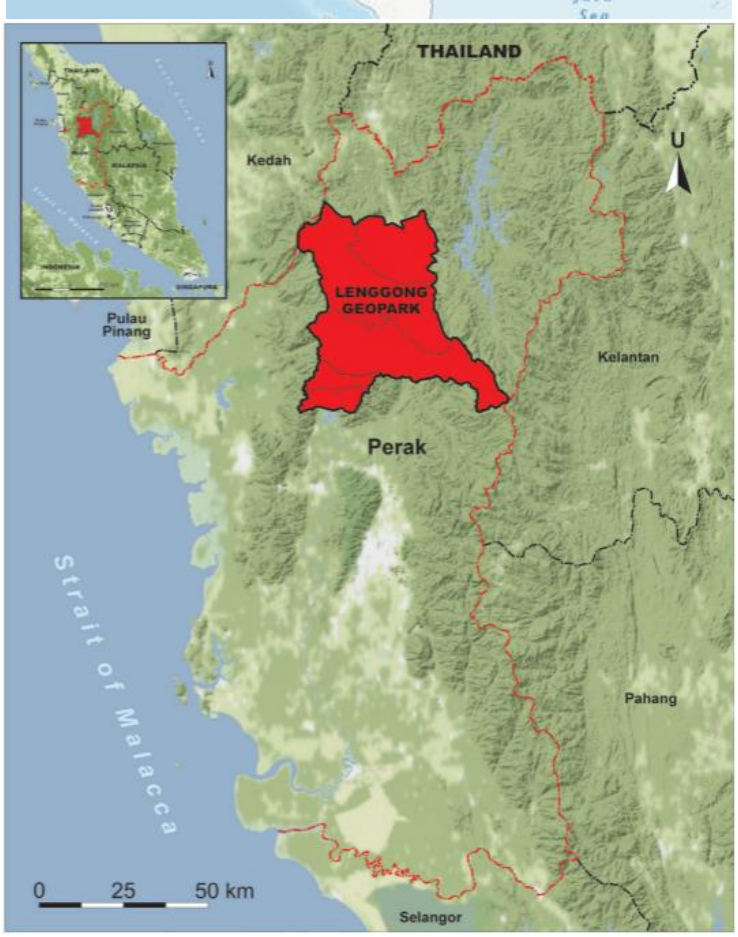
2. Geological features and geology of international significance

The Akiyoshidai karst plateau is formed from the Akiyoshi Limestone, which has its origins in an atoll reef of a submarine volcano, and is one of the internationally significant features of geoheritage in the geopark. The Akiyoshi Limestone preserves an 80-million-year record of marine environments, and thus provides insights into ancient oceanic ecosystems. The geopark also has extremely well-preserved plant and insect fossils that record the evolution and prosperity of terrestrial life since the mass extinction at the end of the Permian (approximately 250 million years ago), and the Late Triassic Mine Group which contains coal (anthracite) layers formed from the transformation of plants of that period. In recent years, a number of new fossil species have been discovered from the Mine Group. In terms of geologically significant heritage of national importance, the geopark area contains skarn copper deposits that were formed through the interactions of Cretaceous magma with the Akiyoshi Limestone. The copper from these skarn deposits greatly influenced Japan's ancient culture and was used in the construction of the Great Buddha of Nara, which is part of the 'Historic Monuments of Ancient Nara' World Heritage Site. The Akiyoshidai karst plateau is also a geological heritage of national importance and is regarded as the best example of karst landforms in Japan. The Akiyoshi Limestone is dense and has indistinct stratification due to the absence of terrestrial source material, and fractured during accretion and uplifting, which in turn produced joints and faults. Because of these features, there are many dolines on the surface of Akiyoshidai and a three-dimensional, labyrinthine cave network exists underground.

Applicant UNESCO Global Geopark

Lenggong Geopark, Malaysia

Geographical and geological summary



1. Physical and human geography

Lenggong Geopark is located in the State of Perak, Malaysia. This geopark is situated in the western Malay Peninsula and covers some 2248 km^2, following the boundaries of five subdistricts. Much of the geopark is nestled within a narrow valley with multiple generations of river terraces and karstic topography. Prominent mountains reaching up to 2103 m in elevation are found in the central and northern parts of the territory. The area is marked by a humid tropical climate, with annual rainfall of approximately 3218 mm and average temperatures ranging from approximately 23.7 to 33.2°C. The tropical rainforest covering much of the geopark is host to significant biodiversity, including Malayan tigers and Asian elephants. The Lenggong area has been inhabited by prehistoric cultures dating back more than 1.8 million years, and today the region is inhabited by a diverse population of Malay, Orang Asli, Chinese, Indian, and other ethnic groups, totaling 61,039 people. Agriculture is the primary economic sector in the region, alongside livestock farming, fishing, and tourism. The geopark is accessible only by road, with the nearest international airport, Penang, 162 km away. The national capital, Kuala Lumpur, is 274 km away.

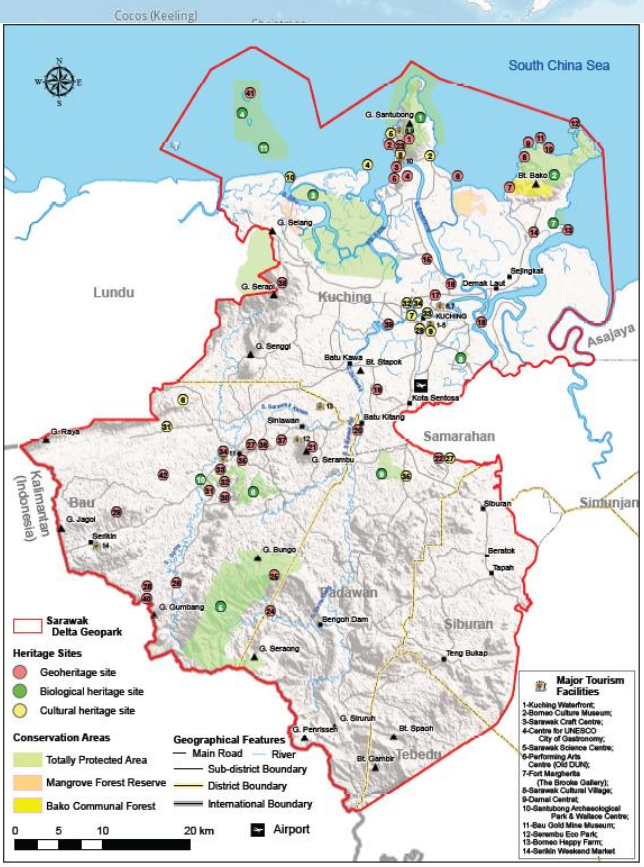
2. Geological features and geology of international significance

The geology of Lenggong Geopark spans from the Paleozoic to the Quaternary, or more than 500 million years. Important geoheritage preserved within the territory focusses primarily on igneous activity and tectonics, but also includes meteorite impacts. The Lawin Tuff (volcanic ash bed) was deposited 480 to 460 million years ago and reflects tectono-magmatism associated with the subduction of the Proto-Tethys Ocean plate under the northern Gondwanaland margin, the earliest and most southern record of this in Southeast Asia. The Titiwangsa Range in Lenggong symbolises a pivotal global tectonic event during collision of the Sibumasu and Indochina tectonic blocks around 220 million years ago and is an internationally significant example of syncollisional S-type granites. The Quaternary Period in Lenggong Geopark is marked by a momentous extraterrestrial geological event - a colossal meteorite impact in the region. This impact gave rise to a rare rock, called suevite, discovered at the epicentre of the crater. Suevite is a distinctive rock type associated with large impact structures and has been identified in many of Earth's largest impact sites. Through fission track age dating, this impact is known to have occurred approximately 1.83 million years ago. This significant phenomenon played a pivotal role in designating Lenggong as a World Heritage Site, enriching the understanding of early prehistoric Southeast Asia. Finally, the last Toba super volcano eruption, approximately 74,000 years ago, is one of the largest explosive eruptions documented in Earth's history. The resulting volcanic ash dispersed across vast expanses of the Indian Ocean, the Indian Peninsula, and the South China Sea, and in Lenggong Geopark, is evidenced of the thickest deposit outside of Sumatra.

Applicant UNESCO Global Geopark

Sarawak Delta Geopark, Malaysia

Geographical and geological summary



1. Physical and human geography

Sarawak Delta Aspiring UNESCO Global Geopark is located on the Malaysian part of the island of Borneo, in the state of Sarawak, comprising the Kuching Division and part of the Serian Division. The boundaries of the geopark are defined by the South China Sea, the Lundu Division, Samarahan District, and Tebedu District. The geopark has an areal extent of 3,112 km^2, of which 427 km^2 are sea. The physical geography of the geopark is dominated by the Sarawak River Basin, which flows from mountainous headlands toward the sea, where it forms the extensive Sarawak Delta system. The region has a topical climate and receives significant rainfall, averaging 3,000 mm per year. The main city of within the geopark is Kuching, which is also the capital of Sarawak. The total population within the territory is 621,700, composed of different ethnic groups that include Malay, Chinese, Bidayuh, Iban, and others. The Bidayuh are considered to be the original inhabitants of the area, and they primarily live in rural villages where they continue to maintain their cultural heritage. Agriculture and aquaculture are the primary industries, as well as tourism. The geopark can be accessed by Kuching International Airport, and a road network connects the territory to other parts of northeastern Borneo. Some parts of the geopark, primarily those within national parks, are only accessible by boat.

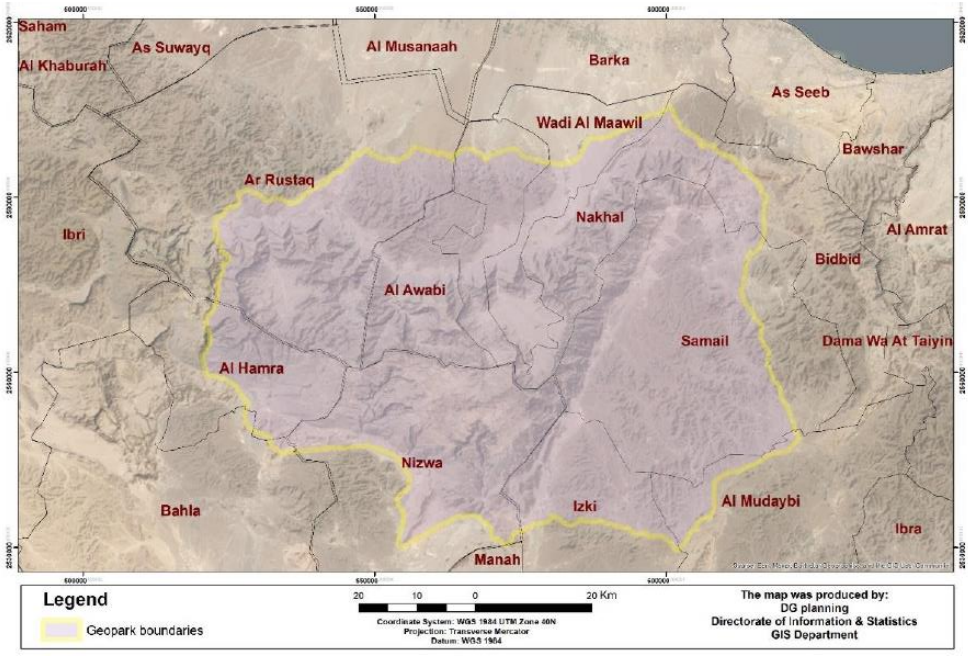
2. Geological features and geology of international significance

The geology of the aUGGp represents the eastern terminus of the Tethyside Orogeny that evolved through multiple phases of continental rifting and accretion spanning from the Late Palaeozoic to the Late Cretaceous periods (approximately 440 to 80 million years ago). Within the aUGGp, the Kuching Zone represents a broad suture zone between the southeastern edge of the Triassic Sundaland continent and the SW Borneo Block to the south. This southern block accreted to Southeast Sundaland from Gondwana during the Cretaceous period (approximately 90 to 80 million years ago). Consequently, much of the Kuching Zone basement and the Triassic-Jurassic cover rocks originated from the NW Australian part of Gondwana. Cathaysian faunal affinities in Upper Carboniferous, Lower Permian, and Upper Triassic strata (approximately 360 to 200 million years ago) provide key evidence that the western part of the Kuching Zone was once attached to Triassic Sundaland and was part of the West Borneo Block. Palaeomagnetic results from the Kuching Zone provide compelling evidence for a counterclockwise rotation of Borneo during the Cenozoic Era. This rotation is a critical element in many current plate tectonic reconstructions of Southeast Asia. During the Late Cretaceous to Late Eocene periods (approximately 100 to 23 million years ago), the Kuching Zone was part of an accretionary complex associated with the southward subduction of the now-extinct Paleo-Pacific Ocean beneath. Following this subduction event, a new ocean basin, the Proto-South China Sea, was formed along the southern margin of China. Subsequently, this Proto-South China Sea underwent subduction beneath Sabah (to the east of the West Baram Line) during the Late Eocene to Early Miocene.

Applicant UNESCO Global Geopark

Al Hajar Geopark, Oman

Geographical and geological summary



1. Physical and human geography

Al Hajar Geopark is located in the Hajar Mountains, in northern Oman. The territory covers 5,400 km^2, from valleys and deserts to mountain ranges and coastal plains. The highest point in the geopark occurs in the Jebel Akhdar Mountains, reaching up to 3,018 m. Temperatures in the region can reach up to 50°C in the summer, and as low as 10°C in the winter, although there is considerable variability between the inland and coastal regions, and high versus low elevations. Vegetation cover is variable across the geopark, ranging from trees and shrubs, to blooming of annual flowers and grasses on foothills, to date palm oases and agricultural terraces, to juniper woodlands. Oasis agriculture has been the cultural and economic backbone of the region for thousands of years, with the territory containing over 2,000 mountain oases and settlements; traditionally, most villages include at least one oasis with date palms and agricultural fields. The Sayq Plateau within the geopark is renowned for the beautiful 'hanging gardens' of Al Ayn, Al Shurayjah and Al Aqr, whose agricultural terraces are planted with fruit and nut trees and annual crops. Three of Oman's four World Heritage sites are at least partially within the geopark, including the Bahla Fort, Tombs of Bat, and the Aflaj Irrigation Systems.

2. Geological features and geology of international significance

The Al Hajar Geopark is host to significant geodiversity, including deserts, alkaline springs, ancient copper mines, travertine deposits and fossilized plants from the Cenozoic, dinosaur fossils, and rocks formed during the global 'snowball Earth' glacial period. The dramatic landscape reflects uplifted sedimentary layers that tell the story of an ever-changing landscape. Carved out by the erosive forces of the labyrinthine Wadi Nakhr below Jabal Al Shams, the 2000 m deep 'Grand Canyon' is one of the deepest canyons in the world. The karstic limestone of the Western Hajar Mountains has been eroded to create several large cave systems, including the impressive Al Hoota Cave. Seepages and springs can be found in numerous locations in the Western Hajar Mountains, although the most famous are the geothermal hot springs of Al Kasfah in Rustaq and Al Thawara in Nakhl. Springs and seepages are the source of many of the Aflaj Irrigation Systems that characterize the Western Hajar Mountains. In addition to many subterranean cave 'landscapes' that are hidden from view on the surface, numerous collapsed sinkholes and cave entrances dot the landscape. Three isolated limestone exotic massifs rise from the landscape of the Western Hajar Mountains, distinct in character, shape and geology from the surrounding mountains: Jabal Al-Kawr, Jabal Misfah and Jabal Misht. The geopark also contains one of the world's most extensive ophiolite systems.

Applicant UNESCO Global Geopark

Algarvensis Geopark, Portugal

Geographical and geological summary

1. Physical and human geography

Algarvensis Geopark is located in southern Portugal's Algarve region, covering 2,427 km^2, including 843 km^2 of marine territory and 1,584 km^2 of land. It includes the municipalities of Loulé, Silves, and Albufeira, bordered by Alentejo to the north, Sotavento to the east, the Atlantic Ocean to the south, and Barlavento to the west. When including the marine region, the territory's elevation ranges from 120 meters below sea level to 255 meters above sea level. The geopark can be accessed via highways A22 and A2, three train stations, and Faro Airport, 20 km away. The population has increased by 11% to 29% over the past 20 years, totalling approximately 154,262 residents, with an average density of 97.4 inhabitants per km^2. Coastal areas have a density of 160.46 inhabitants per km^2, which can triple in summer, while northern areas have fewer than 13 inhabitants per km^2. The economy is primarily driven by the tertiary sector (82%), with tourism playing a significant role, while inland areas face lower economic activity and depopulation trends.

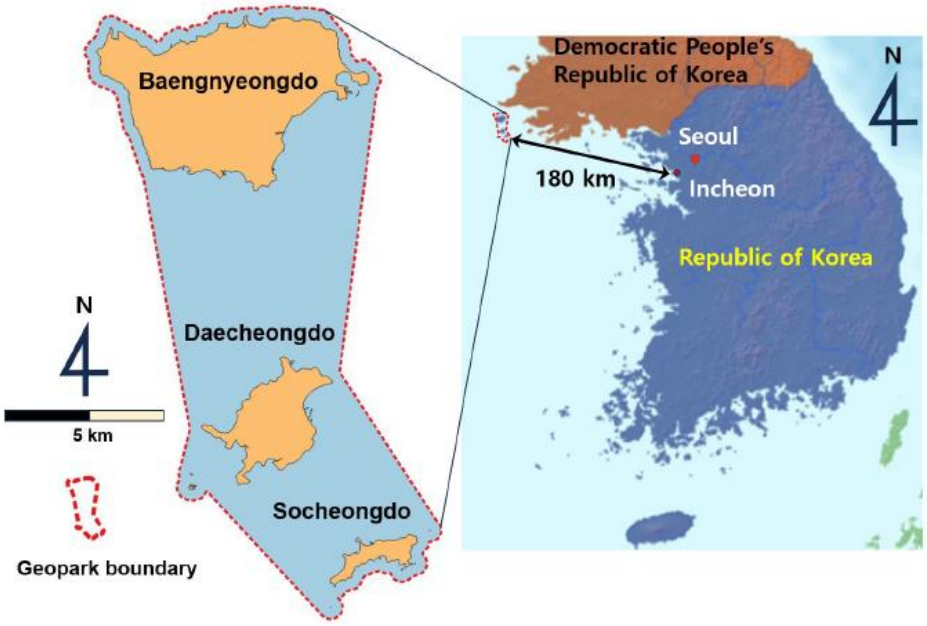
2. Geological features and geology of international significance

The geological history of the Algarvensis Geopark unfolds across 330 million years, from the Carboniferous Period to the Holocene Epoch. It records two Wilson cycles, marked by three compressional orogenic phases and two extensional oceanic phases, profoundly influencing its landscape. In the north, the 'brown Algarve' of the 'Serra' (serra –mountain) is mainly Carboniferous flysch carved by abundant ephemeral streams. At the foot of the mountain, the 'red Algarve' reveals a depression shaped by Upper Triassic terrigenous sedimentary rocks and Lower Jurassic volcano-sedimentary and evaporitic sequences. Moving south, the 'silver Algarve' exhibits karst features developed in Jurassic limestone, including karst structures like dolines, poljés, lapiás fields, caves, and aquifers. Along the seashore, the 'golden Algarve' showcases Miocene calcarenite cliffs with marine fossils, and reddish Pliocene continental sandy cliffs. The 'blue Algarve,' representing the marine area from the Last Glacial Maximum paleocoastline to the 1755 "Lisbon earthquake" tsunami, which inundated a coastal lagoon, bears witness to climate warming and natural hazards. Collectively, this region encapsulates six international significant geological features: the Triassic vertebrates' bonebed containing the *Metoposaurus algarvensis*, the Lower Cretaceous interbedded limestones of Arrifes with dinosaur tracks, the Salt Mine of Loulé, which is one of the few visitable underground salt mines and where the Triassic-Jurassic boundary can be observed, the tsunami deposits of Lagoa dos Salgados formed with the 1755 Lisbon Earthquake, the Carboniferous-Triassic angular unconformity of Pirinéu, and the Central Atlantic magmatic province deposits associated with the initial continental rifting phases that led to the breakup of the Pangea supercontinent.

Applicant UNESCO Global Geopark

Baengnyeong-Daecheong Geopark, Republic of Korea

Geographical and geological summary



1. Physical and human geography

Baengnyeong-Daecheong Geopark, located in the Republic of Korea at 37°58'27"N and 124°43'16"W, encompasses 228.04 km^2 (66.86 km^2 of land and 161.18 km^2 of sea) across three islands: Baengnyeongdo, Daecheongdo, and Socheongdo. Despite their modest size, these islands boast a diverse landscape, including plains, coastal lowlands, mountainous areas, forests, and small lakes. Within the geopark, a number of villages are home to a total of 11,228 residents. Incheon and Seoul lie approximately 180 and 200 km away, respectively. Agriculture, fishing, and tourism (~100,000 to 140,000 visitors annually) are the main industries in the geopark, particularly for hiking and wildlife watching. Numerous trails crisscross the islands, complemented by a well-connected road network, and ferry services provide access to the islands. The geopark experiences an oceanic climate with relatively low rainfall (~800 mm) and an average temperature of 11.25°C (-4.5 to 25°C).

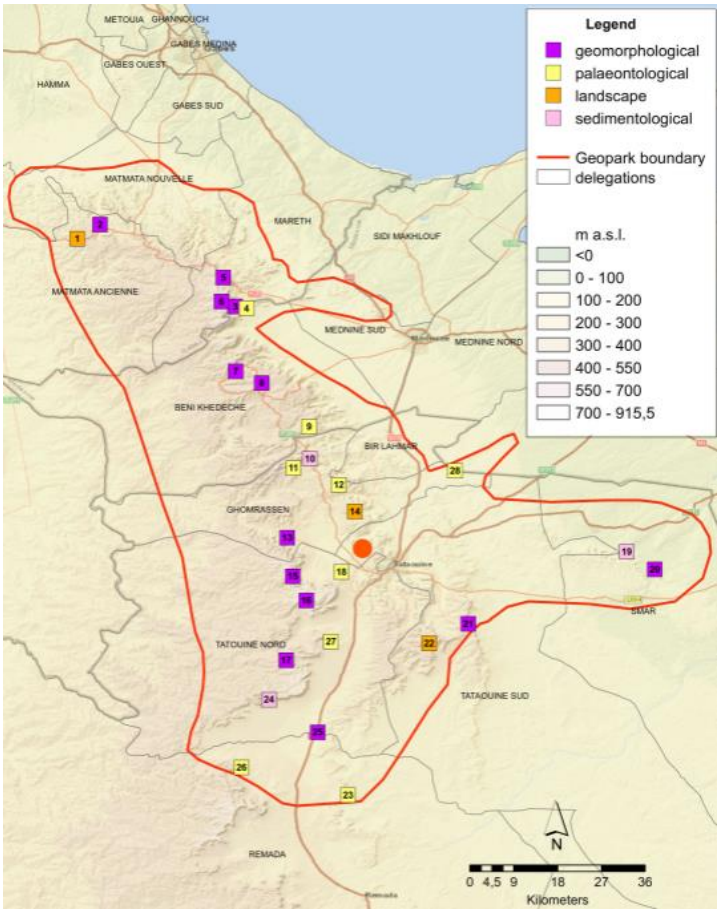
2. Geological features and geology of international significance

The geopark exhibits all three rock types (sedimentary, igneous, and metamorphic) and showcases unique and noteworthy geological features, including stromatolites, dolerite sills, iron-rich red beds, large-scale overturned/intra folds, faults/thrusts, peridotite-bearing basalts, sand dunes, and pebble/sand beaches. These features unveil a geological history spanning up to 1,100 million years ago. The oldest rocks in the geopark, the Baengnyeong Group of (meta)sedimentary rocks, was formed in the ancient Xuhuai rift-related ocean during the Stenian-Tonian period (1,100 to 900 million years ago). Two large dolerite sills (940 Ma and 890 million years ago) and red beds are connected to the Dashigou Large Igneous Province (LIP) of the North China Craton. The black-greenish shale formations and carbonate deposits bear the telltale signature of a negative inorganic carbon (Majiatun) excursion, a phenomenon linked to the Xuhuai Rift and magmatism approximately 940 to 890 million years ago. Large-scale faults/thrusts and overturned formations are attributed to an orogenic process associated with the collision of two blocks of the Sino-Korea Block (North China Craton) and South China Craton during the Permian and Triassic periods. Peridotite xenoliths from the Neogene basalts approximately 6 million years ago offer a tantalizing glimpse into the enigmatic origins and characteristics of the East Asian mantle. The international significance of Baengnyeong-Daecheong Geopark stems from its numerous captivating geological sites that are indispensable for understanding the East Asian tectonic evolution during the Stenian-Tonian period, and the presence of peridotite xenoliths that shed light on the Neogene mantle characteristics.

Applicant UNESCO Global Geopark

Dahar Geopark, Tunisia

Geographical and geological summary



1. Physical and human geography

The Dahar Geopark is located in the southeastern part of Tunisia. The territory features stepped plateaus separated by escarpments, valleys, and basins, extending over the governorates of Tataouine, Médenine and Gabès, and covering a large part of the Dahar plateau (6,000 km^2 total). It goes from the region of Remada, in the south, to the region of Matmata, in the north, passing through the Jebel Tebaga of Médenine mountain range and twelve communes. Collectively, the geopark represented a transition between the Mediterranean coastal plains and the Sahara Desert, making it of geological, ecological, and cultural importance. About 330,000 people live in the geopark, where the economic activities are mainly based on agriculture and livestock farming under harsh environmental conditions. Tourism is an expanding business in the area, and the region of Dahar has a developed network of roads promoting accessibility and attractiveness of the territory, including an international airport (Djerba - Zazis) located one hour and a half drive away. The use and conservation of water by the local communities, in addition to the Ksours and troglodyte habitats show the close relationship between humans and geology in the region.

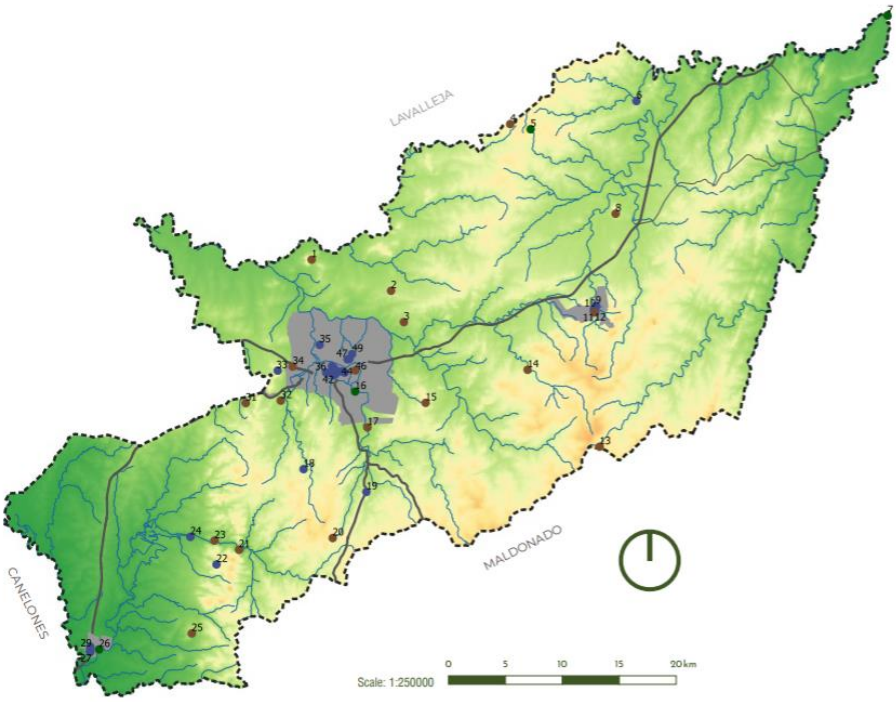
2. Geological features and geology of international significance

The Dahar Geopark records the most recent 250 million years of Earth history. There is a great diversity of geography relating to petrological and mineralogical variations across the territory, as well as a tremendous richness in fossils, diagenetic transformations, and geomorphology. Southern Tunisia occupies the northeastern edge of the Saharan platform, which is the beginning of the African craton, and is characterized by its sedimentary rocks. The main geological features of international significance in Dahar Geopark relate to its record of tectonic processes, marine flooding, and fossil deposits. The Dahar territory is located within the Great Rift, where the Tethys Ocean opened and divided the Pangea supercontinent in two approximately 200 million years ago. Sedimentary rocks deposited during the Upper Permian of the Jebel Tebaga mountain range are the only Paleozoic outcrop in Tunisia and the only marine outcrop of Permian age in Africa, and are very rich in fossils and bioherms. The Dahar Geopark also contains dinosaur sites of significance from the Late Jurassic to Lower Cretaceous (approximately 150 to 100 million years ago), when tectonic uplift caused several periods of prolonged emergence of the Saharan platform. During this period, theropods, sauropods and reptiles roamed the territory. The fact that it hosts in-situ two exceptional palaeontological discoveries, a skeleton of a new rebbachisaurid sauropod, *Tataouinea hannibalis,* and one of the largest marine crocodiles, Machimosaurus rex, testify to its uniqueness.

Applicant UNESCO Global Geopark

Manantiales Serranos Geopark, Uruguay

Geographical and geological summary



1. Physical and human geography

The Manantiales Serranos Geopark is located in southeastern Uruguay, in the department of Lavalleja, occupying 2,010 km^2. The territory boundaries follow third-order administrative boundaries, corresponding to Cadastral Sections 1, 2, and 7 of the Department of Lavelleja. The landscape of the geopark is characterized by valleys, hills, and ranges, and the headwaters of Uruguay's third largest watershed, the Santa Lucia, are found within the geopark. Approximately 43,350 people live within the geopark territory, primarily in the cities of Minas and Solís de Mataojo, and the village of Villa Serrana. The main industries of the area are agriculture, livestock farming, mining, water extraction, and tourism. The geopark territory is approximately 120 km from the national capital of Montevideo, and near other major tourist sites such as Punta del Este and Rocha.

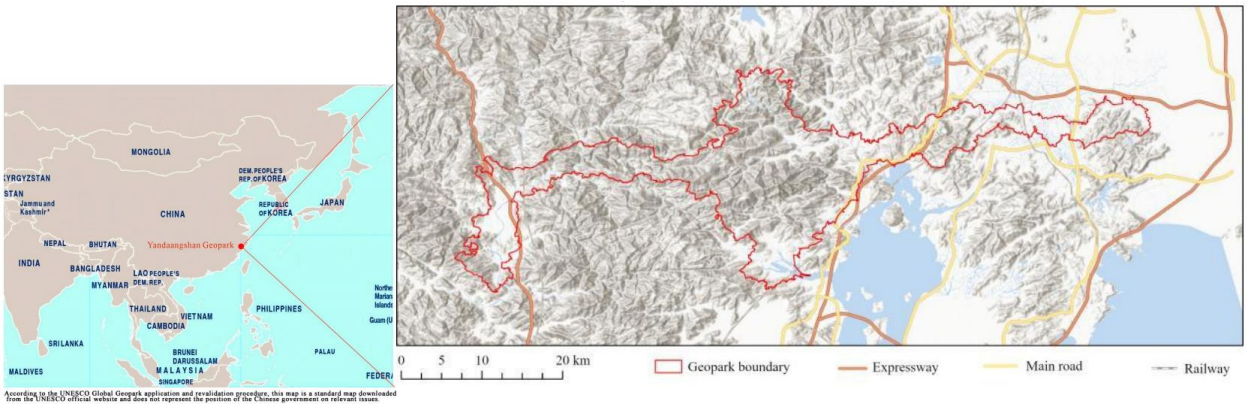
2. Geological features and geology of international significance

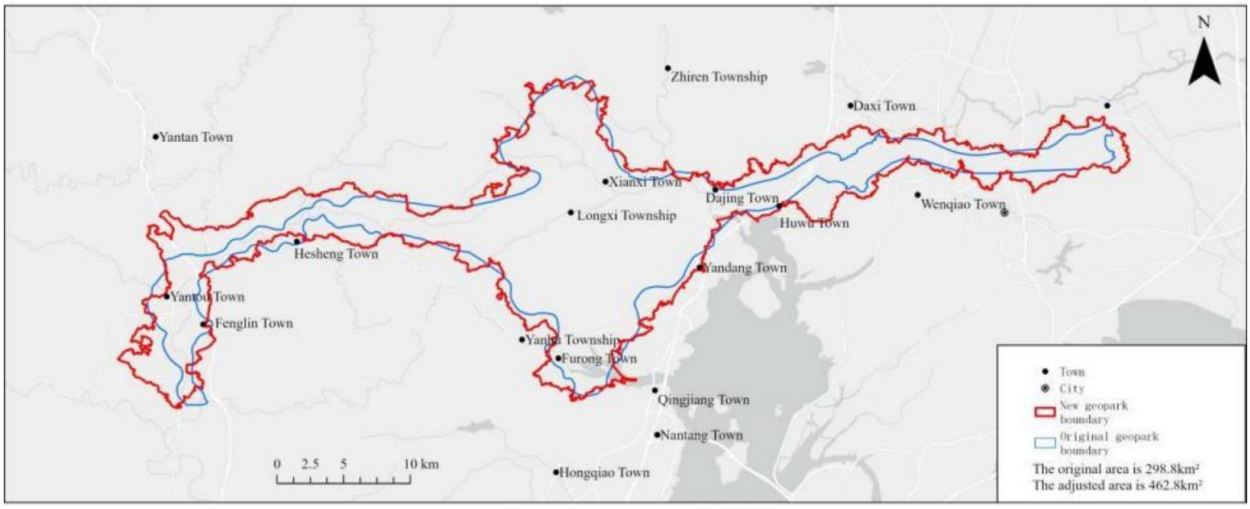
The Manantiales Serranos Geopark tells the story of the processes involved in the formation of continents, the opening and closing of oceans, as well as the climatic evolution of Earth from the Paleoproterozoic to the present. Its most significant features are related to the plate tectonics processes occurring in this region: more than 80% of the territory is represented by diverse metamorphic and igneous rocks, with different deformation phases recording the tectonic events that occurred throughout their geological history. This geodiversity is expressed by more than 28 lithologies, including mineralization unique in Uruguay, both metallic and non-metallic (Cu, Pb, Ag, Zn, Au, Fe, barite, limestone, etc.), as well as mega-structures (transcurrent mega-shear zones), among other features. Geological sites of international scientific value are related to the history of supercontinent formation and breakup from the Mesoproterozoic to the Mesozoic, as well as records from the Pliocene to the present. In the Mesozoic, the earliest geological records are linked to the event of the Atlantic Ocean opening, which caused the rifting apart of South America and Africa. The Cretaceous to the Cenozoic is marked by tectonic processes associated with gentle uplift, erosion, non-deposition, and sedimentation, accompanied by climatic changes. Pliocene records show the climatic and environmental changes during the Cenozoic, associated with a transitional and continental fluvial environment, as well as arid and semi-arid climate conditions. Pleistocene units are found in erosional discordance over the Pliocene deposits, showing climate changes during the Cenozoic, with alternation of arid, semi-arid, humid, and glacial climates. The geopark area is also recognized for important groundwater reservoirs, mainly linked to karst aquifers, which are used for human supply and livestock production. There are two distinctive geomorphological regions in the area, the Eastern Sierras and the Santa Lucía Tectonic Basin. The area features a dense network of surface drainage network, being one of the four main watersheds in Uruguay.

UNESCO Global Geopark Extension >10%

Yandangshan UNESCO Global Geopark, China

Geographical and geological summary





1. Physical and human geography

Yandangshan Geopark is located in Wenzhou City and Taizhou City in Zhejiang Province of China, situated on the eastern margin of the Asian Continent, with geographic coordinates of: E120°41'43"-121°28'14", N28°15'55"-28°29'06". It has an area of 462.8 km^2. Yandangshan Geopark is part of a low mountainous area, trending from northeast to southwest, with higher elevations in the west and lower ones in the east. It is a branch of the southern edge of the Kuocang Mountain, with elevations ranging from 500 to 800 m. The highest point is the main peak of Yandangshan, Baigangjian (1108 m). The geopark is rich in flora and fauna and has well-developed ecosystems. It has 53 mammal species (8 orders and 21 families), 116 bird species (11 orders and 28 families), 27 amphibian species (2 orders and 8 families), 42 reptile species (3 orders and 9 families), 21 fish species (3 orders and 7 families), and 221 insect species (12 orders and 46 families). There are 1659 species of vascular plants (189 families and 786 genera). Yandangshan Geopark involves 3 counties and cities, 13 towns and 159 villages with a population of about 125,000 people, which cultivate economic crops, such as flowers, seedlings, tea, and Chinese medicinal herbs. In addition to its unique natural landscapes, the geopark is rich in cultural landscapes, with numerous temples, cliff inscriptions, steles, and ancient villages. Many literati have left behind more than 5,000 travel essays and poems, more than 370 cliff inscriptions, and 93 immovable cultural relics. The Yongjia Kunqu Opera and Yueqing Fine-line Paper-cutting have been included in the UNESCO Representative List of the Intangible Cultural Heritage of Humanity.

2. Geological features and geology of international significance

Yandangshan Geopark contains a large number of rhyolitic volcanic rocks and a caldera, making it a typical representative of global Cretaceous rhyolitic volcanic activity and rhyolite landform evolution. Yandangshan Geopark is a typical representative of global Cretaceous resurgent calderas and acidic volcanic magma activity. The caldera is complete and typical, with four lithological sections from bottom to top, representing the primary four volcanic eruption events (I~IV). This area has recorded the entire process of Yandangshan's volcanic eruption-collapse-overflow-resurgent eruption. Due to later tectonic activities, Yandangshan caldera was cut by faults, uplifted, and eroded, revealing the internal rock composition and structural elements of the caldera. Therefore, Yandangshan is a typical example of the formation and evolution of resurgent calderas on the active continental margin globally. Yandangshan Geopark is a typical representative of rhyolite cliff and barrier landforms. Due to the giant rhyolite layers, a layered ring was formed in the caldera by crustal uplift, fault cutting, gravitational collapse, and fluvial erosion. The thick horizontal rhyolite layers in the caldera have developed into rhyolite cliff and barrier landforms characterized by steep cliffs and flat tops. Pillar peaks, stacked barriers, and cave landforms are typical representatives. The rhyolite cliff and barrier landforms of Yandangshan have recorded the entire geomorphological evolution of the southeast coast of China for more than 100 million years since the formation of Yandangshan caldera and are ideal for conducting research.

UNESCO Global Geopark Extension >10%

Zhijindong Cave UNESCO Global Geopark, China

Geographical and geological summary

According to the UNESCO Global Geopark application and revalidation procedure, this map is a standard map downloaded from the UNESCO official website and does not represent the position of the Chinese government on relevant issues.

1. Physical and human geography

Zhijindong Cave Geopark, located in Bijie Municipality, Guizhou Province, China, spans an area of 201.72 km^2 and is situated between geographical coordinates 105°49'16"-106°09'36"E and 26°43'32"-26°51'59"N. The geopark is easily accessible, being 146 kilometers from Guiyang. It is positioned in the transition zone between the Qianxi Plateau and the Qianzhong Qiuyuan Basin, with altitudes ranging from 900 to 1,670 meters. The terrain is diverse, featuring high mountains, steep slopes, and canyons. The primary landforms in the geopark are karst landforms, while others include sedimentary, erosive, and tectonic landforms. The geopark experiences a subtropical plateau climate with abundant rainfall, where the rainy and hot seasons overlap. This unique climate fosters a distinct ecological environment, supporting a wide range of flora and fauna. The area is home to ten ethnic minorities, including the Miao and Yi, who contribute to the rich historical and cultural tapestry of the region.

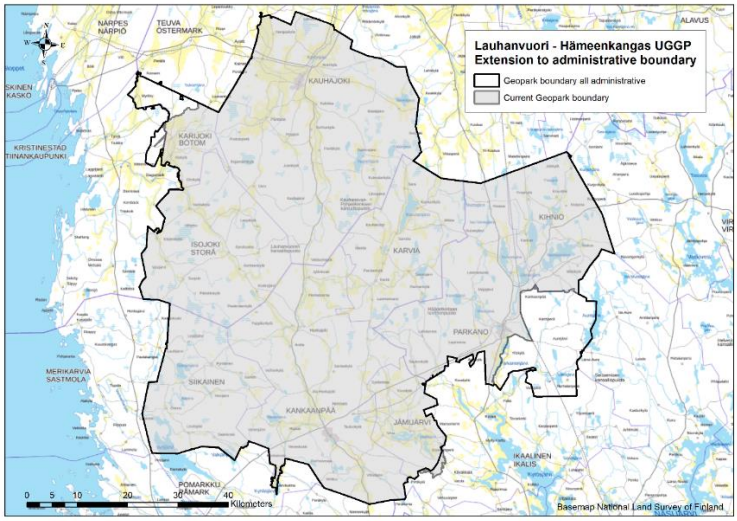
2. Geological features and geology of international significance

Zhijindong Cave Geopark is situated in the transition zone between the plateau and the hilly basin. Its karst geoheritage is primarily formed from Mesozoic carbonate rock, which exceeds 300 meters in thickness. The underground karst system, exemplified by Zhijindong Cave, features an extensive network of well-formed halls and caves, adorned with vibrant secondary chemical sediments. The surface karstification and tectonism have sculpted various canyons, natural bridges, and tiankengs (sinkholes). Perennial surface rivers and an intricate underground river system are interconnected, creating a comprehensive and mature karst landform and hydrological geomorphology system within the geopark. The geoheritage and geomorphological landscapes of the geopark vividly illustrate the complex evolution of plateau karst and stand as some of the most typical examples of plateau karst landforms in the subtropical climate zone.

UNESCO Global Geopark Extension <10%

Lauhanvuori - Hämeenkangas UNESCO Global Geopark, Finland

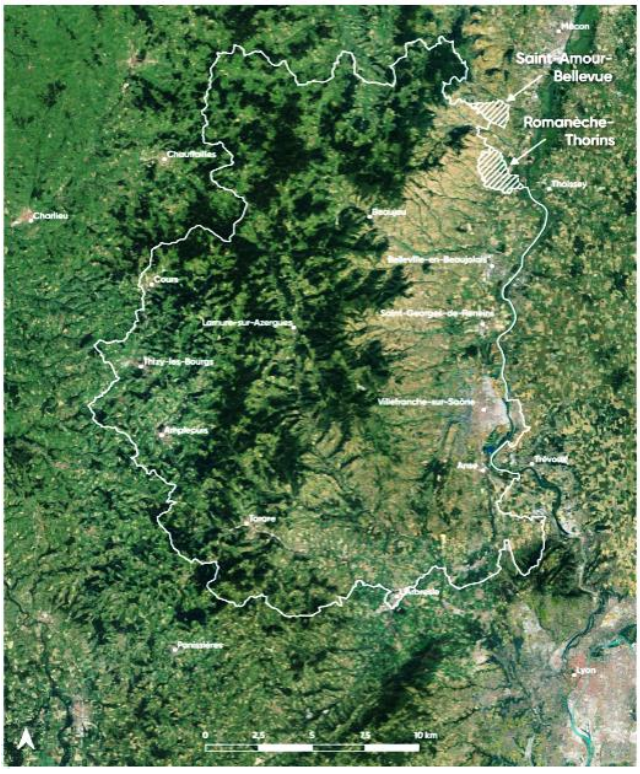
Old area: 5,394 km²
New Area: 5,742 km²



UNESCO Global Geopark Extension <10%

Beaujolais UNESCO Global Geopark, France

Old area: 1,586 km²
New Area: 1,601 km²



UNESCO Global Geopark Extension <10%

Thuringia Inselsberg – Drei Gleichen UNESCO Global Geopark, Germany

Old area: 725.1 km²

New Area: 794.8 km²