

WORLD HERITAGE NOMINATION — IUCN SUMMARY

485: HIERAPOLIS — PAMUKKALE

Summary prepared by IUCN (April 1988) based on the original nomination and summary submitted by the Government of Turkey. This original and all documents presented in support of this nomination will be available for consultation at the meetings of the Bureau and the committee.

1. LOCATION:

Situated in south-eastern Turkey in the province of Denizli, 22km north-north-east of the town on the northern side of the Curuksu river valley, which at this point is some 6km wide. Size of the area not given. 37° 57'N, 28° 50'E

2. JURIDICIAL DATA:

The national park is proposed and has yet to be officially approved.

3. IDENTIFICATION:

The site is noted for its travertine terraces, with 20m high cliffs and waterfalls, situated along on the foothills of the Cokelmez mountains. The highest terrace is about 200m above the Curuksu plain and extends some 6km between the villages of Pamukkale and Karahayit. Thermal springs and travertine pools are located near to the site of the Roman town of Hierapolis, at the south-eastern tip of the terraces and occupy an area 2,500m in length and 500m in width. Semi-circular pools occur in a step-like arrangement down the upper one-third of the slope; the steps range from 1-6m in height. Fresh deposits of calcium carbonate give the pools a dazzling white coating. The travertine deposits, Quaternary in age, are thought to originate from a fault in the contact zone between the Mesozoic crystalline rocks and the layers of the Neogen series. The water temperature averages 35°C with a flow of 25 litres per second (from four springs). The springs form part of a complex hydraulic system extending 70km to the north-west to Alasehir and west along the valley of the Menderes River. These canals take thermal water to nearby villages and agricultural areas, some over the years having accumulated travertine deposits up to 10m in height. The oldest rocks in the area are crystalline marbles, quartzites and schists and are located in the northern parts of the proposed park. Most of the rocks are, however, of the Pliocene period.

A vegetation map of the proposed park produced in 1969, showed land use, in descending order of area covered, as cultivated land, bare land subject to erosion, bare land, urban areas and maquis. Agriculture accounts for 33% of land cover with 41% classified as forest, meadow and pasture.

There are records of some 45 species of flowering plants, not all necessarily from the proposed park area. Within the Denizli province there are records of ten mammals (including wolf Canis lupus, jackal Canis ureus, bear Ursus arctos, chamois Capra hircus and boar Sus scrofa) and ten species of bird including great bustard Otis tarda.

Near to the site are the ruins of the Roman town of Hierapolis which was

founded at the end of the 2nd century BC, reaching its zenith at the end of the 2nd and 3rd centuries AD. In structure, it follows the hellenistic tradition with main buildings lining the main street which was 1km long, with side streets arranged at right angles. The buildings of major importance include the theatre, octagonus, monumental gate, nympheum and the necropolis. A major activity was the wool industry which benefited from the cleansing properties of the hot springs. The town became a bishopric in the 4th and 5th centuries.

4. STATE OF PRESERVATION/CONSERVATION:

A management plan was prepared in 1969 with assistance from the US Agency for International Development, but has yet to receive official approval. It defines three management zones, from a zone of maximum protection to an urban development control zone.

Tourist facilities are restricted to the edge of the archaeological area, and the site is largely free from intrusion by modern constructions, although parts of the lower town have been embedded by travertine deposits. A certain amount of reuse of old monuments is taking place, such as the road to the necropolis being covered with macadam and the use of some buildings as a museum and office by the Ministry of Culture and Tourism. All major buildings have undergone restoration work with emphasis now being placed on the theatre.

The archaeological area has several thousand visitors each year, a problem aggravated by the lack of supervision. Over the centuries, earthquake damage has occurred, but interestingly enough this aspect has contributed to the architectural development of the town.

5. JUSTIFICATION FOR INCLUSION ON THE WORLD HERITAGE LIST

The nomination, as presented by the Government of Turkey, provides the following justification for designation as a World Heritage property:

- b) Natural property
 - (ii) Man's interaction with his natural environment. Excellent example of man's attraction to a specific natural resource and his use of that resource through history.
 - (iii) Superlative natural phenomena. Warm, heavily mineralized water flowing from springs creating pools and terraces which are visually stunning.

WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

485 HIERAPOLIS - PAMUKKALE (TURKEY)

1. DOCUMENTATION

- i) IUCN Data sheet

2. COMPARISON WITH OTHER AREAS

There are 80 formal protected areas in the Mediterranean sclerophyll biogeographic province. None of these have comparable natural features to those found in Pamukkale which are the hot springs and travertine terraces surrounding them. The Nahanni and Yellowstone National Parks and World Heritage sites in Canada and the United States contain more extensive and less disturbed areas of this unique geological feature. Within Turkey, there are 18 national parks and a number of nature reserves, but none of these contain similar features. Pamukkale is one of 23 natural properties on Turkey's tentative list.

3. INTEGRITY

The proposed Pamukkale national park, as one part of the total the nomination, is the focal point for the natural values of the site. The surrounding area is mostly cultivated land with a mix of irrigated crops, pasture and some forest. Villages in the immediate area are populated by some 56,000 residents. Tourist infrastructure includes hotels, swimming pools and picnic facilities. These are restricted to the edge of the archaeological ruins and are heavily used by local people. The travertine terraces are reported to be in no serious immediate threat except from natural phenomena (eg. earthquakes).

The legal status for the area is still under review and a formal national park is yet to be approved. The management plan prepared in 1969 has not been adopted and is in urgent need of updating. The size of the site is not known and its precise boundaries are not clear. There is no information on staff levels, budget or administrative structure.

4. ADDITIONAL COMMENTS

The natural features of the site provide the setting which attracted the original Roman town of Hierapolis. They, thus, form an important backdrop for the cultural landscape which now dominates the area. The relative emphasis placed on the geological and mineralogical aspects of the nomination, however, are subordinate to those given to the historical and archeological features.