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## WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

### MASADA NATIONAL PARK (ISRAEL)

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#### 1. DOCUMENTATION

- i) **IUCN/WCMC Data sheet:** (4 references).
- ii) **Additional literature consulted:** Mazor, E. 2001. **Masada - Geology and Interrelated Heritage.** Report to Israel Committee for UNESCO and World Heritage Committee; **Masada Management Plan** (summary outline), Israel Nature and National Parks Protection Authority (January 2001); Israel N&NPPA , 1997. **Masada - King's Stronghold, Zealots' Refuge.** 32pp. (National Park interpretation book). Israel N&NPPA. **Masada - the Northern Palace.** 15pp. (Promotional and fundraising document). Yadin, Y. 1966. **Masada - Herod's Fortress and Zealots' Last Stand.** Weidenfeld & Nicolson, London. (Principal archaeological reference based on 1963-5 excavations).
- iii) **Consultations:** 4 external reviewers contacted. Onsite consultations with national park director, senior members of park management team and professional advisers.
- iv) **Field Visits:** March 2001 . Paul Dingwall and an ICOMOS representative.

#### 2. SUMMARY OF NATURAL VALUES

The nominated property is the 276ha Masada National Park (IUCN Management Category II National Park, with elements of Category V Protected Landscape), located in southern Israel, approximately 18km south of En Gedi, on the eastern fringe of the Judean Desert. Adjacent to the park is the Judean Desert Nature Reserve (IUCN Category I), 28,956ha in extent, considered as a buffer zone for the nominated site.

The national park is dominated by Mount Masada, a partially isolated massif overlooking the Dead Sea. Masada is a fault-bounded uplifted block of the earth's crust (in geological terms a horst) associated with a down-thrusted rift valley (graben), occupied here by the Dead Sea. This rift valley is the landward extension of the huge Syrian-African Rift Valley System, formed along a tectonic plate boundary zone that stretches from the Indian Ocean, through the Red Sea and the Gulf of Eliat.

Rhomboid-shaped, with a flat top some 8ha in extent, Masada stands 100-400m above the surrounding terrain. It is separated from a large fault escarpment by steep canyons cut by rivers that descend from the Judean plateau to the Dead Sea. The rocks forming Masada include massive dolomites and limestones of marine origin, forming near-vertical cliffs, overlying less resistant limestones and chalk. Palaeokarst features occur in the nearby escarpment walls. West of Masada, is a landscape of hills, terraces and wadis forming the Judean Plateau. To the east, Masada is bounded by 18-80,000 year-old lacustrine silts, gravels, sandstones and conglomerates of the Lissan Formation, deposited in a huge lake that existed prior to formation of the Dead Sea.

Towering over the surrounding terrain, Masada is a landscape feature of great scenic attraction. From its summit, unhindered vistas of largely natural rural landscapes in the surrounding nature reserve, and of the Dead Sea, also have high scenic value. Although essentially an arid site, the region is a climatic and biogeographic transition zone, intermixing desert, steppe and Mediterranean elements.

A natural fortress (its name is the Hebrew term for fortress), Masada is the site of fortified palaces built in the 1st Century BC by the Judean King Herod, and it was the scene of the last stand made by some 1,000 Jewish zealots in their revolt against Roman rule in the period AD 66-73. The ingenious use of location, topography and geology, which transformed the site into both an opulent royal palace and a zealots' fortress, captures the spirit of the people of Israel who have come to regard Masada as a national shrine. Similarly, it is the uniqueness with which Masada intimately entwines cultural legacy and its special natural features that captures the imagination of the modern-day tourists who visit the site.

### **3. COMPARISON WITH OTHER SITES**

The nomination document provides no information comparing Masada to other geological sites. Tectonic plate boundaries, rift valleys and horst-and-graben systems are common geological phenomena in global terms. Among existing World Heritage sites, rift valley systems are prominent in Lake Malawi National Park (Malawi) and the Kahuzi-Biega National Park (Democratic Republic of Congo); Gros Morne National Park (Canada) reveals plate boundary tectonics in a much more outstanding way, in fact this has been referred to as "a Galapagos for Plate Tectonics"; Macquarie Island (Australia) is a horst block on the boundary of the Indo-Australian and Pacific tectonic plates (two of the seven large tectonic plates of the Earth) in the southern ocean; and Tassili n'Ajjer (Algeria), Air and Ténéré Natural Reserves (Niger), and Uluru-Kata Tjuta National Park (Australia) all display eroded plateaux and escarpments in arid environments. IUCN concludes that Masada is an important geological site but is not of outstanding universal value. IUCN also notes that the geological values of the site are already well represented in other World Heritage sites.

### **4. INTEGRITY**

#### **Size and Boundaries**

The boundaries of the nominated property, though somewhat arbitrary, are defined according to cultural rather than natural values. They are drawn to encompass the mountain and the entire surrounding Roman siege system, comprising eight campsites, a siege-wall and towers, and a large wood and earthen ramp. For purposes of historic authenticity, the visual integrity of the surrounding terrain in the nature reserve and the rural land is maintained by prohibiting under State law any construction within view of the mountain summit.

#### **Management**

The nominated site is a national park, protected under national conservation and antiquities statutes. Management responsibility is exercised principally by the Israel Nature and National Parks Protection Authority (NPA). That agency has planning committees and independent experts to assist in implementing management and development plans, while matters of national and international interest are subject to public hearings. The legal and administrative basis for managing the adjacent nature reserve is the same as for the national park. The area between Masada and the Dead Sea is managed as open space and agricultural land according to a masterplan under national planning legislation, administered by the regional council.

A park management plan is currently being prepared. A summary outline of the plan reveals it to be comprehensive in its coverage of management policies and operational plans, with strong underpinning support from planning, forecasting and research. A conservation development project, begun in 1995, is nearing completion. This is intended to promote the conservation and enhancement of cultural assets, guide the implementation of a park interpretation plan, and determine proper levels of visitor services and infrastructure needs. This project incorporates an impressive series of resource assessments, condition reports, research investigations, and forecast surveys. The park is well funded through the NPA, with supplementary funding for visitor services facilities from the Ministry of Tourism. A well-trained staff of 50 is employed, under a park director and senior management team.

The site is well buffered from external development pressures, and there are currently no activities that are incompatible with park objectives or that threaten park values. There are no permanent residents in the park or in the adjacent nature reserve, and the gateway city of Arad (population 25,000) is located 22km away. Pressure from tourism is considerable, but the capacity to handle current and projected visitor levels appears adequate. Masada is one of Israel's most popular tourist venues, receiving about 700,000 visitors per annum. Numbers are forecast to increase to 1.2 million per annum by 2010. The new visitor centre complex and cable car transport system are designed to cope with this level of use without compromising park values or the visitor experience. There is little management intrusion on the site. Rock walls are monitored, and pinned in places, to ensure public safety in the event of earthquake and rockfall.

### **5. ADDITIONAL COMMENTS**

The nomination document is primarily devoted to exposition of Masada's outstanding cultural heritage values, and it gives far less attention to its natural geological character and landforms.

## 6. APPLICATION OF CRITERIA

Masada has been nominated as a mixed (cultural and natural) World Heritage site. Its natural values have been nominated under natural criteria (i) and (iii).

### Criterion (i): Earth's history and geological features

Mount Masada is an impressive landform, but it is neither unique nor outstanding in geological terms. It is a very small structural feature - a horst block, isolated by secondary faulting and stream erosion from its parent fault scarp. This huge escarpment, with a local relief of some 1,400m from the plateau summit to the shoreline of the Dead Sea (400m below sea level) is part of a truly global scale geological phenomenon - a rift valley system on a tectonic plate boundary extending from Israel for thousands of kilometers to the Indian Ocean and beyond. With summit dimensions of only 600m x 300m, Mount Masada is but an extremely tiny representation of this geological system. As such, Masada is of local significance only, and it fails to qualify as being of outstanding universal value either in geological evolutionary terms or as a geomorphological feature.

However, if Mount Masada is considered together with the surrounding buffer zone the picture changes somewhat. The adjacent nature reserve to the west incorporates a much larger representation of the uplifted component (horst) of the rift valley system, while the protected lands east of Masada National Park cover a large area of the downthrown block (graben). Beyond is the drowned portion of the graben - the Dead Sea. A huge lake that was the forerunner to the Dead Sea is evidenced by an extensive deposit of lacustrine sediments in the area between Masada and the Dead Sea. Consideration could, therefore, be given to incorporating the nature reserve and relevant parts of the open rural lands into the nomination, thereby providing a much more extensive and holistic geological representation of the rift valley system. This would impart greater geological significance to the nominated property. However, IUCN considers that such an expanded nomination would still not meet the criteria or outstanding universal value, for geological features. IUCN also notes that there would be questions of integrity associated with the incorporation of the open rural lands into any revised nomination. IUCN considers that the nominated site does not meet this criterion.

### Criterion (iii): Superlative natural phenomena or natural beauty and aesthetic importance

Physiographically, Masada is a small and indistinguishable component of a much more prominent landform feature - a mountainous chain forming the eastern edge of the Judean Desert plateau. This upland is brought into even sharper focus by being set abruptly against the flat expanse of the Jordan Rift Valley floor. Its setting within the context of a much grander regional-scale landscape gives Masada special scenic values. Despite being physically isolated on the escarpment, what really sets Masada apart, and gives it an outstanding aesthetic quality, is the presence of ancient ruins.

Viewed either from below Mount Masada is an awesome sight. Its summit, affords spectacular vistas of the surrounding landscape. But its scenic qualities derive from an intimate combination of its physical attributes and the material remains of human occupation. Masada's aesthetic appeal, therefore, is the culmination of its natural character and associated cultural legacy.

Given that Masada is a well-displayed example of past successive human settlement intimately interrelated with the natural environment, there could be real merit in considering the site as a relict landscape within the World Heritage category of cultural landscape. IUCN considers that the nominated site does not meet this criterion.

## 7. RECOMMENDATION

The Bureau did not recommend the inscription of Masada National Park on the World Heritage List under natural criteria.

The Bureau discussed the possibility of a larger natural site, potentially involving other countries, which would have to be presented as a new natural nomination.