

Tsodilo (Botswana)

No 1021

Identification

<i>Nomination</i>	Tsodilo
<i>Location</i>	The Ngamiland District, north-west Botswana
<i>State Party</i>	Botswana
<i>Date</i>	19 June 2000

Justification by State Party

Tsodilo, a major geological landmark in the Kalahari Desert, has been called the "Louvre of the Desert" for the quality and quantity of the rock art contained in an area of only 10km². The archaeological record is particularly good. The place offers a singular opportunity to comprehend the traditions, cultures, and technologies of the people of the Kalahari region from time immemorial to the present.

Geologically, Tsodilo provides a rare opportunity to observe one of the ancient rock formations that make up the Earth's crust, for its very old rock, uplifted by tectonic forces, has resisted many millions of years of weathering and erosion. The place combines several aspects of Earth's history with the cultural history of humankind. It shows an interplay between geological processes spanning more than a billion years and human activities, particularly those involving minerals, over tens of thousands of years.

The archaeology of the area preserves a chronological account of human activities and environmental changes over at least 100,000 years. Outstanding in this record is the rock art. It consists of over 4500 paintings and numerous carvings which provide a vivid insight into early perceptions of this environment while giving artistic expression to contemporary ways of life. Tsodilo has one of the highest concentrations of rock art in the world and so is of major international significance; it also possesses the largest concentration of such work in Botswana. The emphasis on large herbivores echoes the metaphorical idiom of the San people, indicating that, although the symbolism behind the art remains obscure, it is of a religious nature. Whatever the original intentions of the artists, the art has inspired modern interpretations and been put to current use in stamp designs, etc.

Criterion i

The archaeology also demonstrates technology, exchange, and significant detail of settlement pattern and form. It ranges in time from Middle Stone Age to traditional societies, demonstrating not just antiquity but also great diversity. The sites consist of caves, rock shelters, seasonal camps, and settlements; their stratification contains the palaeo-environmental record and cultural sequence. In

particular, the caves and rock shelters provide evidence of a relatively rare phenomenon in Botswana, the evidence of repeated use over an extensive period of time. The combination of natural and artefactual evidence in stratified deposits demonstrates the interaction of people and environment through time and space.

Criterion iii

Tsodilo is unique in being different from the rest of southern Africa in terms of its Iron Age settlement pattern and the way in which its spatial organization within settlements was executed. It defies stereotypes, be they of aboriginal or Bantu peoples.

Criterion v

Traditions speak of Tsodilo as being the home of all living creatures, more particularly home to the spirits of each animal, bird, insect, and plant that has been created. Though exact interpretation and dating of the rock art is uncertain, the art itself clearly testifies to the long tradition of the site as spiritual, a tradition continued today in practices of the !Kung and in visits by, in effect, pilgrims in Western parlance, often from some distance.

Criterion vi

Category of property

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*. It also qualifies as a *cultural landscape* as defined in paragraph 39 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.

History and Description

History

Present evidence indicates the earliest occupants at Tsodilo probably in the Middle Stone Age, perhaps around 100,000 years ago or earlier. A Late Stone Age cultural presence is dated around 70,000 years ago. In general, repeated use over an extensive period of time appears to reflect small mobile groups of people camping briefly, perhaps on seasonal visits, for example when the fruit of the mongongo tree, *Ricinodendron rautanenii*, ripens. Local quartz as well as exotic stone were used for tool-making in both the Middle and Late Stone Ages. The use of non-local raw material suggests that contact and some form of exchange have existed at Tsodilo for tens of thousands of years. The Middle Stone Age is marked by the appearance of large stone blades. Tsodilo is unique in demonstrating an extensive record of freshwater fish exploitation in a now arid landscape where rivers formerly flowed. Barbed bone points were probably used to tip fish-spears; bone toolmaking at Tsodilo may well go back 40,000 years.

Fishbone and stone artefacts decrease in the Late Stone Age (*c* 30,000 BP). The appearance of ostrich eggs in archaeological deposits around that time indicates the development of a new strategy for acquiring a new resource for food and artefact-making. In particular, a tradition of making beads of ostrich egg-shell began then and continues today. Until as recently as *c* AD 600, the people of Tsodilo lived entirely by hunting, fishing, and foraging for wild food.

By the 7th century AD, however, the pace of change in technology, subsistence, and settlement organization increased as iron and copper metallurgy were introduced. This phase is also marked by the introduction of cattle. Interaction between Late Stone Age foragers and Early Iron Age agro-pastoralists occurred. Settlement took the form of

apparently unique social structures. Divuyu itself is the richest site yet discovered in southern Africa for this period. Copper and iron beads, bracelets, and other ornaments became common. All the metal was imported – the copper probably from southern Zaire or north-eastern South Africa, the iron perhaps from only 40km distant – and worked locally. Nqoma at the end of the 1st millennium has the richest variety of metal jewellery of any known contemporary site in southern Africa.

The same two sites in particular, Divuyu and Nqoma, have indicated domestic herding and a settled lifestyle as early as the 7th–8th centuries AD from evidence of middens and house foundations. Cultivated crops such as sorghum and millet were added to the diet. Sheep and goats augmented the few domestic cattle kept by earlier foraging communities. Pottery was produced for a range of domestic purposes and personal adornment became common and often elaborate. Mining for specularite was extensive in 800–1000, and continued into the 19th century. The output was enormous, doubtless contributing to the amount of jewellery and cattle owned by the Nqoma people. The rich elements of Tsodilo Iron Age culture continued well into the 13th century when Nqoma declined, possibly because of drought or war. No further durable exotic objects seem to have entered the Tsodilo region until the effects of the European Atlantic trade began to be felt in the 18th century. Tsodilo became part of the Portuguese Congo-Angola trade axis.

Historically, the Tsodilo area was occupied by the N/hae, who left in the mid-19th century. Its first appearance on a map was in 1857, as a result of information collected by Livingstone during his explorations in 1849–56. In the 1850s the earliest known horsemen, Griqua ivory hunters, passed through the region. The !Kung arrived in the area and made at least a few of the paintings, possibly some of those showing horsemen. The rock art was first sketched and brought to Western attention in 1907 by Siegfried Passarge, a German geologist.

The two, present-day local communities, Hambukushu and !Kung, arrived as recently as c 1860. Nevertheless, they both have creation myths associated with Tsodilo, and they both have strong traditional beliefs that involve respect for Tsodilo as a place of worship and ancestral spirits. The spirituality of the place has become best known to non-local people through the writings of Laurens van der Post, notably *The Lost World of the Kalahari* (1958). Today, local churches and traditional doctors travel to Tsodilo for prayers, meditation, and medication. Most visitors arrive for religious reasons.

Description

Tsodilo is situated in the north-western corner of Botswana near the Namibian border. Its massive quartzite rock formations rise from ancient sand dunes to the east and a dry fossil lake bed to the west. They are therefore called "inselbergs," meaning prominent isolated residual small mountains of circumdenudation rising from and surrounded by an extensive lowland erosion surface in a hot dry region. The surrounding dunes are covered with trees and open savannah vegetation. The setting and the multicoloured rock formations combined with the large number of rock paintings immediately bestow an iconographic quality to the place, and comparisons with Uluru in central Australia inevitably spring to mind. Three of the inselbergs form a cluster over a 3km x 10km rectangle; a fourth, and smallest,

lies 2.1km to the north-west. Their height, shape, and spatial relationships have given rise to a distinctive name for each: *Male*, *Female*, *Child*, and *Grandchild*. *Male*, at 400m above sea level, is the highest peak in Botswana. The rock ensemble is visible from the Okavango River, c 40km to the north-east.

Caves and shelters are one of the main resources of the rock outcrop from the human point of view. Where excavated, they characteristically show a long, though not necessarily continuous, sequence of occupation beginning in some cases as early as c 100,000 years ago (Middle Stone Age). They indicate repeated use thereafter, the artefact densities appearing to reflect visits, perhaps seasonal, by small mobile groups of people. At White Painting Shelter, Tsodilo, for example, excavation has exposed a 7m deep stratigraphy demonstrating such use over at least 100,000 years.

Divuyu and Nqoma are two excavated settlements of particular significance in the 1st millennium AD. Divuyu lies in a saddle at the top of *Female*; Nqoma is on a plateau below. A general pattern of public housing and living spaces in the centre of the saddle at the former, flanked by communal middens and perhaps burial areas, seemed to be the settlement plan. Much the same was suggested by Nqoma. If so, then these sites at Tsodilo do not share the spatial structure of other settlements in southern Africa, and suggest similarities with the spatial patterning of villages in the "matrilineal belt" of central Africa.

The rock art paintings are often large and imposing, and can be seen from a distance. Most of it has been executed in red ochre derived from hematite occurring in the local rock. Much of the red art is naturalistic in subject and schematic in style, described in the dossier as "sketches capturing the essential character of the creatures depicted." The rock art occurs throughout the rock outcrop. Many of the graphics have been executed in fairly small, isolated panels in contrast to the large friezes elsewhere in the region. In comparison with the naturalistic styles in Namibia, Zimbabwe, and South Africa, the Tsodilo paintings are more schematic, characterized by a variety of geometric symbols, distinctive treatment of the human figure, and exaggerated body proportions of many animals. Overall, in terms of style and content the art has more in common with paintings of similar antiquity in Zambia and Angola to the north and north-east than neighbouring Namibia, Zimbabwe, and South Africa.

The wild animals depicted are characteristically "big game" such as giraffe and rhinoceros until the relatively late appearance of domestic cattle. Some depictions are in outline only, others are in silhouette, differences in style which seem to relate to particular animals (eg zebra in outline and elephant in silhouette). Human figures, or abstracts of them emphasizing, for example, sexual features, are frequent. There is nevertheless a high proportion of geometric designs, frequently lines and grids enclosed in circles or ovals and in rectangles. Such apparently symbolic graphics are rare in southern African Stone Age art.

A distinctive series of white paintings occurs at only twelve sites, in some instances superimposed on the reds but never the other way round. Animals in white are rarer and include more domestic species than the reds. Human figures are common, as are geometric designs.

The art in general is not well dated, though at least some of it could be two thousand and more years old. Pictures with

cattle are regarded as c 600-1200, following the introduction of cattle to Tsodilo after the 6th century AD. Geometric art is generally regarded as about a thousand years old. The latest paintings date to the 19th century on oral evidence. Some white paintings appear to be riders on horses, unknown at Tsodilo until the 1850s, which possibly provides a date for the last paintings. Certainly domestic animals indicate a relatively recent date for the white paintings.

Cup- and canoe-shaped hollows in rock, a common phenomenon throughout the continent, are particularly numerous at Tsodilo. One group, interpreted as a trail of animal footprints, is spread over several hundred metres and is one of the largest rock pictures in the world. As poorly dated as the other art, these hollows may have been made in the Late Stone Age about two thousand years ago.

The extent and intensity of mining activity on the mountains to recover ochre, specularite, and green stone, used for decorative purposes, is impressive. The mines are clearly pre-colonial.

Management and Protection

Legal status

The Monuments and Relics Act 1970 provides for better preservation of ancient monuments, ancient workings, relics, and other objects of aesthetic, archaeological, historical, or scientific value or interest. Tsodilo was declared a National Monument under an early version of this Act in 1927.

Tsodilo is a Conservation Area (but no information is given about the meaning of that phrase in Botswana or its legal standing).

It is also affected by conditions in the Anthropological Research Act 1967, National Parks Act 1967, and Tribal Act 1968.

Management

The site is owned by the Government, controlled by the Tswana Land Board, and managed by the Botswana National Museum. The area nominated for inclusion in the World Heritage List, including both the core and buffer zones (respectively 4800ha, to be fenced in, and 70,400ha), will be leased to the Botswana National Museum.

The Tsodilo Hills Management Plan: Scheme for Implementation (20 February 1994) was reviewed and amended in 1999. Essentially, it is a modern management plan based on generally accepted principles of conservation in a broad sense, while recognizing its particular context, for example within a national policy to develop rural areas in such a way that local people are able to improve the quality of their lives. One of its premises is that Tsodilo is primarily a heritage area and only secondly a settlement; another basic one is to protect traditional rights but encourage traditional methods of land use. Excess population will be encouraged to settle elsewhere, but any actual financial or other loss incurred by the community as a result of the Management Plan should be compensated. Further, the Plan recognizes that people have the right to learn about, appreciate, and enjoy their heritage, provided that they do not damage it. On-site activities are, therefore, controlled, and restricted and monitoring is constantly leading to appropriate and timely action.

One of the strongest recommendations of an Evaluation (August 1995) of the Management Plan was that the site should be nominated for World Heritage Listing, to which end it recommended that Botswana sign the 1972 Convention. It identified reasons for this as "help in marketing the site to tourists, in raising additional capital and in negotiating international assistance." It noted that increasing tourism was already then (1995) leading to vandalism of some art and so it recommended "the systematic recording of all the rock art." Between 1994 and 1996 the archaeology of Tsodilo, including the rock art sites, was recorded by Botswana National Museum staff. The Evaluation's long list of recommendations was much concerned with acquiring and training appropriate personnel.

National Development Plans 1997/98 and 2002/03 emphasize the development of cultural resources to contribute towards the expansion of the tourism sector. It estimates that 30,000 tourists visit historical monuments throughout Botswana annually. In 1998, 3698 people visited Tsodilo, a low on-site number but nevertheless c 10% of the national total of such visitors.

The Department of Tourism will play an active role in defining the policies relating to the presentation and promotion of the property. The Department of Wildlife and National Parks also has responsibilities for the management of tourism.

The Management Plan recognizes the importance of securing the participation of the local communities (c 200 people), expressed in a Tsodilo Liaison Committee of tribal and Museum representatives. The purpose of this Committee is "to ensure harmonious co-operation," but a distinction is drawn between community participation and "formal management" by the National Museum. An elaborate consultation process preceded the nomination of Tsodilo for World Heritage status, a nomination which consequently comes forward with broad-based support over a wide area.

Botswana National Museum policy is to promote the heritage at Tsodilo for Botswana and tourists. A new museum complex is nearing completion, and campsites are provided. A signage system is in hand within a larger system for all National Monuments. Educational programmes will implement a continuing Tsodilo and World Heritage awareness programme among Botswana schools.

Financial resources for Tsodilo include US\$651,000 for the new museum, about US\$2000 a year for hiring casual labourers, and US\$16,000 a year within the National Museum budget. Five full-time staff have been employed specifically on the Tsodilo project. Unspecified amounts of funding are mentioned for a range of tasks like fencing and "preservation of rock art."

In January 2001, a somewhat long list of tasks identified in the Schedule of Implementation awaited completion.

Conservation and Authenticity

Conservation history

Three basic long-term facts contribute to Tsodilo's outstanding state of preservation: its remoteness, its low population density, and the high degree of resistance to erosion of its quartzitic rock.

Recording of the rock art began in the early 20th century. The site became a National Monument in 1927. A landmark

in its conservation, in part led by consideration of the needs of the national economy and tourism at the site, was the preparation of a Management Plan in the early 1990s. This was followed by an expert evaluation which, while generally approving, provided in its recommendations the basis for at least a ten-year programme of improvement.

Authenticity and integrity

Tsodilo is a classic case where both integrity and authenticity must be taken into account. The whole ensemble, over and above its scientific interest, possesses an aesthetic dimension.

The diverse fauna and flora have remained largely intact because of the remoteness of the site. Many species attested in archaeological deposits of the 7th century AD were depicted in rock paintings, and most were probably still present until the early 20th century. Mongongo nuts continue to be a food staple; a particular beetle, *Diamphidia sebae*, continues to provide poison for the !Kung's hunting arrows; two African rock pythons, *Python sebae*, have been living at the waterhole halfway up *Female* for at least ten years and are regarded as messengers of the spiritual realm. The baobab tree, *Adansonia digitata*, continues to be used in different ways (food, water collection, textile raw material, medicine, manure, etc). The tree clearly therefore possesses considerable socio-economic and cultural significance, as was recognized at the First Global Strategy meeting in Harare (October 1995). It has been called "a symbol of the continent and the people of Africa" and was strongly recommended for World Heritage listing.

The archaeological record is large, generally well preserved, and still respected, for some of its content is still living rather than redundant. Excavations have been well conducted and backfilled, leaving deposits and strata intact as a resource for future investigation. Results from the site so far have been illuminating both of the local prehistory and of key significance at regional and continental levels. Overall, the condition and authenticity of the rock art in terms of materials, techniques, setting, and workmanship is impeccable. The art remains a key element in the spirituality of the site today.

Taken as a whole, the site embraces a diverse authenticity, dependent on an integrity nurtured over tens of thousands of years and providing a vivid illustration of natural/cultural interdependence.

Evaluation

Action by ICOMOS

An ICOMOS expert mission visited the site in January 2001. ICOMOS also consulted a distinguished expert on the rock art of southern Africa.

Qualities

The physical attraction and availability of shelter that probably originally drew people to Tsodilo was and still is augmented by local animals, fruit-bearing trees and shrubs, edible plants, and tubers. The plants and the diversity of wild life offered food, water, protection, and sanctuary to the earliest visitors and caused them to settle or return during annual foraging expeditions, a process which has continued over at least 100,000 years. Although changes have occurred through time, particularly in the availability of water, Tsodilo's resources have in general been exploited within

sustainable strategies. Over and above the geological interest of the rock itself, the fact that it is granite is of considerable significance for the site. On the one hand its impermeability has meant that it collects water; on the other, it is resistant to erosion and has therefore preserved the art upon it very well.

Tsodilo is also important for its intellectual contribution to scientific studies of human adaptation and the revision of ideas on forager/farmer interaction. The Stone Age of Botswana is poorly understood, partly through inadequate study, partly because the nature of the landscape offers little incentive for repeated visits to the same locations. Tsodilo, because of its nature as a place where people stay and to which they return, has already contributed significantly to African prehistory, and it has a high potential in its stratification further to illuminate the sequence and character of human activity and environmental change.

The rock art is outstanding in quantity, quality, distinctiveness, scientific interest, and state of preservation. It represents in graphic form a long-lived traditional practice giving cultural expression to different and, until right at the end, anonymous cultures.

Comparative analysis

There are no other African sites like Tsodilo on the World Heritage List. The Brandberg inselberg in neighbouring Namibia is similar in some ways geologically, but the rock art and archaeological history are different. It compares favourably with the Uluru/Kata Tjuta cultural landscape of central Australia in terms of both its spectacular rock formations which, from a geological perspective, represent exceptional examples of tectonic and geomorphic processes; and as a basically natural feature which has become an icon in a cultural landscape.

The cultural heritage is manifest in many forms with similarities to others in Botswana, in southern Africa, in Africa, and in the world but whose combinations may only be peculiar to Tsodilo, an area which itself possesses a unique combination of features. For its size, it compares favourably with Kakadu National Park, Australia, in terms of the concentration of rock art: Tsodilo is of 10km² with c 4500 paintings in more than 400 sites, Kakadu is of 19,804 km² with 15,000 rock-art sites. At Matobo in Zimbabwe some 30,000 paintings are estimated to exist at c 3000 sites over c 2000km²; at the Drakensberg/uKhahlamba, South Africa, 600 sites with 35,000 individual images are spread over a vast area; an estimated 6000 sites occur in c 30,000km² in Lesotho. Quantitatively, the density of rock art at Tsodilo is among the highest in the world.

The art itself exhibits idiosyncratic characteristics rather than close parallels with other sites and areas. Certainly there is nothing to suggest that its origins and development were externally introduced or influenced. Its qualities are very much of this place and its peoples. The art is usually found, for example, on overhangs and ledges; it is not hidden as at Matobo and Drakensberg. Nor is it closely correlated with living sites such as Matobo. Stylistically, the paintings are distinct, being more schematic than the naturalistic paintings in most other parts of southern Africa. Both humans and animals are characteristically expressed by strokes and other minimalist devices; some, humans in particular, are not immediately recognizable. Overall, the style, though neither the colour nor the content, is closer to that of the Iron Age or agro-pastoralist art found elsewhere in southern Africa than shamanistic hunter-gatherer art. The Tsodilo artists preferred

big game, cattle, humans, and geometric or, to modern eyes, abstract, images. Similar large game emphases occur in the paintings of Namibia, South Africa, and Zimbabwe. Geometric shapes are rare in southern African Stone Age rock art, though comparisons have been drawn between the Tsodilo examples and similar designs in the arid interior of southern Africa, especially in Namibia. The nearest examples are c 400km west of Tsodilo. Paintings in eastern Zambia, 1000km away, also contain schematic animals and geometric designs. The nearest art is 250km away at Savuti; it is in a similar style to that at Tsodilo.

Tsodilo's flora and fauna provide the basis of much of the cultural development there. While this is not in itself of universal significance, the relationships within the environment including humankind are.

ICOMOS comments and recommendations for future action

The site is nominated in an excellent dossier which is a credit to those concerned and the State Party. The rock art alone, so persistently created over centuries, represents a masterpiece of human creative genius. Tsodilo vividly demonstrates an exceptional testimony to a specific place as the meeting place of humanity and an environment over 100,000 years. And the very place is directly and tangibly not just associated with, but is itself, a living tradition.

A claim is made under criterion v. As expressed, however, it is largely academic, and the academic argument itself is not sound. The claim is not, in any case, necessary.

Tsodilo should be considered as a cultural landscape because it is well qualified in this category of cultural site. It qualifies primarily under category iii, "an associative cultural landscape" with "powerful religious, artistic, and cultural associations of the natural element." It is also an organically evolved landscape, falling into the sub-category of "continuing landscape." The *Operational Guidelines* require the retention of "an active social role in contemporary society closely associated with the traditional way of life and in which the evolutionary process is still in progress," which closely defines Tsodilo. The presence of Tsodilo among the emerging group of cultural landscapes on the World Heritage List would both grace that group and help clarify its nature.

There are currently less than 4000 visitors to the site per year. The carrying capacity is estimated to be in the tens of thousands per year (though no definition of "carrying capacity" is offered, even though it is well known that absolute numbers are not the only criterion for judging stress on a site). Clearly, with a site so robust in some natural qualities but so fragile in others, not least in its art and human/environment relationships, the development of the place as a tourist destination must be very clear-sighted and sensitively managed, with a sharp, scientifically well informed management focus on the essential qualities of the place. In that context, despite a new museum having only just been completed near the rocks, ICOMOS suggests that, given the close parallel with Uluru, the possibility of moving everything away from the rocks themselves should be borne in mind, perhaps, as at Uluru, when a second phase of tourism facilities is planned.

Noting that the excellent 1994 Management Plan is now nearly seven years old, ICOMOS also recommends that a new one be drawn up including an annual schedule of works to be implemented.

Brief description

A small area of quartz outcrop in the Kalahari Desert has provided shelter and other resources to people for over 100,000 years. It now retains a remarkable record, in its archaeology, its rock art, and its continuing traditions, not only of this continual use but also of the development of human culture and of a symbiotic nature/human relationship over many thousands of years.

Statement of Significance

The significance of the place lies in its visual prominence, its geological and archaeological character as scientific resources, its use over ten of thousands of years as an area of settlement and nourishment, its outstanding rock art, and its long-term sanctity. All of those elements individually bear witness to different universal significances; collectively they combine to create a veritable "node of universal significance" on the surface of the earth. Furthermore, the symbiotic relationship between nature and culture, the very essence of Tsodilo, is, in itself, universally significant.

ICOMOS Recommendation

That this property be inscribed on the World Heritage List on the basis of *criteria i, iii, and vi*:

Criterion i For many thousands of years the rocky outcrops of Tsodilo in the harsh landscape of the Kalahari Desert have been visited and settled by humans, who have left rich traces of their presence in the form of outstanding rock art.

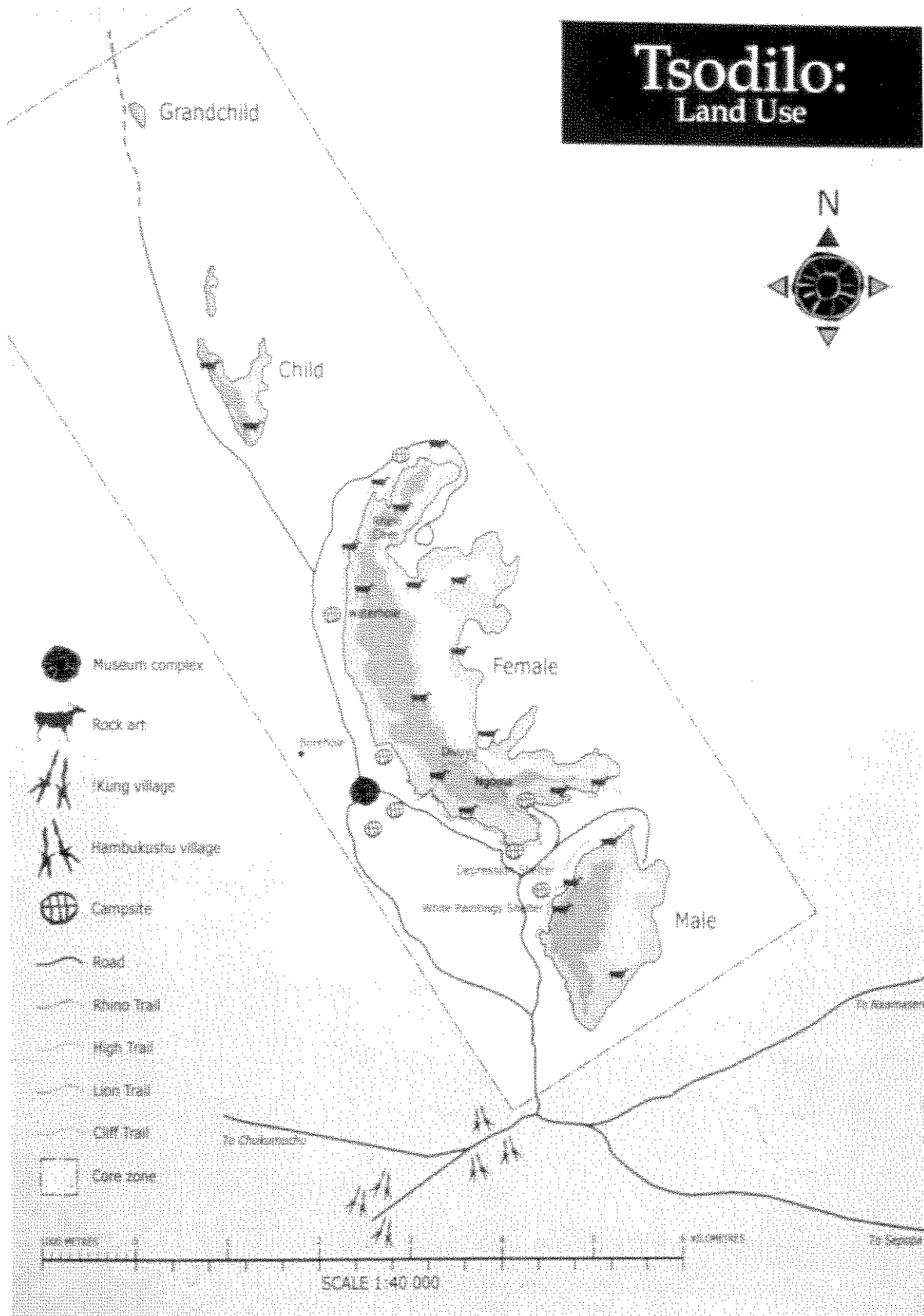
Criterion iii Tsodilo is a site that has witnessed visits and settlement by successive human communities for many millennia.

Criterion vi The Tsodilo outcrops have immense symbolic and religious significance for the human communities who continue to survive in this hostile environment.

Bureau Recommendation

That Tsodilo be inscribed on the World Heritage List on the basis of *criteria i, iii, and vi*.

ICOMOS, September 2001



Plan indiquant la délimitation du bien proposé / Map showing the boundaries of the nominated property