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# Petroglyphs of the Mongolian Altai (Mongolia)

## No 1382

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### Official name as proposed by the State Party

Petroglyphic Complexes of the Mongolian Altai

### Location

Ulaankhus soum and Tsengel soum,  
Bayan-Ulgii province

### Brief description

In sheltered areas of high valleys, carved out by Pleistocene glaciers in the remote western edge of the Altai Mountains, three rock art sites display large concentrations of petroglyphs and funerary monuments linked to the development of human culture over a period of some 12,000 years.

The earliest images reflect a time during the Middle Holocene (c. 11,000–6,000 years BP) period when the area was partly heavily forested and the valleys provided an ideal habitat for hunters of large wild game. Later images reflect the late middle Holocene (c. 6,000–4,000 years BP) period when the Altai landscape assumed its present mountain steppe character, and the herding of large and small animals emerged as a dominant economic way of life, with the high valleys used for summer pastures.

Finally, the most recent images show the transition to horse-dependent nomadism when significant populations grazed the high valleys in both summer and winter during the Early Nomadic Period (early 1<sup>st</sup> millennium BCE), the Scythian Period (1<sup>st</sup> millennium BCE), and the later Turkic Period (7<sup>th</sup>–8<sup>th</sup> c. CE), after which the record falls silent.

### Category of property

In terms of categories of cultural property set out in Article I of the 1972 World Heritage Convention, this is a serial nomination of three *sites*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008) paragraph 47, it is also a serial nomination of three *cultural landscapes*.

## 1 Basic data

### Included in the Tentative List

The rock art site of Aral Tolgoi: 8 December 2009

The Upper Tsagaan Gol Complex: 8 December 2009

Tsagaan salaa rock painting: 1 August 1996

International Assistance from the World Heritage Fund for preparing the Nomination  
2007

### Date received by the World Heritage Centre

29 January 2010

### Background

This is a new nomination.

### Consultations

ICOMOS consulted its International Scientific Committees on Rock Art and on Cultural Landscapes and several independent experts.

Comments on the assessment of this cultural landscape were received from IUCN on 1st February 2011.

The information was carefully considered by ICOMOS in reaching its final decision and recommendation in March 2011. IUCN has also reviewed the presentation of its comments in this report.

### Literature consulted (selection)

Allard, F., and Diimaajav E., *Khirigsuurs, ritual and mobility in the Bronze Age of Mongolia*, *Antiquity* 79, 1-18, 2005.

Golden, P. B., The peoples of the south Russian steppes, in *The Cambridge History of Early Inner Asia*, edited by Denis Sinor, 256-284, Cambridge: Cambridge University Press, 1990.

Jacobson E., Kubarev V. D., and Tseveendorj D., *The Rock Art of Mongolia*, *The Silk Road* 4 (1): 5–12, 2006.

Kubarev, V. D., and Tseveendorj D., *Ancient Turkic Memorials in the Altai*, *Archaeology, Ethnology & Anthropology of Eurasia* 1 (9): 76–95, 2002.

*Preservation of the Frozen Tombs of the Altai Mountains*, Paris: UNESCO/Flanders Funds in Trust, 2008.

### Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 23 October to 3 November 2010.

### Additional information requested and received from the State Party

None

### Date of ICOMOS approval of this report

10 March 2011

## 2 The property

### Description

The three sites are within the Tsagaan Salaa-Baga Oigor and Upper Tsagaan Gol valleys high up in the western ridge of the Altai Mountains that separates Mongolia from Russia to the north-west, and China to the west, at the intersection of Central and North Asia.

The area is some 1,700 kilometres west of Ulan Bator, and accessible by vehicle around 4 to 5 months of the year. Two sites are located in areas controlled by the military because of their proximity to the Chinese and Russian borders.

The raw materials for the rock art are sandstone outcrops and boulders, polished smooth and deeply etched by glaciers that carved out these valleys during the Pleistocene period. Over time, the boulders have acquired an almost glossy surface patination in a variety of colours from pink to mahogany brown to black.

The three properties are, from north to south:

- Tsagaan Salaa-Baga Oigor
- Upper Tsagaan Gol
- Aral Tolgoi

The distance between them is between 35 and 40km.

The three sites are said to include many thousands of engraved images as well as hundreds of burial mounds, and other structures of funerary significance, some in the buffer zone. However ICOMOS notes that images and surface remains are only described in general terms and precise details of numbers and locations are not provided, other than in plans that show locations of individual sites, without differentiating types, and groups of sites.

The three properties are described separately:

#### Tsagaan Salaa-Baga Oigor

The site covers 2,100ha and stretches some 15km along two valleys which descend from the high Altai Ridge over which were ancient passes into present-day Russian Altai, thus explaining a similarity of the rock art with that of Russian Altai.

An estimated 5,000 'sites', each containing between one and 160 images, are found on outcrops, cliff faces, and boulders. The quantity and quality of the rock images suggest that this large valley could have supported a significant population in the pre-Bronze Age, Bronze Age, and Early Iron Age.

Of all three sites, this one is said to reflect the most extensive and continuous record of human cultures. Its images extend from the large hunted animals of the late Pleistocene, Early and Middle Holocene periods, through the early Bronze Age when there appear the earliest images of heroic hunters with mushroom-shaped headdresses: frontal figures, armed with large cudgels or long bows and associated with large antlered or horned animals, to the late Bronze Age images of hunting, herding, family scenes, stylized stags of ibex, horses, and hunters, and finally to Turkic inscriptions. This valley offers the significant evidence for the transformation of early hunting societies into societies dependent on herding and transhumance and their subsequent

transformation into horse-dependent nomadism in the Late Bronze and Early Iron Ages.

Ceremonial and funerary mounds, presumably from the Bronze Age and later, are located along the terraces over the valley floor and, occasionally, on terraces higher up the slopes. It is suggested that the locations of these remains reflect a *'deep and ancient orientation to the river'* and particularly to its eastward flow.

#### Upper Tsagaan Gol

The site, covering 9,000 ha, extends east-west for a distance of approximately 22km within the high valley of Tsagaan Gol and its principle tributaries, which rise in the glaciers of the Tavan Bogd peaks and flow along the north and south sides of the sacred mountain, Shiviit Khaikhan, before joining to form Tsagaan Gol.

Approximately 5,000 'sites' of between one and 100 images are found on glacier scraped and polished outcrops and on moraine boulders. The complex is particularly rich in images from the Bronze Age, the Early Iron Age, and from the Turkic period. This material includes individual images but also elaborate compositions reflecting the hunting of large and small animals, the movement of people on foot, with yaks, in wheeled carts, and on horseback. There are even a few images from the post-Turkic Period that represent figures riding reindeer.

This site has a rich assemblage of surface monuments. In addition to the *khirigsuur*, mounds, circles, and standing stones from the Bronze Age, there are a large number of Turkic enclosures and image stones. This material is all oriented either to the east-flowing rivers or to Shiviit Khaikhan, the sacred mountain at the centre of the complex.

The mountain is still considered sacred by local people. An 'Ovoo' or shrine has been built on a hill facing the mountains and it is still used today for ceremonies and votive offerings. The area is lived in by Tuva families who conduct ceremonies based on shamanism as well as mornings Buddhist rites. An annual religious gathering of some 200 to 300 people takes place each year. The mountain is home to protected wild goats and argali sheep.

#### Aral Tolgoi

This site covers only 200ha and lies 40km south of the Upper Tsagaan Gol Complex. Some 300 rock art images are found to the south-east of a whale-shaped hill. Most prints are on the ground, on horizontal planes on which it is easy to walk. Many are said to have been lost on the deteriorated rock surfaces, the victims of a moist and severe climate. The rocks are under the snow for some 9 to 10 months of the year. The hill is very close to the border guards' barracks.

The images have a 'static' quality and are seen to have the hallmarks of the Pleistocene period. The animals are

shown contoured or silhouetted with massive bodies, deeply rounded bellies, and legs that are reduced to two tapering cones, front and back. The types of animals - large, flightless birds that inhabited cold, dry climates, free of forest, and a rare image of a rhinoceros – are said to anchor this property to the Late Pleistocene. Only a few images are said to be dated to the Bronze Age or later.

Within the buffer zone are deer stones, burial mounds, and Turkic enclosures reflecting Turkic herders of the Late Bronze-Early Iron Age, but these seem to have no relationship to the rock art.

### History and development

Overall the three sites are considered to provide evidence of art from the following historic periods, and of funerary and other monuments from the Bronze Age and later. However the dating attributions have been done on stylistic grounds and have not been confirmed by any other evidence. It is suggested, on the basis of chance finds, that excavation of the terraces composing the buffer zone of Tsagaan Gol might reveal extensive artefacts of a Palaeolithic and Mesolithic date.

#### Late Pleistocene (11,000 BP)

This period is depicted by images of large animals such as mammoth, aurochs, horses, elk, argali and ostrich, in what is called a static profile style, that reflect nomadic societies hunting in high forests.

#### Early and Middle Holocene (c. 11,000–6,000 BP)

This period is characterized by the expansion of forests and by a relatively wetter, warmer climate. Animals that live between high forests and mountain steppe such as aurochs, elk, and ibex, are represented with a greater sense of power and grace than was visible in the earlier art, and images of human hunters appear.

#### Bronze Age (c. 4,000 – 2,800 BP) or the onset of the Late Holocene

This period saw the reestablishment of a relatively cold and dry climate, when the area assumed its present day appearance of mountain steppe. Herding and the gradual development of transhumance are depicted through images of hunting with bows, spears, and cudgels; wheeled vehicles, the use of domesticated yak for transport of goods and children, led by women in long dresses and with elaborately braided hair. Large compositions, perhaps carrying communal mythic narratives, appear within this period. Only one image appears to refer to the spirit realm: a faceless, horned being with a bell-shaped body, sometimes shown alone, sometimes with animals, and often bearing the signs of a birthing woman.

Surface monuments include burial mounds, 'virtual burials' in the form of dwellings outlined in stones; *khirigsuur* (stone cairns surrounded by a square or circular fence of surface stones), with up to several hundred adjacent circular altars and small mounds;

massive standing stones. Large stone circles, usually set on high terraces, may also belong to this period.

#### Late Bronze Age (c. 3000–2800 years BP)

This was the period that saw the transition to horse-dependent nomadism. Images show well proportioned figures, often of powerful build, with details of weaponry and dress, herding animals, moving to new pastures, or riding Bactrian camels or horses. One of the most distinctive images is that of a highly stylized stag, represented individually, in pairs, or in groups, and characterized by antlers flowing like waves back over its body.

Surface remains continue what was constructed in the Early Bronze Age and also include massive standing stones known as a deer stone as they are carved with images of deer or other animals that were often anthropomorphic.

#### Early Iron Age (1<sup>st</sup> millennium BCE)

This period, which coincides with the Scythian Period, reflects the development of a completely horse-dependent, herding culture that dominated the steppes of Eurasia. The images are scenes of hunting and riding, with both animals and men represented with considerable stylization and detail. Over time, the images, particularly of stags, becomes conventionalized and emblem-like.

Surface remains include north-south rows of burial mounds with associated altars west and rows of small stones (*balbal*).

#### Turkic Period (7<sup>th</sup>-9<sup>th</sup> c. CE)

The images of this period are centred on the warrior-horseman, shown hunting, in combat, or galloping at full speed, his falcon on his arm. Details of weaponry, horse trappings, armor and even the handling of human hair are vivid. In many cases, compositions appear to refer to epics. To this period, also, belong a number of runic inscriptions.

Surface remains include square altars, known as enclosures; rows of *balbal* and carved image stones.

It is stated that particular mountains, rivers, and the cardinal directions, particularly the eastern direction, had an '*overwhelming importance*' in terms of the siting of images and monument and their ritual associations, but ICOMOS notes that no evidence is provided to substantiate this claim.

## 3 Outstanding Universal Value, integrity and authenticity

### Comparative analysis

The analysis compares the nominated sites to others in the Altai, in Mongolia, in North Asia, Central Asia and then globally. Within the Altai and Mongolia, it is clear that there are many rock art sites, some with similar

profiles to the nominated sites – but which are seen as different as they are not in high glaciated valleys. Many sites display distinctive hunt scenes and figures with mushroom-shaped headdresses, characteristic of the Altai region. However the stylized deer and caprids of the Late Bronze and Early Iron Ages, in the nominated properties are rarely found elsewhere in the Altai.

Relevant sites that are mentioned in Mongolia include

- Bichigtin am, Bayankhongor aimag
- Zhargalant Uul, Huvsgul aimag

Within North and Central Asia there are some 80 significant sites – of which only a few are mentioned and that offer comparable subject matter such as:

- The small mountain, Syryn-Chiureg: Iron Age and Turkic imagery;
- Rock faces at Bizhiktig-Khaya: bulls and Early Nomadic figures;
- Rock faces at Alaga Mountain: stylized deer of the Late Bronze-Early Iron Ages;
- Rock face at Ustiu-Sargol: panel of overlaid goats, Early Scythian Period;
- Cliffs at Shalobolin and Oglakhty.

The global comparisons offered do not provide relevant comparators: ICOMOS considers that it is clear that this rock art does need to be understood in its geo-cultural context.

Overall ICOMOS considers that what the comparative analysis demonstrates is the wealth of rock art in North and Central Asia and in some instances the paucity of information on individual sites. Furthermore it is clear that there are, to a degree, more similarities between some sites than differences, particularly across the Altai ridge in Russian and Mongolian Altai.

IUCN notes that: *“parts of the nominated property located in an area that has been suggested for transboundary cooperation in the Altai mountain range. There is an existing natural World Heritage Site in this region, the Golden Mountains of Altai, located in the Russian Federation. China has proposed another site in the Altai mountains on its tentative list.”*

With information available from ICOMOS's new thematic study on Rock Art in Central Asia, ICOMOS considers that notwithstanding the links between the nominated sites and others in the Altai, the complex of three nominated sites can be seen as one of the largest, oldest and least damaged concentrations of rock art in North Asia. The quality of the Bronze Age imagery in two of the sites and the early images in the third site sets the complex apart from other in the Altai area.

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ICOMOS considers that the comparative analysis justifies consideration of this property for the World Heritage List

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### **Justification of Outstanding Universal Value**

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Tsagaan Salaa-Baga Oigor, Upper Tsagaan Gol, and Aral Tolgoi, represent a visual record of human prehistory and history in the heart of Eurasia, extending over a period of more than 12,000 years;
- Two of the properties (Tsagaan Salaa-Baga Oigor and Upper Tsagaan Gol) represent the most extensive such complexes yet recorded in North Asia and the third, Aral Tolgoi, is unquestionably the largest and best preserved concentration of open air rock art from the Late Pleistocene and Early Holocene yet identified within North Asia;
- By virtue of its images of aurochs, horses, ostrich, and other animals adapted to a cold, dry steppe environment, the rock art of Aral Tolgoi evokes a cultural landscape earlier than that represented by the forests that surround it;
- By contrast, the persistent relationships created between rock art, surface monuments, and relatively unchanging physical elements – rivers, ridges, directionality – at Tsagaan Salaa-Baga Oigor and the Upper Tsagaan Gol create an immediate sense of the intense integration of human communities with their physical environment.

ICOMOS considers that this justification is appropriate. Further, ICOMOS considers that the serial approach is justified.

### **Integrity and authenticity**

#### **Integrity**

ICOMOS considers that the boundaries of the three sites encompass all the key images. The three sites areas to a degree complementary with Aral Tolgoi presenting a unique array of early images and the other two sites reflecting the highpoint of Bronze Age cultures.

However some of the images are vulnerable to human interaction and some are suffering from the impact of grazing animals.

#### **Authenticity**

ICOMOS considers that there is no doubt over the authenticity of the rock art images and their ability to display their value.

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ICOMOS considers that the conditions of integrity and authenticity have been met.

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### Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (ii) and (iii).

*Criterion (i): represent a masterpiece of human creative genius;*

This criterion is justified by the State Party on the grounds that the quality of the rock art, its extent, and its relatively un-impacted character are unsurpassed within known rock art sites of North Asia.

ICOMOS considers that to demonstrate this criterion it would be necessary to show how the images manifest particular creativity that is not normally associated with such images. ICOMOS considers that the images on the sites are of value more for what they convey of the communities that produced them rather than for their outstanding imagery.

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ICOMOS considers that this criterion has not been justified.

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*Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town planning or landscape design;*

This criterion is justified by the State Party on the grounds that it applies to the Tsagaan Salaa-Baga Oigor and to the Upper Tsagaan Gol sites only for the following:

Imagery in both sites vividly describes the character of early hunting traditions; the appearance of herding, horse and camel riding in the Late Bronze Age and the exploitation of riding in hunting and herding activities; and the transition to full horse dependency in the Early Iron Age. The impact of that cultural development – ultimately the basis of the expansion of steppe empires after 400 BCE – is vividly reflected in Turkic imagery. An important and ubiquitous motif in both properties is that of the wheeled vehicle which seems to have come into North Asia from the west during the Bronze Age. The adoption of this vehicle, together with the domestication of yak as beasts of burden, profoundly affected the emergence of transhumance and herding dependency not only within the Altai Nuruu but also across the Eurasian steppe.

ICOMOS considers that this justification could apply to a number of properties identified in the Comparative analysis as hunting scenes and wheeled vehicles are found in many sites. Also the justification only applies to two of the sites not the whole property.

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ICOMOS considers that this criterion has not been justified.

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*Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;*

This criterion is justified by the State Party on the grounds that it applies specifically to Aral Tolgoi (AT) and Tsagaan Salaa-Baga Oigor (TS-BO).

While a few other sites in North Asia include imagery from a period considerably earlier than the Bronze Age, none have the number of images or the integrity of imagery to compare with these two sites. The images of mammoths (TS-BO), rhinoceros (AT), and ostriches (AT), refer to a geological period in the Late Pleistocene that has been identified with the “mammoth steppe”: a period when North Asia was significantly colder, drier, covered by rough grasses and forbs rather than forest, when it supported a very different fauna. Archaic images of aurochs, ibex, horses, and argali may well belong to that period, also. At both sites, images of elk executed in a typically archaic style reflect the transition to a more forested environment in the Early Holocene. This is the period that appears to be documented, also, in the earliest imagery of the Upper Tsagaan Gol.

ICOMOS considers that for this criterion to be justified it would need to apply to the whole property in terms of how as an ensemble the three sites contribute to our understanding of pre-historic communities in this area of Asia in an exceptional way. ICOMOS considers that in this way this criterion can be justified.

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ICOMOS considers that this criterion has been justified.

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ICOMOS considers that the serial approach is justified and that the selection of sites is appropriate.

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ICOMOS considers that the nominated property meets criterion (iii) and conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated.

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## 4 Factors affecting the property

### Development pressures

The main development pressures are roads and mining – see below. ICOMOS notes that local authorities for the nominated sites have now agreed not to issue further mining licences or give approval for the development of roads within the nominated area. However, as unplanned roads are found throughout Mongolia, ICOMOS considers that this, rather than planned road building, should be considered as a major threat.

### Tourism pressures

Tourist number is currently tiny and most tourists come in organised groups. The difficulties of getting permits for this sensitive border area mitigate against a huge rise in numbers. Nevertheless ICOMOS considers that any

increase in numbers could be disastrous without more structures in place to manage access, as many rock images are carved on boulders small enough that they could be carried away by people who want to add to their private collections or to sell to museums.

#### Environmental pressures

Surface deterioration is caused by extreme changes in temperature and by erosion due to wind and snow over time and this makes the patinated surfaces prone to peeling. Cracks in the rocks host plants that contribute to this flaking.

#### Vegetation

Colonies of lichens are invading the decorated surfaces. The problem of controlling the vegetation as well as that of desertification has been much discussed in recent years, but no actions have been taken. The non-interventionist decision is wise, for now, because the protocols for actions in this area remain very unclear and need to be specially adapted to circumstances. Monitoring areas at high risk is desirable.

#### Graffiti

Graffiti is quite considerable where access is easy, such as adjacent to the road through *Tsagaan Salaa-Baga Oigor*. They take the form of either painted or pitted images and are mostly in Cyrillic script (Kazakh or Mongolian). There is less graffiti inside the protected areas (national parks) and there is a move to increase the size of the parks, but this could impact on people's livelihoods.

#### Tracing and other means of copying images

It appears that copying involving rubbing a damp sheet of paper over the engraved surface, a technique widely used in the 1970s, is still in use, as well as the application of chalk, and both of these activities should be stopped.

#### Uncontrolled access

People and animals can cause damage when treading on the rocks. However the presence of local people in the area is a positive advantage. Nevertheless it was reported to the mission that more damage was done to images outside the national park than within. ICOMOS considers that awareness raising would appear to be necessary to allow understanding of the significance of the images and that some specific control is needed in Aral Tolgoi as the flocks of grazing animals all come from the nearby Border Guard Station.

#### Mining

Mining appears to be a real threat. The State issues operating licenses against a percentage of revenues and payment for damages to the environment. Since 2009, however, all mining licenses have apparently been withdrawn in the property as the environmental laws have become stricter.

There remains concern, however, as the area is known to hold sources of copper, coking coal, gold, silver, uranium, molybdenum and lithium and other rare metals and demand for them is likely to increase. Also mines represent 20.3% of the country GDP, 42.7% of its exports, and employ nearly 40,000 employees, as well as involving some 200 foreign companies.

There are sources of lithium pegmatites, not far from the proposed sites. They are linked to salt lakes. Since April 2010, mining activities should be subject to official approval. However, there seem to be several small private mining activities that employ people on a daily basis, even though it would appear that these activities are illegal.

ICOMOS notes that the Deputy Minister of Culture, Environment and Science is said to be committed to developing a specific document on the abolition of mining in the proposed sites and in the upstream areas of the rivers flowing through them. At the moment no such ban exists.

#### Natural disasters

Tsagaan Salaa-Baga Oigor, Upper Tsagaan Gol and Aral Tolgoi are located within active seismic and earthquake zones.

#### Impact of climate change

An increase in rainfall, which could increase vegetations, or a decrease that might threaten the livelihoods of farmers, could impact adversely on the property, first in terms of vegetation growing over the rock face and secondly as there would be no local communities to act as guardians of the sites. Currently an increase in temperature, and the decrease in permafrost is encouraging more herders to use the area in the spring and a substantial increase in grazing animals could be highly detrimental to the property.

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ICOMOS considers that the main threats to the property are graffiti, uncontrolled access (for people and animals) and mining and that currently there are not sufficient measures in place to adequately deal with any of these threats although progress is being made at local level – see below.

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## 5 Protection, conservation and management

### Boundaries of the nominated property and buffer zone

The boundaries are adequate to enclose each of the three main rock art sites. The sites are of enormous size and it will never be feasible to enclose or protect the boundaries.

All three sites are surrounded by large buffer zones that encompass the plains on which are many surface monuments. The boundaries of the buffer zones are unrelated to natural features and thus difficult to determine on the ground.

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ICOMOS considers that the boundaries of the nominated property and of its buffer zone are adequate.

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### Ownership

The rock art site of the Tsagaan Salaa-Baga Oigor is owned by Ulaankhus soum (department), Bayan-Ulgii aimag (region). The rock art site of Upper Tsagaan Gol is owned by Tsengel soum, Bayan-Ulgii aimag. The rock art site of Aral Tolgoi is owned by Tsengel soum, Bayan-Ulgii aimag.

The three sites are located in areas traditionally used by herding communities; the herders have an interest in the sites.

### Protection

#### Legal Protection

The three sites of Tsagaan Salaa-Baga Oigor of Ulaankhus soum and Upper Tsagaan Gol (Rock arts of Shiveet mountain) and Aral Tolgoi of Tsengel soum of Bayan-Ulgii are included on the list of historical and cultural properties under state protection as listed in 2008 under the provisions of the Law on Protecting Cultural Heritage of Mongolia, 2001.

The territory of Mongolia is divided into 21 *aimags* (regions) with *soums* (departments), within which are smaller units known as *baghs*, bringing together families and represented by a manager. Management and protection can be applied at each level of government. However, the nominated sites are all under the protection of the state.

Under the Mongolian Law on Special Protected Areas, 1994, the whole of Aral Tolgoi and half of the Upper Tsagaan Gol Complex are included within the Altai Tavan Bogd National Park. This offers protection to the natural aspects of the area, including water sources, and controls the development of villages and the construction of facilities for camping sites to pasture cattle permanently. As stated above, it appears that the Park offers protection for the images and it would be desirable to extend the park to cover all of the nominated sites. This has been discussed but there is resistance from some local communities. The nomination dossier sets out the framework that will be put in place to implement the necessary protection, if the property is inscribed.

The Government of Mongolia shall create the relevant legal framework for safeguarding and maintaining nominated properties in compliance with the principles of World Heritage:

- Management of the safeguarding and maintaining of the nominated sites shall be regulated under applicable laws and regulations of Mongolia in line with the Convention of World Nature and Cultural Heritage;
- The Government of Mongolia shall pass and implement national policy, programmes and strategies for safeguarding and maintaining nominated sites and cooperate with and encourage initiatives and participation of governmental and non-governmental organizations, private entities, bilateral and international organizations and individuals;
- Under the supervision and guidance of the Ministry of Education, Culture and Science, the administration/ management office of rock art sites of TS-BO, Upper Tsagaan Gol and Aral Tolgoi in Bayan-Ulgii aimag shall implement the management plan;
- The Mongolian National Commission of World Heritage shall provide technical assistance and guidelines to the Management office.

However ICOMOS considers that it is clear that effective implementation of protection of the rock art will need to be carried out at local level. In some *soums* action is already being taken. The *soum* Ulaankhus has signed agreements with farmers to safeguard the engravings and archaeological sites, ensuring their protection from external hazards and in particular those related to tourism.

At *soum* Tsengel, a group of farmers has been organized for the protection of heritage plants. Vandalism has declined significantly. Inventories are updated with the help of local people and teachers are involved in curriculum development on heritage. This *soum* has organized a seminar for governors of the 21 Mongolian *aimags*, to show them how biodiversity and heritage is managed.

Archaeology is under state control, and excavation is subject to approval from the Ministry of Culture and an additional authorization is needed from the Ministry of Environment within the National Park.

#### Traditional Protection

This is crucial to the protection of the rock art. As set out above, the local authorities are now working with local farmers to engage them in heritage protection.

#### Effectiveness of protection measures

Although protected at a national level, this protection must be implemented on a day to day basis at local level and with the active participation of the local communities. This way of working is beginning to happen.

ICOMOS considers that protection will however need to be implemented at national level in relation to major development proposals, such as roads and mining, and

currently it is not clear whether the Law on Heritage can prevent road and mining development.

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ICOMOS considers that the legal protection in place is adequate to deflect most threats but that its implementation needs to be strengthened (see below) to prevent illegal road building and small scale illegal mining. The protection does also appear to need strengthening to address large scale mining threats.

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## Conservation

Inventories, recording, research

There is no centralized management of the archaeological information at national level. The documentation for the three sites is thus scattered amongst archaeologists and between countries such as Russia and the United States.

The management plan sets out an aim to establish a comprehensive rock art site database. It is understood that there are plans to use as a model the work carried out in Tamgaly (Kazakhstan). However currently there are no computer database or management tools for this documentation.

ICOMOS considers that there is an urgent need to centralize all this information, even if the originals remain in the respective partner countries. Training and capacity building would be desirable in this area.

Currently the dating of the rock art is done on the grounds of style, themes and especially on the visual appearance of patinas. Research has not provided a clear chronological framework. Non-destructive methods of dating need to be considered such as lichen chronology.

Present state of conservation

The current state of conservation appears variable with those images near roads or other access being disturbed in various ways.

Active Conservation measures

There are currently no active conservation measures.

The Management Plan envisages an annual monitoring by local staff, if the property is inscribed. However there are currently no responsible bodies who could recommend any remedial action, and there are no people trained in restoration work. Also, given the huge size of the three areas, and the limited possibilities for intervention, there seems little chance of stabilising the images, and the best action will be to limit access of people and to try to limit certain grazing animals.

Many foreign expert teams have been working in this area for several decades but it appears that there research is not correlated necessarily to local needs and for the most part their records and data remain outside

the country. There is a need to ensure that the management authority assumes some responsibility for a research strategy.

Maintenance

There is also little active maintenance of the rock art sites.

Effectiveness of conservation measures

ICOMOS notes that there are currently no active measures being undertaken. There is also a lack of information about the images as no database has been established drawing together all available information. This is essential in order to prioritise activities across these three very large sites.

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ICOMOS considers that conservation work needs to be underpinned by adequate documentation and a database urgently needs to be established.

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## Management

Management structures and processes, including traditional management processes

The current management structure is minimal. Although levels of authority have been established, the main activities arise at local level. ICOMOS considers that there is an urgent need for management to be strengthened in order to raise awareness of the rock art resource, to optimise the support of local communities, to provide more education and training and better signage so that tourists are aware of the significance of the areas they are visiting.

There is currently no over-arching management structure for the three sites.

Policy framework: management plans and arrangements, including visitor management and presentation

A Management Plan for the conservation and preservation of the *Petroglyphic Complexes of the Mongolian Altai: Rock art And Cultural Landscape* was developed by the Ministry of Education, Culture and Science, the Mongolian National Commission for UNESCO, the Mongolian National Committee for World Heritage, and the Institute of Archaeology of the Mongolian Academy of Sciences. This draft Management Plan will be submitted for ratification to the Government in 2012.

The Management Plan includes specific mid-term objectives (2010-2012) and long-term objectives (2010-2015). One of the mid-term objectives is to establish a Management Authority to implement the Plan. A second is to develop the legislative and monitoring framework to enforce the regulations of Mongolia's *Law on Protecting Cultural Heritage*.

The aims of the Management Plan cover all the main areas including the need to look at the sustainability of the wider area. However, at the moment they remain aspirational. As the nomination dossier says: *'Harshly saying, rock arts are left alone without any management in many respects'*.

The best management would be one that takes into account the intangible cultural heritage of each site and in particular the associations with Shiveet Khaikhan in order to sustain the sense of tradition and place. The balance between tangible and intangible heritage should be respected and form part of comprehensive offering for tourists.

The management system needs to address the issue of foreign expeditions to the area. Applications for study by foreign scientists should be subject to review by Mongolian archaeologists who could suggest appropriate conditions.

There is also a need to put in place appropriate management for the buffer zones that could hold archaeological information relevant to the sites. Various funerary monuments in the buffer zones have no historical ties to the rock art; rather they connect with the western territories in central Mongolia but are not more numerous or more dramatic in the aimag Bayan-Ulgii than in the rest of the territory. However ICOMOS considers that they need careful management.

#### Risk preparedness

This has not been addressed in the dossier.

#### Involvement of the local communities

The local communities are increasingly involved – see above.

IUCN notes that: *"Some of the land has traditionally been used by herding communities. Grazing might be increasing in the coming years due to climatic impacts. There is a proposed management plan for this serial property, and IUCN recommends ICOMOS confirm that there has been effective consultation with the herding communities in the process of its preparation."*

#### Resources, including staffing levels, expertise and training

It is suggested that as the three sites are remote and unfenced they will need significantly fewer resources than in Tamgaly, Kazakhstan. It is suggested the resources will come from national and local government budgets, fees from tour operators running tourism businesses within the nominated areas, donations from international organizations and foreign countries, and from fees assessed from individuals wishing to study the rock art of the nominated properties.

ICOMOS notes that none of these sources is yet in place.

There are very few trained staff apart from cultural heritage inspectors of each soum. The need to train more people at all levels is acknowledged in the management plan. However given the paucity of resources, it is stated that the possibility of unpaid interns or peace corps volunteers will be explored.

#### Effectiveness of current management

The current management is at the moment skeletal but there appears to be strong support at local level and a willingness to put in place structures to optimise the involvement of local communities. However adequate management will need resources to ensure adequate documentation and monitoring of the three sites.

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ICOMOS considers that the aims of the Management Plan are satisfactory but resources are needed to implement them and it is essential that an overall management authority is put in place.

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## 6 Monitoring

Some monitoring indicators have been suggested related to the fracturing of rocks, lichen growth, impact of tourists and the construction of gers. These however do not yet seem to be active. The indicators also include the construction of roads and mining activities – and these are not valid as indicators. Every effort needs to be made to ensure that such projects are assessed before they are carried out.

Monitoring is one of the key tools for maintenance and conservation – it should be preventative conservation. Trained observers are needed who could register on a regular basis the degradation of natural or manmade deterioration on some sort of general database. The model developed in Sweden for the Bohuslän on Tanum petroglyphs is a good example.

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ICOMOS considers that the indicators suggested need to be edited to those that reflect conservation and monitoring of the indicators needs to be put into practice.

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## 7 Conclusions

The three sites are undoubtedly spectacular in terms of their sitting in dramatic valleys of the Altai Mountains and in terms of the number of their images. The rock art is part of an enormous corpus of work in North and Central Asia where over 70 significant sites have been identified at various times. The three nominated sites together are one of the largest, oldest and least damaged concentrations of rock art in North Asia.

The three sites nominated currently do not have a database of information drawing together the known research on the area, or identifying in overall terms what is being nominated. Considerable data has been

collected over many decades by foreign teams, and some of this assembled electronically, but for the most part this data is outside the country and fragmented. There is an urgent need to assemble this data and to put in place a database system within the property, building on the work that has already been accomplished within the region at Tamgaly, in order to allow staff at local level to have a full understanding of what rock art exists and its conservation needs.

The three sites are on an enormous scale and will only be managed with the effective participation of local communities who also need to have access to data.

Although one site, Aral Tolgoi, is put forward for its early images, there has been no work to substantiate the dates through for instance excavation of surrounding terraces, where chance finds have been noted, or through lichen analysis. There is a need to establish research priorities and to coordinate permission for visiting teams to address these research priorities.

Currently the Management Plan has not been put into practice and no overall management authority has been set up for the three sites. There are considerable threats to the sites from grazing animals, and from potential mining activities, and at the moment there appears to be no presumption against mining in the nominated property or its upstream hinterland, although verbal assurances have been given at a Ministry level that such a ban will be put in place.

#### **Recommendations with respect to inscription**

ICOMOS recommends that the examination of the nomination of the Petroglyphic Complexes of the Mongolian Altai, Mongolia, to the World Heritage List be **deferred** in order to allow the State Party to:

- Put in place a database system for the property, and a timescale for populating this database through assembling the existing material for the sites, and for undertaking any further work that may be needed to gain an overview of the images clusters;
- Put in place a management authority for the three sites as a means of implementing the Management Plan; and ensure adequate resources for its implementation;
- Provide assurance that mining will be banned in the nominated areas and their upstream hinterland;
- Provide assurance that illegal road building activities will be stopped.

ICOMOS further recommends that the State Party consider the following:

- Extend the Altai Tavan Bogd National Park to cover all of the three nominated sites.

ICOMOS considers that any revised nomination would need to be considered by an expert mission to the site.

ICOMOS further considers that it might be appropriate to consider submitting an international assistance request for support for the establishment of a database.

ICOMOS also suggests that the international community might offer cooperation to help with assembling the results of foreign research teams.



Map showing the location of the nominated properties



Tsagaan Salaa - Baga Oigor



Aral Tolgoi



Upper Tsagaan Gol



Examples of funerary monuments