

Heritage Management Plan of Rock Shelters of Bhimbetka (Madhya Pradesh) with special reference to Disaster Risk Management

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Introduction

The world famous site of Bhimbetka lies about 45 km south east of Bhopal in Madhya Pradesh, India and is spread with an aerial span of more than 8 kms. Scholars have enumerated more than 700 rock shelters in these clusters in the large aerial spread known as Bhimbetka Rock Shelters. Bhimbetka reflects a long interaction between people and the landscape, as demonstrated in the quantity and quality of its rock art and is closely associated with hunting and gathering economy as demonstrated in the rock art and in the relics of this tradition in the local *adivasi* villages on the periphery of this site even now. The site complex is a magnificent repository of rock paintings within natural rock-shelters with archaeological evidences of habitation and lithic industry, from the *Paleolithic* and *Mesolithic* periods through the *Chalcolithic* to Mediaeval period. The core area forms a part of the *Vindhyan* range in Central India within the northern periphery of the *Ratapani* Wildlife Sanctuary. It is a dry deciduous type of forest containing many varieties of edible flowers, fruits, seeds and tubers. Besides, the forest is rich in economic and medicinal plants. This forest has traditionally been remained as the source of sustenance for the surrounding tribal population.

Cultural Heritage of Bhimbetka

With these wide varieties of landforms, flora and fauna noticed even now it is evident that the natural settings offered bounties of nature to the ancient man. Excavations carried out by different universities have exposed a continuous spectrum of human activities starting from the earliest activity of the human beings. These are: Lower Paleolithic, Middle Paleolithic, Upper Paleolithic, Mesolithic, Early Historic and Medieval remains. The Lower Paleolithic remains found from this site as per the excavators are: pebble tools, hand axes and cleavers. Scrapers, smaller hand axe and cleavers mark the Middle Paleolithic. Although the Upper Paleolithic is not very conspicuous, yet it is clearly noticed in the stone tools like blades, borers and burins obtained from the site. The Mesolithic period is marked by a large variety of stone tools including blades, triangles crescents, trapezes and blade cores. The Early Historic remains are represented by structures of stone, iron implements, potsherds besides objects of ornamentation like bangles and beads. In these cave inscriptions of Mauryan/Sunga Brahmi again suggest the early moorings of the site. Besides these structural remains and engraved inscriptions, there are a large number of *Shanka lipi* inscriptions. According to researchers in the field, with the evolution of his cognitive capacities, man started to make tools. Somewhat later he also started

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to make different types of visual objects like carvings on wood engravings on stone and making lines on stone. It appears therefore that he had started to make art objects quite early *i.e.* some time in the Lower Palaeolithic period. Amongst the earliest such creations is the cupules seen in the Auditorium Rock Shelter at Bhimbetka. Such engravings are quite rare and are seen only occasionally elsewhere. All these show that there was continuous human activity from the prehistoric times to the mediaeval times. Besides in the realm of art there are nearly 450 rock shelters, which contain rock paintings. Some of the rock shelters have more paintings whereas others have only a few.

Nature of Problems of Rock Shelters of Bhimbetka and Management Issues

The vast area of Bhimbetka with its varied topography, ecological settings, archaeological remains have a number of stake holders, like the Archaeological Survey of India, Forest Department, Revenue Department and the villagers of the 21 villages located around the core zone who were traditionally exploiting the forest resources besides tourist pressures on the site. Not only this, but there are a number of authorities having jurisdiction over the total area (including the buffer area as per the World Heritage eligibility requirements) and sometimes the various laws are in discordance with the optimal management of the site. Moreover, the continuity of traditions in the villages surrounding the Bhimbetka region draws its resources from the forests of the region, which already face various challenges. Again many sections of the forest laws prohibit the carrying out of activities in the jungle related to the economic sustenance and extraction of useful resources from the forest. Strict implementation of these laws causes further impoverishment of the local people. In view of the various different types of resources and organizations responsible for its maintenance, perspectives are different due to the emphasis on implementation of laws based on varying concerns and there are problems of management of the site for posterity, for tourists and for growth of tourism industry. Some of the problems that can be enlisted are as follows:

- Dual Jurisdiction: as the management of the cultural remains is with the A.S.I. while the forest ownership belongs to the Department of Forest, M.P.
- Although the various acts of both the departments are largely helpful in the preservation of heritage as a whole, differences arise in implementation of work.
- Burgeoning population affects the resources of the forests and leads to its unsustainable exploitation.
- Erratic nature of tourist arrival especially on Sundays and other holidays which reduces the ratio of watch and ward staff vis-a-vis the number of visitors
- Encroachment in Buffer area.
- Lack of provisions to regulate the Buffer area in consonance with the UNESCO regulations.
- Illegal construction inside the core area.
- Deforestation due to provision of some relaxations provided by law.
- Grazing by cows within the protected area.
- Large area to be covered by less number of staff deployed at different groups

of rock shelters.

- Forest fires caused by the local people.
- Growth of exotic plants and shrubs like *Lantana camara* that causes the lessening of biodiversity of the area.
- Reduction of fauna of the region due to a variety of interrelated reasons.
- Vehicular air pollution and noise pollution especially during the uphill climb of larger vehicles at the main center of Bhimbetka.
- Visitors' mindset of picnicking.
- Graffiti by visitors.
- The pathway of visiting the accessible rock shelters is strenuous for old people and ailing persons.
- Visitors see the levying of ticket as a burden failing lack of provisions for visitor facilities.
- Facilities of water and electricity in the forest area are prohibited.
- Lack of other conveniences of International Standards lack at Bhimbetka.
- Lack of refreshment centers at the site proper.
- Wastage of time at the Railway crossing.
- Increase in temperature due to deforestation as noted in temperature difference between open areas and forested area.
- The possible effect of rainwater creeping down that had caused patination earlier even on the paintings. The situation is under constant monitoring by the watch and ward staff posted at Bhimbetka.
- The effect of bird droppings on the corrosion of paintings are also being watched, so as to prevent any possible damage.
- Difficulty in maintaining the continuity of traditions due to the changing life styles of the population around the Core area and also due to the laws in force besides the dwindling forest resources that cannot sustain significant dependence on it.
- Effect of growth of vegetation on the rock shelters which may cause cleavage ultimately of the rocks along the bedding planes.
- Lack of parking space for vehicles during high rush days especially during the Sundays of the monsoon season.
- Pollution in the main Bhimbetka region during the annual *mela* held during March/April.

Disaster Risk Management Plan of Bhimbetka

The site of Bhimbetka with its vast geographical area, its large variety and quantity of natural and cultural wealth evidently has a large number of management issues that are yet to be resolved to the optimal levels of perspectives of the stake holding organizations. The foremost issue of management is disaster risk management of the site. Of all the ranges of risks such as forest fire, human vandalism, wood cutting, cattle grazing, forest fair, vehicular pollution, increase rate of tourists, rock weathering, the risk of forest fire are of utmost concern and hence a proper disaster risk management to overcome this risk factor is highly essential for these rock shelters. Intentional firing to remove the evidence of illegal tree falling in the area, burning of leaves as part of ground clearance of *Mahua* trees, smoking or casual use of fire and natural forest fire are some of the major threats to these rock shelters. This in turn results in change

in bio-diversity, reduction in growth and density of vegetation, reduction in soil nutrients and extinction of many medicinal plants. Hence a proper management plan is required to safeguard this rich cultural heritage. Some of the measures which can be adopted are:

- (i) In the absence of large water bodies in the area the forest fire may be controlled by cutting fire line around the sensitive area (s) depending on topography and other features.
- (ii) By engaging fire watchers
- (iii) By educating people about precautionary measures for the prevention of forest fire
- (iv) Formation of fire-fighting squad
- (v) Mapping of sensitive area (s)
- (vi) Through Joint Forest Management by involving the local communities
- (vii) Attempt may be made to reactivate the stream
- (viii) The area which has become completely barren due to constant human vandalism may be rejuvenated to the natural composition of forest

Conclusion

The site of Bhimbetka with its vast geographical area, its large variety and quantity of natural and cultural wealth evidently has a large number of management issues that are yet to be resolved to the optimal levels of perspectives of the stake holding organizations. While there are a number of authorities having jurisdiction over the total area (including the buffer area as per the World Heritage eligibility requirements), sometimes the various laws are in discordance with the optimal management of the site. Moreover, the continuity of traditions in the villages surrounding the Bhimbetka region draws its resources from the forests of the region, which face several challenges. Again many sections of the forest laws prohibit the carrying out activities in the jungle related to the economic sustenance and extraction of useful resources from the forest. Strict implementation of these laws causes further impoverishment of the local people. However, if control is not exerted, the forests will become barren and unexploitable. In the situation the criterion for the eligibility of the World Heritage status would be negated. Either way the continuation of earlier lifestyles mentioned as under: '*Bhimbetka is closely associated with a hunting and gathering economy as demonstrated in the rock art and in the relicts of this tradition in the local Adivasi villages on the periphery of the site*', evidently is not sustainable due to the fast pace of the changing life styles and also due to the dwindling resources of the forest. Evidently the ambience around the sites is also very important from the point of view of the site and any negation could risk the site to be put under the World Heritage under risk, some decades later.

In view of the various different types of resources, organizations, responsible for its maintenance, perspectives are different due to the emphasis on implementation of laws based on

varying concerns and there are problems of management of the site for posterity, for tourists and for growth of tourism industry. It is therefore necessary that the Archaeological Survey of India have a data base of the large site on which it can build up the mechanism of the management plan already submitted to the World Heritage Monitoring bodies. On the other hand, regular meeting between the various stake holders should be held so that a better rapport between them could be established. These will go a long way in the sorting out of problems that can be overcome. The problems caused due to the bottlenecks imposed by rules and regulations have to be addressed by approaching at the highest levels possible. There are problems such as the prohibition of the developmental activities like digging for water or providing electric poles. Even the Archaeological Survey of India, which is responsible for providing bare minimum facilities at the site proper, is not inclined to erect poles in a prehistoric site. In fact a prehistoric site should also not have metalled roads if the highest concordance of the ambience is to be taken into account. However, the visitor accessibility and at least bare minimum facilities are essential. Thus, some methods should be envisaged by the managers of the site that drinking water and other facilities are available to the visitors. In this context, the ICCROM publication on the "Management Guidelines for World Cultural Heritage Sites" mentions that the establishment of a Site Commission is recommended (within the state party's Archaeological Organization). If the multiple jurisdictions caused problems are not resolved, in the best interest of the site, its ambience, World Heritage status requirements, then it is better that a separate legal entity, including laws applicable tailor made for the site alone is enacted. It is imperative that the entangled wires of jurisdiction are disentangled, so that sustainable tourism to the maximum becomes a reality. The tourism industry the world over is growing by leaps and bounds and all those who are concerned should make a concerted effort to sow labour and reap the fruits.

Thus an integrated approach is required for disaster risk management of rock shelters of Bhimbetka by integrated risk assessment, by involving local communities and addressing the complexity of heritage in the present context by seeking to integrate living dimensions of cultural heritage into risk preparedness strategies.

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