1.	Introduction
a.	Country (and State Party if different):
	Pakistan
b.	Name of World Heritage property:
	Archaeological Ruins of Moenjodaro.
C.	Give the date of inscription on the World Heritage List and subsequent extension (if applicable):
	05-09-1980
d.	Person(s) responsible: Director General Address: Department of Archaeology & Museums, Government of Pakistan, 27-A, Al-Asif Building, Shaheed-e-Millat Road Karachi, Pakistan.
e.	Signature on behalf of the State Party:
	Signature
	Name Dr. Fazal Dad Kakar
	Function Director General

2. Statement of significance

Cultural criteria: ii– iii

Please propose a statement of significance by providing a description of the World Heritage value(s) for which the property was inscribed on the World Heritage List. This description should reflect the criterion (criteria) on the basis of which the Committee inscribed the property on the World Heritage List and it should also detail what the property represents, what makes it outstanding, what the specific values are that distinguish the property as well as what its relationship with its setting is, etc:

The Archaeological Remains of Moeniodaro are located on the left bank of Indus River about 510 km North-East of Karachi and 32 km away from Larkana District in the Province of Sindh, It represents the metropolis of the Indus Civilization which is the third great ancient civilization in human history. This great civilization flourished approximately between 2500 BC-1500 BC in the Indus Valley. The discovery at Moenjodaro in 1922 has unveiled an amazing story of the customs, art religion and administrative abilities of its inhabitants and the creator of this civilization. The well planned city, built mostly in baked brick buildings with a public bath, college of Priests and elaborated drainage system soak pits for disposed of sewerage and a large state granary, bears testimony that it was a metropolis of great importance enjoying a well organized civic, economic, social and cultural system. How this one of the great metropolis (another at Harappa District, Sahiwal) of Indus Civilization came to its tragic end, is still an enigma. Many factors have been attributed to the collapse and ultimate disappearance of this great civilization.

The citadel area contains administrative and religious building while the low mound or the lower city represents residential quarters, shopping areas and other important buildings. Each area has been given a particular name (which is derived from the name of principal excavator who worked in the area), such as S.D. Area, D.K. Area, H.R. Area, V.S. Area, L. Area, M.N. Area and D. Area.

3. Statement of authenticity / integrity

Have the World Heritage values identified above been maintained since the property's inscription? YES
Have there been changes in the authenticity / integrity since inscription? NO
Are there (further) changes foreseeable to the authenticity / integrity of the property in the near future? NO

4. Management

How could the arrangements for the protection and the management of the property best be defined (more than one indication possible)?

Legal (/)	The Antiquities Act 1975 of Pakistan provides
	adequate remedy for protection of the property

- Contractual (/) Due to World Heritage Site, the International Conventions/laws concerning protection of Cultural Heritage are also applicable, which provides additional guarantees for its protection.
- Traditional (/)The masses have great emotional attachment with
this heritage site, having been built by one of the
most staunch Muslim rulers of the Sub-Continent
as a military might and the people are themselves
determined to protect this splendid heirloom of the
history.

Please describe and assess the implementation and effectiveness of these arrangements for the preservation of the values at the national, provincial and/or municipal level:

The Government of Pakistan in collaboration with UNESCO formulated a master plan for preservation of Moenjodaro in 1972. This master plan included five schemes namely (i) River Training Scheme (ii) Ground Water Control Scheme (iii) Conservation Scheme (iv) Plantation and Landscaping Scheme and (v) Cultural Tourism Scheme.

The Government of Pakistan has prepared and executed a number of different schemes for its conservation and restoration. After implementation of different projects the Department of Archaeology has succeeded to control on its further deterioration to some extend. The Department of Archaeology is trying its best level to preserve the Monument for our future generations. Since Archaeology is on the concurrent list of the constitution of Pakistan, 1973, the Federal, Provincial and the Municipal Governments are equally responsible for the protection of all cultural heritage sites and specifically the protected and the World Heritage Sites.

In general terms, can this legislative, contractual and/or traditional protection be considered sufficient? **YES**

Please explain:

The present Antiquities Act, 1975 of the Department of Archaeology, Government of Pakistan provides sufficient guidelines/legislations for the protection of our cultural heritage including Moenjodaro.

Provide a list and summaries of laws and regulations concerning cultural and natural properties protection and management (including extracts of relevant articles from the

F	nstitution, Criminal Law, Law/Regulations on Land-use, Environment Law and restry Law, amongst others). Please also attach any documentation available accerning these points:
	e following Laws and Regulations are concerned for the protection and nagement of cultural properties of Pakistan:
	1. Antiquities Act, 1975.
	2. Excavation & Exploration Rules, 1978.
	3. Conservation Manual of Sir John Marshall.
	4. Immovable Antiquities (mining, quarrying and blasting in restricted areas) Rules, 1979.
	5. Admission of Public into Immovable Antiquities Rules, 1982.
	6. Cinematographical Filming Rules, 1989.
	7. Export of Antiquities Rules, 1979.
p ha ir T	scribe the administrative and management arrangements that are in place for the perty concerned, making special mention of the institutions and organisations that we management authority over the property as well as of the arrangements that are blace for the coordination of their actions: e Director, Southern Circle of Archaeology, Pucca Fort, Hyderabad is sponsible for the administrative and management arrangements for e property concerned.
Р	ase indicate under which level of authority the property is managed:
	Property () Regional () National (/) Other (please describe): World Heritage
re	ase provide the full name, address and phone/fax/e-mail of the entity(ies) directly ponsible for the management (conservation, preservation, visitor management) of property:
D S D G P H	. Qasim Ali Qasim, rector, uthern Circle of Archaeology, partment of Archaeology & Museums, overnment of Pakistan, cca Fort, derabad, Sindh, kistan.

Т	Telephone: 92-0741-459051
F	ax:
E	E-mail:
	s it necessary to revise the administrative and management arrangements for the property?
I	f YES, explain why this is the case:
I	s there a management plan for the property? YES
I	f YES, please summarise, indicating if the plan is being implemented and since when:
a	The present Management Plan of the property contains the administrative set up which perform vital functions for its preservation, conservation and up keep.
p	Please report on legal and administrative actions that are foreseen for the future, to preserve the values (e.g. passing of legislation, adjusting administrative and nanagements, implementing of drawing up of a (new) management plan, etc.):
P	Please provide detailed information, particularly in cases where changes have
0	occurred since the inscription of the property, on the following matters:
	• <u>Conservation</u>
	Make reference to all major interventions at the property and describe its present state of conservation:
a v c n b d s t	The structural remains at Moenjodaro started deteriorating from Salt, Drainage and Thermal problems soon after their excavation. The continuous rise of ground vater table including the salt taken moisture to more into the structures through capillary action, consequent upon the conduction of Sukkur Barrage and its network of canals in 1932, had accelerated the speed of its deterioration. The prick walls are in danger of collapse due to their surface decay and structural listress by hydration/dehydration process of salt, rain and extreme thermat tress. The river Indus showed a tendency to move westward toward the remains hreatening the very existence of the site.
N	Moenjodaro at a cost of US \$23.500 million during the period from 1979-1997 The work carried at the site included:-

i) Construction of 5 spurs and armouring of right bank of Indus River.

- ii) Installation of 27 Tube Wells and construction of a collector drain around the site. Besides, construction of a disposal chain and a pumping station on the left bank of Dadu Canal and,
- iii) Conservation of structural remains. (The schemes meant for cultural tourism and landscaping were however left to be implemented in future)
- <u>Ownership</u>

Make reference to all major changes in ownership of the property and describe the present state of ownership:

No changes have been made/occurred in the ownership of the property concerned which is still under the control of Department of Archaeology and Museums, Government of Pakistan.

Please, give a detailed description of the staffing of the site:

The staffing position of the property concerned is as under:

- 1. Curator
- 2. Assistant Curator
- 3. Assistant Archaeological Engineer
- 4. Supporting Staff (Clerks and Site Attendants, etc.)

Is the staffing level sufficient for adequate management of the property? **NO**

If NO, what should be done to improve the situation?

In order to improve the situation, a number of staff is required to manage properly and conserve the World Heritage Monument. The Department of Archaeology is trying to secure necessary staff for the purpose.

Does the staff need additional training?

YES

If YES, what are the training needs for your staff?

- 1. Conservation training pertaining to different fields such as, Bricks conservation, Chemical treatment, landscaping, hydraulic work etc.
- 2. **Curatorial staff training.**

Describe the funding and financial situation of the property, indication sources, level

and regularity of financing:

The main source of funds for the Department of Archaeology & Museums for the Preservation of Conservation of the Cultural Heritage of the country is allocation from the National Budget.

There are two types of Budget under which the conservation of sites and monuments is carried out by the Department of Archaeology & Museums Government of Pakistan .

- a) Normal Budget
- b) Annual Development Programme (ADP)

a) NORMAL BUDGET:

This Budget is provided to our Circle Offices/S.R.Os annually for the conservation of the sites/Monuments which is used for carrying out the annual repair and maintenance of the sites and monuments. Under this budget, special problems are also attended concerning to the Conservation of the Sites/Monuments.

b) ANNUAL DEVELOPMENT PROGRAMME

Under the Annual Development Programme the Government provides the funds to the Department of Archaeology & Museums on the already approved schemes. This budget is also provided annually according to the approval phasing of the scheme.

Source of expertise and training in conservation and management techniques.

The Department of Archaeology & Museums has established an institute known as Pakistan Institute of Archaeological training and Research (PIATR) at Lahore Fort, Lahore in 1986. The PIATR is the main source to provide training in conservation and management techniques and other related trainings for the managers and curators of the cultural properties. The PIATR has successfully organized many International and National Training Programmes some of them with the assistance of the UNESCO.

Is the available funding sufficient for adequate management of the property? **NO**

If NOT, describe the financial resources that would be required for the management of the property:

For the proper management of the property different financial resources could be utilised for the purpose. The Department of Archaeology and Museums collect funds through different resources which can be utilised for the property concerned to implement on the different programmes schemes etc. Indicate International Assistance from which the property has benefited:

- World Heritage Fund:
- UNESCO International Campaign:
- National and/or regional projects of UNDP, the World Bank or other agencies:
- Bilateral co-operation:

Other assistance: A Master Plan was made by the Government of Pakistan in collaboration with UNESCO in 1972 for the preservation of Moenjodaro, (cost of revised M.P.Rs.352.241 million, which included foreign exchange of Rs, 3.121 million). The 1972 Master Plan was particularly executed by the Authority for the Preservation of Moenjodaro during the period form 1979-97. The World Heritage Fund under Technical Cooperation Programme has provide US\$ 31982 in 1982 The UNESCO under Training Assistance Programme has provided US \$ 7078 during 1983 for the up keep of Water and Soil Investigation Laboratory (WASIL) at Moenjodaro.

Describe the IT (computer) equipment of the site and/or management office and assess its effectiveness:

NO

Are you using (multiple indications are possible):

✓ PC	()
Apple	()
Mainframe	()

Please, give the number of available computers:	TWO
Does an operational access to the Internet exist?	NO
Is e-mail used for daily correspondence?	NO
Is there a Geographical Information System (GIS) for the site?	NO
If YES, what software do you have and how is the GIS used?	

List scientific studies and research programmes that have been conducted concerning the site:

The excavation at Moenjodaro carried out mainly by Sir. John Marshal (1922-27), Ernest H.J. Machey (1927-31), Sir. R.E. Mortimer Wheeler (1950), Dr. G.F. Dales, (1964-65) and salvage operations by the Department of Archaeology & Museums during 1987 and 1989. Since 1964 a large number of technical expert mission from UNESCO had visited Moenjodaro to save the deteriorating condition of structural remains, These scientific studies/research programmes were mainly carried out by Dr. H.J. Plenderleth, S.J. Van Kregten, L.C. Kreple, Sir.

Mortimer Wheeler, Prof. Schaefer, J. Obrew, K. Michalowsk etc., UNESCO sent a mission to Moenjodaro in 1972 including Mr. S.J. Van Krogton, Mr. Raoul Curiel, Dr. Zaky Iskandar etc. Similarly Mr. Peter Cock visited Moenjodaro. Dr. Michel Jansen had carried out a comprehensive scientific research work with special reference to the documentation of Moenjodaro remains during 1979-86.

Describe financial and human resource inputs for the research programmes and or facilities:

The Conservation Branch and WASIL according to allocated funds carried out different research programmes as well as schemes for the conservation of Moenjodaro.

Describe how the information / results are disseminated?

The results disseminated through these research works are published in the Annually Departmental Journal and the Department of Archaeology and Museums, Government of Pakistan prepare reports for the future guidance.

Are there any visitor's statistics for the site?

YES

If YES, please summarise the statistics (2003)

	PAKISTANI	FOREIGNER	TOTAL	
	59771	356	60127	
What vi	sitor facilities do you	have at the property?		
The exi	sting facilities in the	property concerned	are summarize	ed as under:-
	0	1 1 2		
	2. Cafeteria			
	3. Gift Shop	s		
	 Gift Shop Public Toilet 			
What vi	3. Gift Shop			
What vi 1.	 Gift Shop Public Toilet 			
1. 2.	 Gift Shop Public Toilets Public Toilets Telephone, E-m 	in need of?		
1. 2. 3.	 Gift Shop Public Toilets sitor facilities are you Public Toilets Telephone, E-m Guide (Tourist) 	i in need of?		
1. 2.	 Gift Shop Public Toilets sitor facilities are you Public Toilets Telephone, E-m Guide (Tourist) 	in need of?		

If YES, please summarise, if NO explain if one is needed:

The Department of Archaeology & Museums, Government of Pakistan is preparing a comprehensive visitor Management Plan for the visitors.

Indicate how the property's World Heritage values are communicated to residents, visitors and the public (please attach examples of leaflets, videos, posters etc. and print-outs and/or the address of a web-page):

A number of published material is available in the shape of Leaflets, Books and Information Booklets.

Are there educational programme concerning the property aimed at Schools? **NO**

If yes, please describe:

What role does World Heritage inscription play for the site concerning the visitor number, the research programmes and/or the awareness building activities?

A number of visitors/tourists both from home and abroad are attracted in a large number since its inscription on World Heritage List by UNESCO.

5. Factors affecting the property

Please comment on the degree to which the property is threatened by particular problems and risks, such as development pressure, environmental pressure, natural disasters and preparedness, visitors / tourism pressure, number of inhabitants. Also mention all other issues that you see as problematic.

The remains of Moenjodaro suffered a lot mostly due to age, human neglect variations of atmospheric condition, severe temperature and natural disasters have also caused its decay.

The main causes of decay are summarised as under:

- 1. Salt Action
- 2. Moisture in filtration from ground and atmosphere
- 3. Direct rains and
- 4. Structural distress including extreme thermal stress, poor site drainage, material decay and visitors behaviour.

Is there an emergency plan and / or risk preparedness plan for the property in existence? NO

If YES, please summarise the plan and provide a copy:

If NO, describe what is being done – and by whom – to counteract the dangers that threaten or may threaten the property:

After completion of the Master Plan for the Preservation of Moenjodaro and fulfilment of its functions the Authority for the Preservation of Moenjodaro was disbanded on 30th September, 1997 and it work has reverted to the Department of Archaeology & Museums, Government of Pakistan. In order to meet the challenging task and in pursuance of the recommendation and resolution adopted by the International Consultative Committee (ICC) and the Executive Committee (EC) for Moenjodaro and completion of Moenjodaro International Safeguarding Campaign, 1997 the Government of Pakistan has established National Fund for Moenjodaro with a Board of Governors for the proper preservation of Moenjodaro.

Indicate areas where improvement would be desirable and / or towards which the State Party is work:

Following actions are required to be undertaken:-

- 1. Management including establishment of an advisor/expert committee
- 2. Re-assessment of the Groundwater Control Scheme.
- 3. Tourism Development
- 4. Scientific Research Studies

Give an indication if the impact of the factors affecting the property is increasing or decreasing:

Since these affects are increasing therefore an emergency plan is required to be executed.

What actions have been effectively taken, or are planned for the future, to address the factors affecting the property?

In order to overcome the problems mainly caused by weathering and other problems mentioned above, the Department of Archaeology and Museums has prepared several future schemes/plans for the preservation of Moenjodaro. If applicable, give details (e.g. dates, results, indicators chosen) of any previous periodic or reactive monitoring exercises of the property:

Three UNESCO Monitoring Mission led by Ms. Junhi Han had visited Moenjodaro in 2001 in order to make a future strategy for the preservation of Moenjodaro including its Management and other related matters. In April, 2002 an International Expert Workshop was held at Moenjodaro, which was organized by Department of Archaeology & Museums. Government of Pakistan in collaboration with UNESCO. The Department of Archaeology & Museums is now planning to implement on the recommendation made by the Workshop Experts for the preservation of Moenjodaro.

Is there a formal monitoring system established for the site?

YES

If YES, please give details of its organisation:

The Ministry of Culture, Sports, Tourism & Youth Affairs' Planning Section monitor the project schemes during excavation and after completion as per procedure adopted/rules.

Are there any indicators established for monitoring the state of conservation of the property? **NO**

If YES, please provide up-to-date information with respect to each of the key indicators established and / or used. Care should be taken to ensure that this information is as accurate and reliable as possible, for example by carrying out observations in the same way, using similar equipment and methods at the same time of the year and day. Name and describe the key indicators for measuring the state of conservation of this property:

Though a number of works have been carried out by applying different methods for preservation of Moenjodaro but still a number of equipment/latest techniques are required for the preservation of structural remains of Moenjodaro.

If NO, indicators have been identified and / or used so far, please define key indicators for future use in monitoring:

For sophisticated study of various deteriorating elements responsible for World Heritage Site the following equipment are required for the WASIL, Moenjodaro.

- Sinar Camera(Model f2) with accessories
- Enlarge Fuji Moto, Japan
- Bath Tank
- Timber Switch for enlarger
- Safe Light Box
- Film Dryer
- Chrome 6A

Indicate which partners, if any, are involved or will be involved in the regular monitoring exercise:

Science and Technological Universities of Pakistan, Soil Investigation Laboratory, Lahore, Geological Survey of Pakistan, Environmental Department etc.

Identify the administrative provisions for organizing the regular monitoring of the property:

Under the convention for the protection of the World Cultural and Natural Heritage, it is the prime responsibility of the State Parties to take appropriate provisions and actions for the application of the convention and to put in place on site monitoring arrangements as an integral component of day-to-day and management of the sites. As per Conservation Manual of Sir John Marshall enough administrative provisions for organising the regular monitoring of the property are provided which are being implemented by the Department of Archaeology and Museums.

Describe what improvement the State Party foresees or would consider desirable in improving the monitoring system.

Necessary funds are required to be allocated for the implementation of various programmes/Schemes for the purpose.

7. Conclusions and recommended actions

Please summarise the main conclusions regarding the state of the World Heritage values of the property.

Moenjodaro an urban centre of the Indus Valley Civilization which was discovered in 1922 had been under excavation intermittently from 1922 to 1964. Soon after its excavation, the structural remains at Moenjodaro started to decay an crumble due to salt drainage and thermal problems. The continuous rise of ground water caused salt laden moisture to move into the structure through the capillary action. The precaution measures taken at the site by the Department of Archaeology & Museums, Government of Pakistan to arrest its decay process could not improve the situation. Realizing the magnitude of the problem the Government of Pakistan approached UNESCO for help to overcome this alarming situation the request followed by a series of UNESCO technical mission and as a consequence a Master Plan for the preservation of Moenjodaro was drawn up in 1972 which was endorsed by the International experts in an International Symposium held at Moenjodaro in 1973. The Government of Pakistan constituted an Authority for the preservation of Moenjodaro for execution of the Master Plan in 1974.

The International safeguarding campaign for Moenjodaro World Heritage during 1974-97 received active international support. On the completion of the Master Plan, the authority was disbanded in 1997 and its work was reverted to the Department of Archaeology & Museums, Government of Pakistan. In order to meet the challenging task and in pursuance of the recommendation and resolution adopted by the International Consultative Committee and the Executive Committee for Moenjodaro and on the completion of safeguarding campaign or Moenjodaro, Government of Pakistan ha established "National Fund for Moenjodaro, (NFM) with a Board of Governors. Three monitoring missions form UNESCO have visited Moenjodaro during 2001 for the future plan and proper management of Moenjodaro. An expert workshop for the conservation of Moenjodaro was held at Moenjodaro in 2002 by the Department of Archaeology & Museums is now planning to execute the work as per recommendations of the workshop.
life of the monument. The conservation works are carried out in accordance with the set principals of conservation within the available resources of the Department of Archaeology & Museums.
Please summarise the main conclusions regarding the management and factors affecting the property:
The Moenjodaro site is being looked after by a number of staff deputed there headed by Director, Southern Circle of Archaeology, Hyderabad. The present management plan is however not sufficient to look after the monuments/methods and international standards. Because many factors which are affecting the property need immediate measures such as to control on the conservation problems like:- 1. Salt Action
 Moisture infiltration form ground and atmosphere. Direct rain and
4. Structural distress including extreme thermal stress, poor site drainage, material decay and visitors behaviour.
Give an overview over proposed future action / actions:
The Department of Archaeology and Museums have prepared a number of schemes/programmes for the proper preservation and conservation of this World Heritage of Pakistan. But due to limited resources the Department is facing a lot of problems to implement in their true spirit.
Give a timeframe for the implementation of the actions described above:
For the year 2004-2005.
Indicate for which of the planned activities International Assistance from the World Heritage Fund may be needed (if any):

Both financial and technical International facilities/assistance is required from the World Heritage Fund, UNESCO & Other donor agencies.

Are there any contacts with management units of other properties within or outside your country? NO
Please indicate which experience made during the periodic reporting exercise and/or during the on-going conservation / protection efforts of the property could be shared with other States Parties dealing with similar problems or issues:
The Department of Archaeology and Museums had facing a number of problems during the conservation works or different schemes due to shortage of technical skilled staff, craftsman, procurement of traditional materials.
Provide the name(s) and address(es) of organization(s) or specialist(s) who could be contacted for this purpose: Curator, Archaeological Museum Moenjodaro, District Larkana, Sindh, Pakistan. Telephone: 92-0741-459051 Fax: E-mail:

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