

CHAPTER – V

Excavation, Epigraphy and Survey

“Archeological excavation is any research aimed at the discovery of objects of archeological character, whether such research involved digging of the ground or systematic exploration of its surface or was carried out on the bed or on the sub soil of inland or territorial waters of a Member State.”³⁶

Excavation includes functions such as excavation, exploration, scientific clearance, building survey, temple survey, pre history, underwater archeology and village to village survey. Excavation of archaeological remains has been one of the primary responsibilities of the ASI. As per Sections 21 to 24 of the AMASR Act, 1958 an Archaeological Officer or an officer authorised by him on this behalf or any person holding a license granted in this behalf under the Act, may make excavation in any protected or unprotected area.

The ASI granted excavation licenses, based on the proposals received from different agencies like the ASI Circles, Branches, Universities and Research Institutions every year. The proposals were examined and recommendations made by a Central Advisory Board of Archeology (CABA)³⁷ chaired by the Minister of Culture and assisted by a standing committee of experts. We noticed the following deficiencies in the ASI’s discharge of excavation function:

5.1 Inadequate Documentation and MIS

No centralised information system was maintained at the ASI HQ regarding the functioning of CABA, grant of licenses, reasons for rejection of proposals and status of accepted proposals. Only limited records of meetings held by CABA were available.

5.2 National Policy on Archaeological Excavation and Explorations

The Prime Minister (December 2009) referred to the need for formulating a ‘National Policy on Archaeological Excavation and Explorations’. Five Sub

³⁶ UNESCO, Delhi Declaration 1956

³⁷ The CABA advises and makes suggestions on matters relating to Archaeology in India

Committees of the CABA were formed to examine specific issues relating to functioning of the ASI and developing policy in those areas.

The Sub Committee on Archaeological Excavation and Exploration finalised the draft on **National Policy on Archaeological Excavation and Explorations** and submitted it to DG ASI on 23 December 2009 for approval.

We noticed that these guidelines were still in the draft stage (November 2012) and the file received with Ministry's queries on it was untraceable at ASI HQ. In the absence of any laid down policy, the work of excavation, was being conducted without setting up measurable performance parameters and guidelines. There was no timeframe set for the finalisation of this policy.

5.2.1 Provision for Mandatory Archaeological Impact Assessment

We noticed that the ASI was unable to effectively stop unauthorised excavations. Many sites with rich deposits of archaeological remains were destroyed by developmental activities. There was no provision to conduct a Cultural Resource Management or Archaeological Impact assessment before developmental projects were taken up on the site. We noted that even after five years of rendering assurance to the Parliament in 2007 there was no progress in this matter.

Recommendation 5.1: *The Ministry should ensure finalisation of the National Policy on Archaeological Excavation and Exploration expeditiously.*

The Ministry (May 2013) accepted the recommendation and replied that a National Policy would be formulated.

5.3 Expenditure on Exploration and Excavation Activities

Exploration and Excavation was one of the primary functions of the ASI. We however noted that the ASI was spending less than one *per cent* of its total expenditure on these activities. The option of obtaining funds through the National Culture Fund was not explored despite deliberations on this issue by CABA in 2009.

5.4 Planning and Conduct of Excavation

5.4.1 Selection of Sites and Grant of Excavation Licenses

The ASI did not have any laid down policy or guidelines for selection of sites for excavation. There was no priority list or perspective plan for completion of projects within a given period. We found that excavation licenses were not being given in a

systematic manner to solve cultural or historical debates or questions pertaining to different parts of the country. In the ASI, officers of the rank of Deputy Superintending Archaeologist (Dy. SA)/Superintending Archaeologist (SA) or above were eligible to apply for licenses for excavation. We found that the ASI's own proposals depended on the individual initiative of the SA/ Deputy SA of the Circle rather than any overall departmental perspective.

The table below shows the details of excavation proposals received and accepted during the period of audit.

Table 5.1 Details of excavation proposals received

Field session	No. of excavation proposals received	No. of proposals accepted	
		Proposed by ASI officers	Proposed by others (universities, State Archeology Department etc.)
2007-08	141	22	85
2008-09	142	21	93
2009-10	159	40	92
2010-11	149	23	88
2011-12	137	24	100
	728	130	458

We found that the ASI did not have information regarding initiation/completion of the 458 excavation works proposed by others. This indicated poor monitoring of excavation works by the ASI.

We also noticed instances of non-transparency in grant of excavation licenses and recommendations made by CABA to DG ASI. As an example, in 32³⁸ proposals, reasons for rejecting them had not been recorded. The ASI accepted (November 2012) the Audit observation.

³⁸ 17 of ASI and 15 of other agencies , details in Annex 5.1

We also found that some sites were taken up for further re-excavation without availability of the reports of earlier excavations. Reasons for such repeated excavations were also not clear from the records.

During 2011-12, the ASI proposed a program for Ropar which was earlier excavated in 1950s. Similarly, the site for Patne and Raja Vishal Ka Garh at Vaisali were earlier excavated and no reason was found on record for re-excavations proposed by the ASI.

Chandraketugarh archeological site in West Bengal had been excavated six times in the past, four times by Calcutta University and twice by State Archeological Department. However, no report on these six excavations was available. We found that the site had been taken up again for excavation during 2010-11, but was left midway. Further, the whereabouts and inventory of antiquities recovered during previous excavations were not documented, involving risk of smuggling and loss.

5.4.2 Sites Notified but Excavation not Undertaken

We found sites which were notified by the ASI for central protection after discovery of some archeological evidence were not excavated till the end of our Audit (February 2013). In the list of protected monuments, the ASI had many ancient mounds and sites, most of which had never been excavated. A few instances are given below:

- ✓ In Kolkata Circle, the ASI had notified four sites³⁹ between 1920 to 1963 after discovery of archaeological evidence in them, but these were never taken up for excavation. Bangarh site was taken up for excavation in 2008-09, 70 years after its notification in 1938.
- ✓ In Patna Circle, no excavation work was carried out in the protected sites of Chankigarh in West Champaran district.
- ✓ In Trissur Circle, the biggest site of burial urns in the State was found in Elanthikkara High School ground near North Parur, Ernakulam district. The ASI was aware of this site since 2002 yet no action was taken till 2012. We found that school children were playing amidst scattered pieces of ancient burial urns, the site was neither protected nor fenced.

We also found proposals being taken up for excavation/scientific clearance due to VIP references without any prior archaeological evidence. For example, scientific

³⁹ i) Devil's Mound and Raja Karna's Palace, ii) Ancient mound known as Barah Mihirer Dhupi, iii) Nadhia, Burdwan, iv) two mounds in Birbhum and Barkuna Deul Mound

clearance conducted at Jyothi, Cuddapah, Hyderabad Circle was without any proper justification of archaeological evidence found there.

Recommendation 5.2: *The Ministry should formulate a transparent procedure for conducting archaeological excavation and document detailed findings of the excavation work in all cases.*

Recommendation 5.3: *The ASI may consider devising mechanisms for preparing a priority list for excavation projects based on importance of the site. The list may be updated annually.*

The Ministry stated (May 2013) that for undertaking excavations there is an established mechanism and the findings of the excavations were recorded as per the due process. However the fact remained that there were many protected sites which despite identification of archaeological evidence decades back, were yet to be taken up for excavation. The Ministry further stated (May 2013) that the ASI would make efforts to prepare a culture-wise list of ancient sites as a part of the overall programme finalised for the NMMA. However, no time frame was indicated.

5.4.3 Approved Excavations Proposals not Undertaken or Left Incomplete

We noted cases where excavation proposals approved by the ASI were not undertaken at all or were left incomplete. The reasons were usually lack of technical staff, labour and shortage of funds. However, there were no attempts in subsequent years to sort out these problems and complete the approved projects.

5.4.3.1 Excavation not Taken up

- i. In Chandigarh Circle, during 2007-08, a proposal for excavation work⁴⁰ was approved but could not be commenced due to non availability of labour. We found that even though no excavation was undertaken, an expenditure of ₹ 14.98 lakh was incurred on acquiring computer camera, photo-material, stationery and kitchen articles etc. from the funds allotted for excavation.
- ii. Excavation license at Modikuppam, Chennai Circle, was granted during 2009-10. However, work could not be taken up due to non availability of technical staff. There was no evidence of any attempt to arrange for technical staff to take up the work.

⁴⁰ Buddhist Stupa, Asand, Haryana

5.4.3.2 Incomplete Excavation

- i. In Guwahati Circle, Ambari site was excavated many times during 1970 to 2003. In 2009, eight steps of staircase were unearthed from the site but this excavation was left incomplete due to lack of proper plan for water drainage. The ASI did not make any efforts to solve the problem and complete the excavation work.
- ii. In 2008, the excavation at Garhgaon in Ahom Raja's Palace, Guwahati Circle was conducted for 17 days and was left after security threats. However, no efforts were made to resume the same after improvement in law and order situation in the state.
- iii. In Ranchi Circle, excavation work taken up in Saridkel during 2003-05 was abandoned due to local protest. It was not resumed subsequently.
- iv. Scientific clearance was attempted in Benisagar, Ranchi Circle during 2006-07 and 2007-08 but we found during the joint physical inspection that this too was left incomplete. No reasons were found on the record for non completion of work.



Incomplete excavation at Dholavira

The excavation at Dholavira, a major site for Harappan civilisation, was started in 1990. The Officer-in-charge of the excavation retired in 2002 and did not submit any report on the status of excavation so far. In the absence of his report, further excavation was not resumed.

5.5 Protection of Ancient Mounds

The ASI had declared 221 ancient mounds as centrally protected monuments. However, there was no specific policy on the maintenance and excavation of these mounds. The mounds were looked after by the Circles (which conducted structural conservation) and were not supported by the excavation Division. During joint physical inspections, we found that many of these mounds were not fenced and were taken up for cultivation. No action plan had been drawn up by the ASI with regard to protection and maintenance of these sites.



Soil erosion on Nilkuthi Mound

In Nilkuthi mound, Barkona Deul site at Malda, Bangarh site in Kolkata Circle we noticed that the protected sites were not fenced, demarcated and preserved. Consequently unauthorised cultivation work had been going on at the site of Barkona Deul Site and Bangarh Site.

The Ancient Mound, Buxar, another protected site in the Patna Circle had been reduced to just a strip of land due to unauthorised construction. At four Vedic Burial Mounds in West Champaran, Patna Circle we found soil digging, resulting in damage to the excavated area.



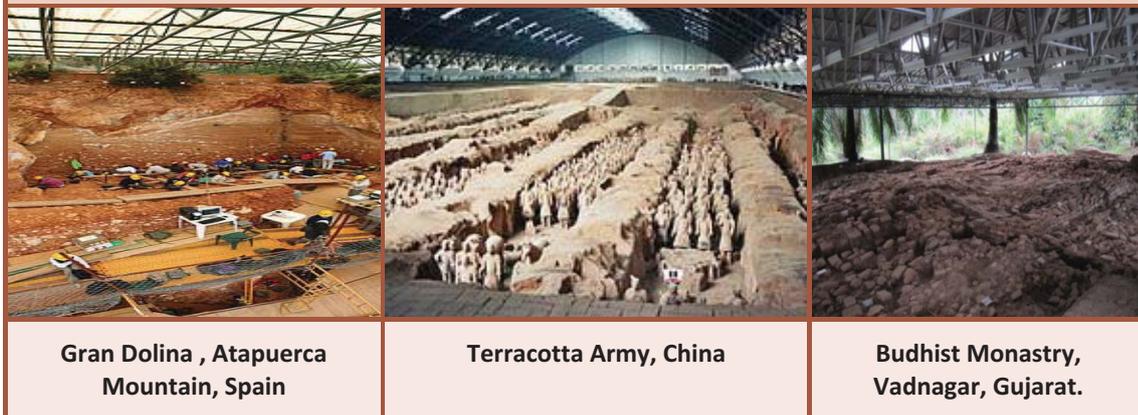
Photos depicting soil digging in four Vedic Burial Mounds in West Champaran

The ASI stated (November 2012) that post excavation, maintenance of the site was decided on case to case basis and an unprotected site after excavation, if considered for protection, was usually fenced. We, however, found that even the protected sites were not fenced and maintained properly.

5.6 Status of Excavated Sites

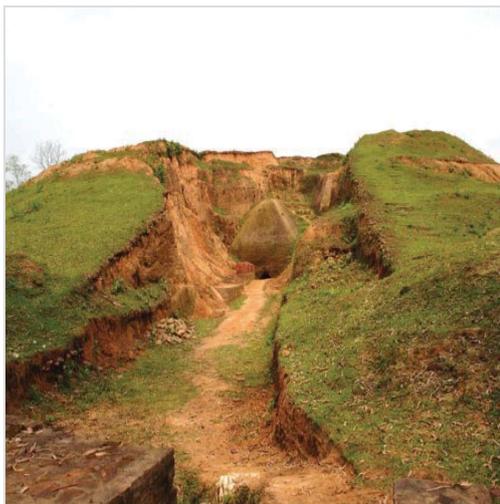
Conservation Manual by John Marshall provided that all excavations were required to be protected from inclement weather. Protection of excavated sites was carried out in several countries including Spain and China. Even the Archeology Department of Gujarat Government installed a protective shed (Iron/PVC/Acrylic) over the excavated site. We did not find any such practice in the excavated sites of the ASI.

Good practices (International and National) adopted for maintenance of excavated sites



However, the excavated sites of the ASI were not being maintained and properly preserved leading to some sites going “missing” and becoming untraceable. Few instances of improper maintenance and preservations of excavations site were as follows:

- i. Excavations were conducted at group of four Maidams, Nazira, Sivasagar district, Assam during 2001-2003 and restoration work for ₹ 23.85 lakh was undertaken during 2007-08 to 2011-12. This restoration was not completed and the site lay exposed to vagaries of nature.



Excavated Maidam at Charaideo, Sivasagar, Assam as on 05/05/2010



Current view of Excavated Maidam at Charaideo, Sivasagar, Assam as on 10/06/2012

- ii. In Lucknow Circle, protected site called Sandi-Khera, Pali, Shahbad, was not traceable.
- iii. In Dharwad Circle, the excavated site of Kanaganahalli, Sannati was not maintained and preserved properly despite many site visits by senior officers and VIP references. We also noticed cases of defective conservation on the site. **(Refer Case Study 6)**
- iv. Seven excavated sites⁴¹ in the Vadodara Circle, which were declared as protected between 1951 and 1954 had been completely destroyed/encroached as they were not properly preserved. The mound at Venivadar was submerged and remaining six sites were under cultivation and residential units had come up there.

⁴¹ i) Ancient mound site, Venivadar, ii) Ancient (mound) site at Sejakpur, iii) Historic site, Akota, Vadodara iv) Ancient site, Gohilwad Timbo, District Amreli, v) Microlithic Site in Amrapura vi) Ancient site in Sihor and vii) Ancient site in Kamrej

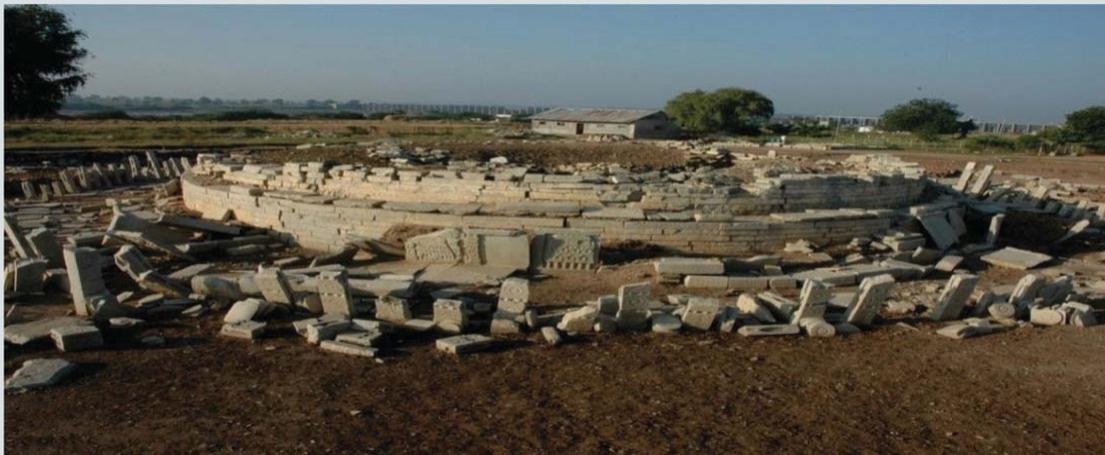


Ancient Site at Amreli, Gujarat with houses built on it

- v. In Aurangabad Circle, five sites⁴² were not traceable.
- vi. The most glaring mismanagement of protected excavation sites was however, noticed with respect to world renowned sites of Harappan Civilisations for which the ASI was also seeking World Heritage Sites status. **(Details in the Case Study 7)**
- vii. In Halebidu, Karnataka a huge temple complex was excavated during 1984-87. We noticed that excavated sculptures and antiquities were lying around and the complex was fenced only in 2008-09 after a gap of more than 20 years.

⁴² viz Jarasangh Nagri at Jorve, Ahmednagar ii) Stone Circle at Arsoda, Gadchiroli iii) Group of twenty Cromlechs at Gadchiroli iv) Stone Circle, Nildho v) Stone Circle, Takalghat, Nagpur

Case Study 6 : Excavation at Kanaganahalli, Sannati (Dharwad Circle)



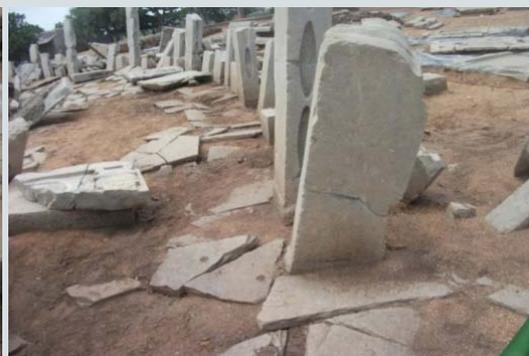
Excavated site Kanaganahalli

In 1993-94, Government of Karnataka approached Bengaluru Circle of the ASI for archaeological clearance for construction of a dam at Bhima river at Sannati. During exploration for this purpose, several pre-historic artifacts, structural remains and ancient vestiges were noticed in the area. After extensive excavations by the ASI during 1996-2002 the remains of a unique Mahastupa (Great Stupa) were discovered at Sannati, near Kanaganahalli. The Site was acclaimed as a rare Buddhist site by the experts. Among other panels, there is a unique panel with a labeled sculptural frieze of King Ashoka, the only one of its type in the world. The 23 acre site was notified in 2003 as a protected site.

Condition of the Site:



Moisture on panels covered with plastic



Scattered panels at the site

Despite incurring an expenditure of ₹ 1.42 crore for the site, during joint physical inspection we found that the excavated parts of the Stupa and the panels were lying scattered in the open, subject to the vagaries of the nature. Water had accumulated

in many parts and black patches had appeared on the Panels. Some Panels were covered with plastic sheets to prevent rain water. However, moisture had accumulated and was damaging these Panels.

DG, ASI in June 2012 had instructed that temporary shelters be provided for the Ashoka Panel and other excavated parts of the Stupa. But this was not done (December 2012). Only a cloth shed was provided for the Ashoka Panel after the visit of Union Minister Shri Jairam Ramesh (August 2012).



Ashoka Panel under cloth shed

We also found that the activities on the site were not being carried out with due care. An unsuccessful mending work was carried out on the Panels by using non-magnetic steel rod and epoxy resins, without proper testing. The Ashoka Panel was repaired by the ASI leaving it damaged.



Faulty Repair works at the site

The inventory of the parts was unavailable at the site. We also found that while making replicas of some panels in 2012, the ASI had used fiber glass as mould instead of softer alternatives like latex. The mould left some glass pieces stuck in the curves of the friezes. The ASI officials then used chemicals followed by oil to remove them, leaving the limestone panels discolored and damaged.

Despite assurances from the Minister of Culture (May 2012) in response to a reference from Shri Jairam Ramesh, Minister of Rural Development, the site remained uncovered and neglected.

5.7 Monitoring of Excavations

Excavations are to be carried out under close supervision and monitoring. Absence of proper technique could result in destruction of valuable material. The ASI HQ informed us (May 2012) that Director (Excavations) as and when visited the excavation sites, gave direction on the site for proper excavation. However, there were no inspection reports on record at ASI HQ. At the excavation sites too, no instructions from the Director or any other higher official from the ASI were found recorded. The ASI accepted (November 2012) that no such records were present as the Director was unable to visit the sites due to his commitments in Headquarters.

Recommendation 5.4: *The ASI should put in place an effective monitoring mechanism by making inspections documented at ongoing excavation sites, mandatory by Director (Excavation).*

The Ministry stated (May 2013) that informal inspections of the ancient sites are a normal practice by various level of officers. The reply underscores the need for the ASI to undertake inspections in a formal manner and document the results of such inspection.

5.8 Report Writing Work

Writing of the report on excavation is an integral part of any archaeological excavation. An excavation or exploration without proper documentation and reporting of findings becomes a futile exercise because it would not provide inputs for further research and analysis of findings. The UNESCO recommendations also enjoined upon the Member States/excavator to publish results of the excavation work within the period stipulated in the Deed, or, in cases lacking such stipulations, within a reasonable period.

5.8.1 Delays in Report Writing

We noted marked delay in report writing for completed excavations. In 2005, a decision was taken to complete the pending excavation reports within a period of 24 months. Accordingly, the ASI identified pending 56 excavation reports pertaining to the period prior to 2007-08 for completion by 2007 but only 25 reports were submitted as of September 2012. **(Annex 5.2).**

We found reports pending for 57 years in some cases. For some of the major excavations, like Mathura, Sravasti and Ropar the report writing work for the excavations carried out in 1954-55, 1958-59 and 1953-54 respectively, were yet to be completed. It was unlikely that accurate reports could be written at such a belated stage without re-excavation. Given the state of documentation and controls

at the ASI even the preliminary records of the site were also incomplete/untraceable.

The ASI informed the Ministry (April 2010) that it would not be possible to write reports in respect of two excavations viz. Kunnattur (Tamil Nadu) and Nalanda (Bihar) as the excavated materials were in non living form and unidentifiable. Moreover the excavators were dead. This raised serious doubts over the protocol being followed for safekeeping of records and material from the excavated sites.

Latest consolidated position of pending reports was not available on record. Besides 56 cases discussed in **para 5.8.1**, for the 113 excavations/exploration works that were undertaken by the ASI during 2007-08 to 2011-12, report had been submitted in only 12 cases; out of which only one report had been published in the Indian Archeology-A Review (IAR). Details are given in **Annex-5.3**.

We also noticed that in the absence of the detailed excavation report of Rakhigarhi, the site was dropped from inclusion in the work of the nomination dossier for the inscription of World Heritage List for UNESCO.

The ASI stated (November 2012) that periodic monitoring of the report writing work had been done by the ASI continuously since 2005 and all possible logistic support was given to the report writers to facilitate early completion of reports. The position of pending reports, however, did not support the reply of the ASI.

Some of the major cases of pending reports included:

Table 5.2 Cases of pending report of excavation

Site	Year (s) of excavation done
Ropar	1953-54, 54-55
Mathura	1954-55, 1973-74 to 76-77
Hulas	1978-79 to 1982-83
Dholavira	1989-93, 1994 -95, 1996 to 2004
Sanghol	1986-87 to 90-91
Rakhigarhi	1997-98 to 99-2000
Chichali	1998-99, 1999-2000
Hampi	1975-76,1976-77,1978-79 to 2001-02
Sravasti	1958-59, 1986-87, 1998-99, 2000-01, 2001-02
Ramapuram	1980-81 to 83-84
Banawali	1983-84 to 86-87
Harsh-ka-Tila	1987-88 to 89-90

5.8.2 Reasons for Delayed Report Writing

We noticed that no time was given to the officers of the ASI doing excavation, exclusively for Report writing work and as such there was no specified timeframe. The report writing work was undertaken much after the excavations and for the ASI's own excavations, sometimes after the retirement of the main excavators. This resulted in pending report writing work and also extra expenditure on remuneration of retired officers. We found that expenditure of ₹ 63.75 lakh had been incurred as expenditure for such delayed report writing works.

We also found that 10 excavators, from whom reports were pending, were no more/incapacitated due to ill health and old age and one excavator had left the ASI to join some other organisation. The ASI failed to take effective measures against unusual delays in report writing by its own officers.

The ASI replied (May 2012) that taking stringent measures against unusual delays of report writing by the ASI on officers could not be justified as the officers were overburdened by other administrative activities and untimely transfers which resulted in delay. The reply of the ASI is not convincing as the primary responsibility of report writing by excavators cannot be compromised.

Recommendation 5.5: *While approving proposals for excavation, the time frame should be fixed for submitting and publishing the report and it should be strictly adhered to. The ASI should take adequate steps to address the reasons affecting the report writing work.*

The Ministry stated (May 2013) that despite fixing deadline and timeframe, 30 excavation reports were yet to be submitted for publication. The Ministry also stated that the ASI would explore the possibility of putting in place a system wherein the report writing on excavation can be taken up in a project mode so as to provide assistance to directors of the excavations and achieve the target within a reasonable period of time.

5.9 Status of Excavated Material

Delayed report writing also affected the condition and counting of antiquities found during excavation. Till the final report was published many of the items remained in the custody of the excavator without proper records made available to the ASI.

In some cases, when excavators were relocated, they had been allowed to carry these antiquities from one place to another. e.g. Excavation work at site of Dholavira, Vadodara Circle and Sirpur, Raipur Circle. In Dholavira, the excavated material was not handed over even after a lapse of upto 12 years. In such a situation damage and loss of antiquities lying with the excavators without proper insurance and security, could not be ruled out.

We noticed that no inventory had been maintained centrally, on an All India basis, in the ASI for recording all the artifacts, antiquities and sculptures found and collected during excavations, explorations or village to village survey. In many cases, as discussed in **detail in Chapter 6**, the excavated antiquities were not accessioned and found dumped in the ASI Circle offices, monuments and store rooms.

Recommendation 5.6: *A protocol is required for handing over and maintenance of antiquities with laid down responsibilities and accountability for loss. Proper arrangement needs to be made for storing these antiquities.*

Recommendation 5.7: *The ASI may prepare an inventory of the excavated antiquities and their locations and put it in public domain so as to facilitate its use for reference/research by scholars.*

The Ministry (May 2013) welcomed the recommendations and stated that ASI would formulate a policy that the excavator would prepare a catalogue of antiquities unearthed within three months of the excavation and put up the same for public information through the website of the organisation.

5.10 Other Activities related to Excavation and Exploration

The details of the other activities are as follows:-

Sl. No.	Activities of the ASI	Remarks
1	Village to Village Survey	<ul style="list-style-type: none"> • Another method for exploration of archaeological evidence. • It is nowadays not undertaken due to shortage of manpower.
2	Under Water Archaeology	<ul style="list-style-type: none"> • Established a specialist Branch for Underwater Archaeology in 2001. • There was no perspective plan or policy for Underwater Archaeology. • 17 projects had been undertaken till May 2011. • In 2011, the only trained superintending Archaeologist in this field was allowed to proceed on deputation to Assam University. • Another trained ASA and a photographer were posted in Archaeological Museum and Chemical Branch, Jaipur respectively. • The Branch virtually became defunct due to lack of specialised manpower.

3	Building Survey Project	<ul style="list-style-type: none"> Established in 1977 with the aim to select domestic and secular buildings pertaining to the 16th to 19th century and document their details. After documentation, the report if deemed fit, was to be published in the Indian Archaeology - A Review (IAR). The building survey project was located at New Delhi. During the last five years, only two projects had been undertaken and sent two reports of its earlier projects to Director (Excavation). None of them was published in the IAR. No recorded reasons for not finding the reports suitable for publication. We could not therefore ascertain the reasons for executing this project without any tangible outcome. No system of regular monitoring of the project by Director (Excavation). No criterion on the basis of which the buildings were selected for the projects.
4	Temple Survey Projects, Bhopal and Chennai	<ul style="list-style-type: none"> The purpose was to document the invaluable ancient temple art and architectural treasure of our country. Huge delays in the publication of the Temple Survey reports. Submitted five project reports relating to the period 1984 to 2011 to DG ASI for publication. However, none of them were published till date.
5	Pre History Branch, Nagpur	<ul style="list-style-type: none"> Carried out research in the field of Pre History. Areas were explored to know the prehistoric remains of the particular area or to reconstruct the entire settlement pattern of the prehistoric culture. During 2007-08 to 2011-12, 14 reports on prehistory were submitted for publication in the IAR, out of which nine were recommended by CABA but none of them had been published. There was a huge backlog and works relating upto the year 2003-04 had only been printed in the year 2011.

5.10.1 Archaeological Investigations Using Modern Scientific Methods

The application of modern scientific technology in various fields of archeology is ever growing. Several recent technologies such as Ground Penetrating Radar (GPR), Magnetic and Resistivity Survey, Global Information System (GIS) and Global Positioning System (GPS) were available for excavation. The ASI did not have infrastructure/equipment of its own and the excavations were carried by using traditional methods. For capacity building of the ASI officials, an MOU was signed between the ASI and IIT Kanpur in 2007 regarding application of scientific techniques in archaeology. Two training programmes were organised for plain surveying and GPS, GIS in Kanpur at a cost of ₹ 11.60 lakh and 30 officials were trained.

We observed that only two of the trained officials were actually involved in the ASI excavations that were conducted after 2007-08 using the above technology.

5.11 Epigraphical Studies

Epigraphy is the Branch of study in Archaeology dealing with the deciphering and interpreting inscriptions found in clay, stone or metal tablets and rocks. These Inscriptions were mostly written in ancient languages/scripts, some of which may be lost now. The main function of the Epigraphy Branch was to undertake an epigraphical survey of several states in India and to copy the inscriptions on stone, copper-plate and other materials written in Sanskrit, Dravidian and other languages. After deciphering and transcribing, the inscriptions were listed out in the Annual Report on Indian Epigraphy. However, there were no Acts/Rules/guidelines pertaining to the Epigraphy Branch.

5.11.1 Status of Work and Human Resource for Epigraphical Studies

The Directorate of Epigraphy, which managed the epigraphy work of the ASI, was headquartered at Mysore and had three zonal offices at Chennai, Nagpur and Lucknow. We noted the following:

- i. No Director had been appointed since October 2006.
- ii. There were two posts of Superintending Archaeologist which were lying vacant since 1998 and 2004 respectively. Men in position were 25 as against the sanctioned strength of 45.
- iii. We found that 1725 epigraphic items were collected during 2007-08 to 2011-12. However, the Annual report on Indian Epigraphy had been compiled and published only upto 1997-98. Due to improper assessment and lack of publicity, there were unsold publications to the extent of 43464 volumes of this report, valued at ₹ 53.17 lakh as at the end of March 2012.

- iv. South Indian Inscription volumes in Tamil, Telugu and Kannada were published on the inscriptions collected up to 1955. Remaining inscriptions were yet to be published. Works assigned to six departmental scholars during 1995 to 2011 and to three external scholars during 2009 were pending. It informed that no work on North Indian Inscriptions (Sanskrit) had been carried out due to paucity of staff.
- v. Only seven volumes of Corpus Inscriptionum Indicarum⁴³ on inscriptions of various period/dynasties written by different authors were published. No specific targets or planning was done for these volumes.
- vi. In the Epigraphy Branch, Chennai Zone, 5440 epigraphic items were collected during 1991-92 to 2011-12. However only 2383 inscriptions collected upto 1998-99 were transcribed and the remaining 3057 (57 per cent) were yet to be transcribed.

Transcription and publishing of Telegu inscriptions collected during the year 1936-38 and editing of Telegu inscriptions for the year 1939-45 was yet to be done. South Indian inscriptions collected during the years 1916 and 1905 were yet to be transcribed and published.

Epigraphy Branch, Nagpur which was responsible for copying, accessioning, deciphering and publishing Arabic and Persian inscriptions had deciphered 297 (80 per cent) inscriptions out of 367 numbers of inscriptions collected during 2007-08 to 2011-12.

In the zonal office, Lucknow, though an expenditure of ₹ 1.04 crore was incurred during 2007-08 to 2011-12, no inscription was copied, deciphered, interpreted and printed in the Annual Report on Indian Epigraphy.

5.11.2 Non Publication of Inscriptions

During the period 1997-98 to 2011-12, total 644 transcribed inscriptions from Chennai Branch and 31 inscriptions from Epigraphy Branch, Nagpur were forwarded to Director General, ASI, New Delhi for publishing in the **Annual Report on Epigraphy**. However, no report had been published till now. There was an inordinate delay extending upto 12 years in the publication of Annual report on Indian Epigraphy. Works relating to 1997-98 had been published in the Annual Report of Epigraphy in 2011.

⁴³ Corpus Inscriptionum Indicarum is a specialized volume containing detailed description and critical notes on inscriptions belonging to a particular dynasty or a particular period of history.

5.11.2.1 Preservation of Impressions/Estampages

Estampages are paper impression of stone or copper plate inscription. Estampages are preserved in a controlled environment to stop deterioration. There were 72000 estampages with the Directorate of Epigraphy out of which 3105 estampages were under the custody of the epigraphy Branch, Chennai. These estampages in Chennai Branch were stored in normal environment in closed almirahs/boxes/racks. Due to absence of temperature and humidity control, most of them were reduced to a very brittle condition. We did not find on record any proposal sent by Chennai Branch to the ASI for requisite funds to stop further deterioration of estampages. Ten inscriptions and letters of ten estampages had been obliterated/damaged in Epigraphy Branch, Nagpur. We could not ascertain the cause of damage and the period during which this occurred.

5.12 Capacity Building and Research in the ASI

The ASI has laboratory facilities in the Science Branch, Dehradun and other field offices of Science Branch. Scientific analysis of excavated material was being carried out with the assistance of the Science Branch and various external institutions.

We observed cases of inordinate delay in getting the results of the dating samples taken from Banawali and Dholavira which were sent to Birbal Sahni Institute and Physical Research Laboratory and copper samples sent to IIT Kanpur. In Vadodara Circle, six samples from Junikaran excavation were sent for testing to Institute of Physics, Bhubaneswar in June 2005, and July 2006 but results were still awaited. Results of samples of Bones sent during August 2004, to Deccan College, Pune had not yet received.

Failure on the part of the ASI to acquire and use modern equipment and to develop a laboratory of its own for dating and analysis of the archeo-materials had adversely affected the capacity building and research activities of the ASI.

Recommendations 5.8: The ASI needs to enhance the use of modern scientific technology, build capacity of its officials and establish an upgraded dating laboratory of its own.

The Ministry agreed (May 2013) with the recommendation.

Thus the working of the ASI in executing its function of excavation was marked by the absence of policy and criteria for excavation. Further, delays in report writing and publishing of excavation works led to non achievement of the desired progress in exploration and excavation activities.

Case Study 7 : Harappan Sites

In 1947, the most important Harappan sites viz Harappa and Mohanjodaro which were the showpieces of the ASI's efforts in the previous two decades, were left behind in Pakistan. In first two decades after independence, the ASI concentrated its efforts in finding new Harappan sites leading to significant discoveries viz Lothal, Kalibangan and Ropar. Subsequent discoveries like Dholavira and Rakhigarhi helped further to appreciate the geographical spread of the civilisation and to bring to light its important facets. These sites are thus some of the most significant signposts of Indian history and archaeology.

During this audit we visited these sites of Harappan civilisation and found that almost all sites were improperly maintained for want of post-excavation maintenance protocol.

Table 5.3 Status of Excavation Reports

Site	Excavation Status	Status of excavation report
Dholavira, Gujarat	1989-93, 1994-95, 1996-2004 Incomplete	Incomplete
Rangpur, Gujarat	1935,1947, 1953-56 Incomplete	Completed for excavations done so far
Rakhigarhi, Haryana	1997-98 to 1999-2000 Incomplete	Incomplete
Ropar, Haryana	1953-54, 1954-55 2011-12 Incomplete	Incomplete
Sanghol, Punjab	1986-87 to 1990-91 Incomplete	Incomplete
Lothal, Gujarat	1955-62 Incomplete	Completed for excavation done so far
Kalibangan, Rajasthan	1961-69 Incomplete	Completed for excavation done so far

Apart from the incomplete excavation work, we found that the work done so far was also not conserved and displayed properly. For want of regular inspection, these sites were in a state of encroachment and decay.

Table 5.4 Status of Harappan sites and the antiquities found

Site	Status of the site	Status of antiquities found
<p>Dholavira, Gujarat</p>  <p>Dholavira excavated site</p>	<ul style="list-style-type: none"> ▪ Site was not fully fenced. ▪ Pottery pieces, beads, earthen bangles, circular buttons, precious stones were lying on the site and were progressively destroyed with visitors walking over it. ▪ A Copper factory and a bead factory found near the excavated site were both under unauthorised cultivation by local farmers. ▪ There were no guide facilities. 	<p>A Site Museum with an “Interpretation Cum Information Centre” with 61 photographs of antiquities and 295 objects had been kept. The remaining antiquities were stated to be with the excavation team in Delhi for Report writing work</p>
<p>Rangpur, Gujarat</p>  <p>Site covered with vegetation</p>  <p>Buildings on the Site</p>  <p>Archaeological remains on the Site</p>	<p>The site was not surveyed, measured, demarcated and fenced. Though it was a protected site, the protection notice board, culture notice board were not found. Houses had been constructed on the site.</p> <p>The site was covered under vegetation. Local people were using a portion of the site for taking out soil to make pots and dig ditches.</p>	<p>Artifacts were not collected and kept under safe custody. There was no information available on the antiquities collected at the time of excavation</p>

Site	Status of the site	Status of antiquities found
<p>Rakhigarhi, Haryana</p>  <p>Heaps of Cowdung and broken fence on the Site</p>  <p>Cremation ground on the protected site</p>	<p>The fencing on the site was broken at several places.</p> <p>There were heaps of cow dung cakes on the site.</p> <p>The mound was used as a cremation ground and as public toilet.</p> <p>There were unauthorised constructions on the site</p>	<p>The excavated collections were kept with the ASI.</p>
<p>Ropar, Haryana</p>  <p>Ropar excavated site</p>  <p>Constructions around the Site</p>	<p>There were unauthorised constructions on the site and three sides of the mound were densely populated.</p> <p>There was no Cultural Notice Board explaining importance of the site. Part of Nalagarh Kothi on the mound was converted to be used as office, guest house and store by the ASI.</p>	<p>In 1992, a Site Museum was built to store antiquities. It was opened to public in 1998.</p>

Site	Status of the site	Status of antiquities found
<p>Sanghol, Punjab</p>  <p>Unkempt excavated site at Sanghol</p>	<p>There was no proper fencing on the site and the site was used as a cremation ground and defecation by the villagers.</p> <p>There were unauthorised constructions on the site.</p>	<p>Excavated collections were kept with the ASI and the State Government</p>
<p>Lothal, Gujarat</p>  <p>Excavated site, Lothal</p>	<p>The site was lying without any fencing or protection. Some stones from the walls had disintegrated. Brick walls were found damaged.</p>	<p>Excavated collections were kept at the Site Museum</p>
<p>Kalibangan, Rajasthan</p>  <p>Excavated site, Kalibangan</p>	<p>The site had not been fully fenced. There were unauthorised constructions on the site. The Site was not developed and maintained properly.</p>	<p>Only 267 excavated collections were kept at the Site Museum. Rest of the Antiquities were taken to ASI, Delhi</p>

Case Study 8 : Ashokan Rock Edicts



Ashokan Rock Edict at Udaegolam
in Dharwad circle



Ashokan Rock Edict in Delhi

Brief History

King Ashoka was one of the greatest rulers in human history. After winning the Kalinga war in 261 BC, he underwent a complete change. For the rest of his life he decided to dedicate all his resources to propagate the message of Buddha throughout the world. Ashoka issued religious edicts carved on stones. Ashokan Edicts were significant for the message related to the teachings of Buddhism and also as some of the earliest known stone inscriptions in India. These were written in several languages and scripts, but most of those found in India were written in Prakrit language using the Brahmi script. The edicts were of two types, i.e. in-situ rock edicts and the pillar edicts. The rock edicts were further subdivided into two categories, the "major rock edicts" and the "minor rock edicts", based on their age. Minor rock edicts were the earliest, followed by major rock edicts. Minor rock edicts were further divided into rock edict I and rock edict II. Major rock edicts were discovered across India with 14 personal declarations by Ashoka. These rock and pillar edicts were put up at prominent places along the royal highways, trade routes and pilgrimage centres across the subcontinent to spread the message of peace and non violence.

Present Status

The ASI was protecting 12 Ashokan Rock Edicts through their different circles like Dharwad, Vadodara, Delhi, Dehradun etc. These rock edicts required special attention and care because these have to be retained in-situ and being large rocks exposed to weather needed proper conservation and cleaning. We noticed that ASI did not prepare and implement any policy specially designed for these more than 2000 years old rock edicts. A joint physical inspection of five⁴⁴ of these rock edicts revealed the following irregularities:

⁴⁴ Ashokan Rock Edict in Delhi circle, in Vadodara circle at Junagarh, Gujarat, in Dehradun circle at Kalsi and in Dharwad circle at Nittur and Udaegolam.

Missing Monument

As per the information furnished by the ASI HQ, Ranchi circle had 12 monuments including one Ashokan Rock Edict. However, the circle office intimated that there were only 11 monuments and there was no Ashokan Rock Edict. Neither the ASI HQ nor the Ranchi circle sorted out this discrepancy in the list of monuments.

Categorisation

Though it was clear that the Ashokan Rock Edicts were categorized into Major and Minor Rock Edicts, the ASI did not categorise the centrally protected Ashokan Rock Edicts into Major and Minor Rock Edicts. No information was available in the details of the rock edicts placed at the site on whether that was a major or minor rock edict.

Conservation

Joint physical inspection revealed that the ASI was not properly protecting and conserving these Ashokan Rock Edicts. One of the worst case of poor conservation was found at the Rock Edict at Udaegolam in Dharwad circle where to protect the rock, the big pillars were erected on the rock itself thus damaging the Rock Edict.

Similarly to save the rock edict from the adverse weather conditions, a big hall was constructed around the Rock Edict in Junagarh, Gujarat and a shelter of stone slab was constructed at Nittur in Dharwad Circle. However, it was noticed that rain water was coming on both the Rock Edicts and causing damage to these precious stones.



Stains due to water seepage at
Ashokan Rock Edict at Nittur, Dharwad

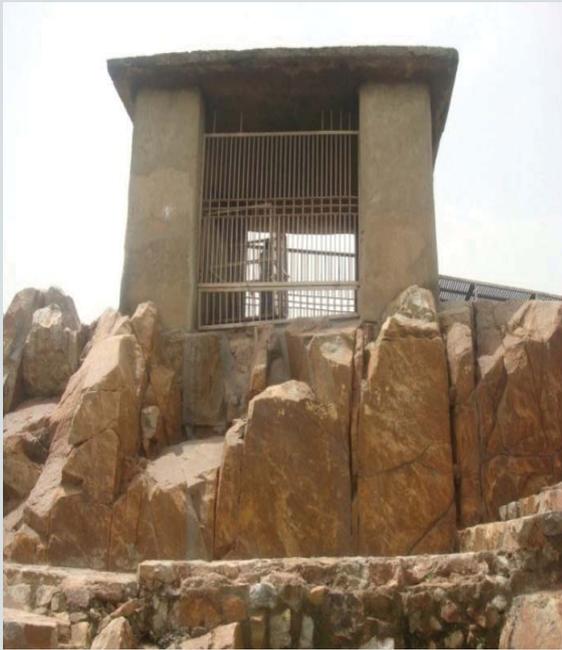


Stains on the inscription at
Ashoka Rock Edict at Junagarh, Gujarat

In Delhi⁴⁵, Rock Edict was covered with grill fencing. However it was noticed that visitors were not only touching the Edict but also performing rituals at the rock edict. It was also

⁴⁵ East of Kailash in Hauz Khas I sub circle

noticed that the garden surrounding the place was badly maintained and encroachment was noticed at the site. The signage installed in 2010 were found missing at the site.



Covered Ashokan Rock Edict in Delhi circle



Performance of rituals over the Rock Edict



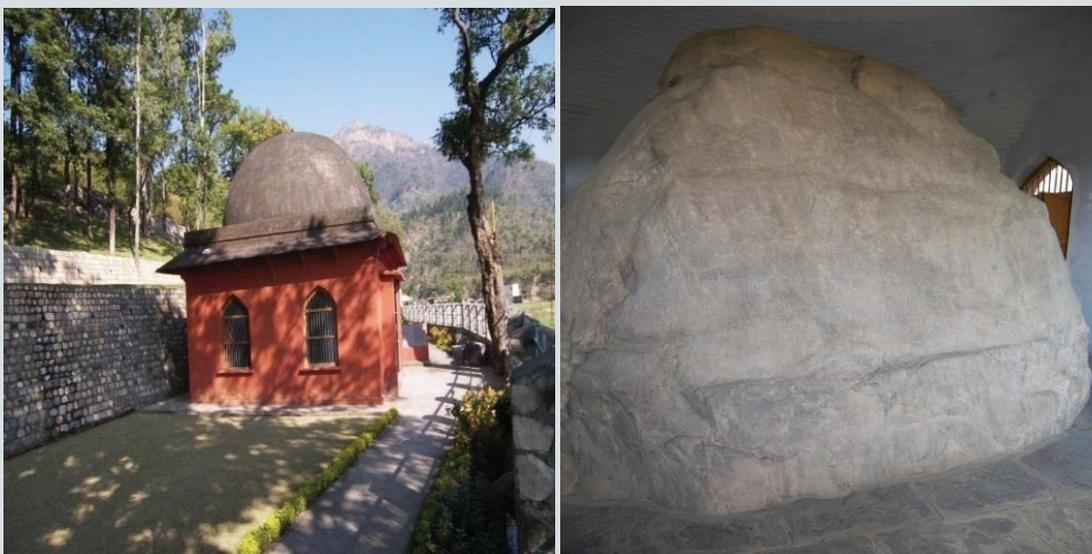
Translation of the inscriptions at the Site



Missing signage at Ashokan Rock Edict

Ashokan Rock Edict at Delhi

In contrast, we noticed that Ashokan Rock Edict at Kalsi, Dehradun was properly maintained. It was covered with a gumbad which protected the rock edict and no visitors were allowed to touch the Rock Edict.



Ashokan Rock Edict at Kalsi, Dehradun

Translation of the Inscriptions

As these inscriptions were written in Prakrit language with Brahmi script, the ASI was expected to provide proper signages at the sites translating what was written on these Rock Edicts. Though all Ashokan Edicts had been deciphered and translated, no translation was provided at the site for the benefit of the visitors at these sites except in Delhi.

