Durable Digital Archives for South Asian Heritage

From excavation records to preserved, searchable and ethically governed public evidence

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Direct answer. A trustworthy heritage archive is a managed evidence system, not a folder of scans. It links every digital object to its creator, site, context, date, method, rights, transformations and related records; stores preservation masters in sustainable formats; checks file integrity; keeps redundant copies; assigns persistent identifiers; and supports migration as technology changes. Public access should be generous but tiered where precise site locations, sacred knowledge, human remains, personal data or community rights require protection.

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1 Archaeological archive as evidence system

Because fieldwork can remove primary context, the integrated record of observations, objects, samples and interpretations is itself a research collection. Digital stewardship must preserve relationships and provenance, not merely individual bitstreams.

2 Lifecycle planning and appraisal

Preservation begins before capture. Project plans should assign responsibilities, select records, document significant properties, define formats and metadata, budget for deposit, and distinguish working, publication and preservation versions.

3 Metadata, identifiers and interoperability

Descriptive, technical, structural, rights and preservation metadata enable discovery and future interpretation. Persistent identifiers, controlled vocabularies and documented schemas permit citation and exchange while retaining local terminology.

4 Bit preservation and format continuity

Fixity, replication, access control, monitoring, migration and recovery testing address different risks. Sustainable formats reduce dependence on particular software, while original formats may be retained when functional properties matter.

5 Access, rights and cultural governance

Open access is valuable but not absolute. Tiered controls may protect sites, privacy, sacred knowledge and community interests. Restrictions should be specific, documented, reviewable and accompanied by as much discoverable metadata as ethically possible.

6 FAIR, CARE and public value

FAIR improves machine-actionable reuse; community-centred governance adds collective benefit, authority, responsibility and ethics. Heritage repositories need both technical interoperability and accountable relationships with knowledge holders.

7 Repository architecture and interfaces

Preservation storage should be separated from public delivery. Landing pages, APIs, IIIF services and downloadable packages can be regenerated from controlled masters. Versioning and audit logs maintain the chain between evidence and published interpretation.

8 Sustainable implementation

A staged programme should inventory collections, stabilise at-risk media, publish metadata, deposit priority datasets, formalise policies and measure coverage. Recurring funding and succession agreements are as necessary as servers.

9 Evidence assessment

Strong	Digital archaeological records require active preservation, metadata and provenance; storage or scanning alone is insufficient.
Strong	Persistent identifiers, sustainable formats, fixity checks and redundant copies reduce distinct preservation and reproducibility risks.
Probable	Open, linked and multilingual metadata substantially improves discovery and responsible reuse across fragmented collections.
Contested	The appropriate balance between public access and restrictions for sensitive places, knowledge and human remains must be decided case by case with affected communities.
Unsupported	The assumption that uploading files to a website guarantees their authenticity, intelligibility or long-term survival.

10 Conclusion

South Asian heritage needs archives built around evidence relationships, persistent stewardship and accountable access. The practical path begins with identifiers, metadata, durable masters, integrity checks and redundant custody, then grows toward interoperable, multilingual services. Preservation succeeds when future users can find a record, understand how it was made, assess its authenticity and reuse it within clearly governed rights.

References

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This paper is an evidence review for public scholarship.

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