

Examining the Existing Management System for the UNESCO World Heritage Sites from National to Property Level in India

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Abstract India's UNESCO World Heritage Sites represent significant cultural and natural assets requiring effective systems of protection, conservation, management, and sustainable use. This research paper examines the existing management system for UNESCO World Heritage Sites in India, with particular emphasis on the legal and institutional framework and the availability and allocation of resources from the national to the property level. The study reviews the roles of key agencies, including the Ministry of Culture, Archaeological Survey of India (ASI), State Governments, local authorities, site-management authorities, and other stakeholders involved in World Heritage conservation. It analyses relevant legislation, policies, institutional responsibilities, financial and technical resources, and management mechanisms operating at different administrative levels. The paper also identifies challenges related to inter-institutional coordination, resource availability, community participation, monitoring, and implementation. This paper highlights the need for an integrated, adequately resourced, and participatory management approach to strengthen the long-term conservation and sustainable management of India's World Heritage Sites.

Keywords: UNESCO world heritage, architectural conservation management, government intervention, India

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1. Introduction

India's cultural and natural heritage represents thousands of years of human civilization, artistic expression, architectural innovation, and ecological diversity. To ensure the preservation of properties of exceptional global significance, India ratified the UNESCO World Heritage Convention in 1977 [1]. Since then, the country has successfully inscribed numerous properties on the UNESCO World Heritage List, reflecting its diverse historical, architectural, and natural wealth [2,3]. The management of UNESCO World Heritage Sites in India operates within a complex, multi-tiered framework involving legal statutes, institutional hierarchies, policy frameworks, and financial mechanisms extending from the national government down to site-specific administrative units [4,5].

2. Legal Framework

India became a State Party to the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (1972) in 1977 and has since incorporated its principles into national heritage conservation policies. Although there is no single legislation dedicated exclusively to World Heritage Sites, a robust set of legal instruments provides protection to cultural and natural heritage.

2.1. Constitutional Provisions

The Constitution of India establishes the protection of heritage as a shared responsibility:

- Article 49 directs the State to protect monuments, places, and objects of national importance from destruction, removal, or neglect.
- Article 51A(f) makes it a Fundamental Duty of

every citizen to value and preserve the country's rich cultural heritage.

- The 42nd Constitutional Amendment (1976) places forests, wildlife, and environmental protection within the Concurrent List, enabling coordinated action by both Central and State Governments.

2.2. Cultural Heritage Legislation

The principal legislation governing protected monuments includes:

- The Ancient Monuments and Archaeological Sites and Remains Act, 1958 (AMASR Act) and the AMASR Amendment Act, 2010, administered by the Archaeological Survey of India [6].
- The Act provides legal protection to monuments declared to be of national importance.
- It establishes regulated zones of 100 metres (prohibited area) and 200 metres (regulated area) around centrally protected monuments, restricting construction and development.
- The National Monuments Authority (NMA) oversees heritage by-laws and regulates development within protected zones.

Additional legal instruments include:

- Antiquities and Art Treasures Act, 1972
- Indian Treasure Trove Act, 1878 (partially applicable)
- State Ancient Monuments Acts enacted by various State Governments for monuments of state importance.

2.3. Natural Heritage Legislation

The protected areas such as National Parks, Wildlife Sanctuaries, Tiger Reserves, Biosphere Reserves, and Conservation Reserves form the legal basis for safeguarding natural World Heritage properties. The Natural World Heritage Sites are protected through environmental legislation, including:

- Wildlife (Protection) Act, 1972
- Forest (Conservation) Act, 1980
- Environment (Protection) Act, 1986
- Biological Diversity Act, 2002
- National Forest Policy
- National Wildlife Action Plan

2.4. Planning and Urban Legislation

Many World Heritage properties located in urban environments are also regulated through:

- State Town and Country Planning Acts
- Municipal Corporation Acts
- Heritage Regulations incorporated within Master Plans
- Development Control Regulations
- Smart City and AMRUT planning frameworks where applicable

These instruments help regulate land use, building controls, infrastructure development, and heritage-sensitive urban planning [7].

3. Institutional Framework

India employs a multi-level institutional structure extending from the national government to site management authorities [8].

3.1. At National Level

3.1.1. Ministry of Culture

The Ministry of Culture is the nodal authority responsible for cultural World Heritage policy, international coordination with UNESCO, funding, and national heritage programs [9]. The functioning of Ministry of Culture is given as below.

- Allocates financial resources
- Coordinates UNESCO nominations
- Oversees heritage policy
- Supports capacity building
- Represents India before UNESCO

3.1.2. Archaeological Survey of India (ASI)

The Archaeological Survey of India (ASI) under the Ministry of Culture is the principal authority responsible for architectural conservation of most cultural World Heritage Sites [6]. ASI was established in 1861; the ASI is India's premier heritage conservation agency responsible for:

- Conservation of Centrally Protected Monuments;
- Structural conservation
- Archaeological Research;
- Scientific Conservation;
- Chemical preservation
- Documentation
- Site Management;
- Visitor Management;
- Disaster Preparedness
- World Heritage Nomination Dossiers;
- Periodic Reporting to UNESCO.

The ASI manages most cultural World Heritage Sites in India through its Circle Offices and site-specific conservation units [6]. The annual funding is provided by the Government of India. The ASI prepares the followings:

- Annual Conservation Plans
- Perspective Plans
- Maintenance schedules
- Scientific reports

3.1.3. National Monuments Authority (NMA)

The NMA regulates development within prohibited and regulated areas by:

- Reviewing construction proposals
- Issuing No Objection Certificates
- Protecting monument settings
- Maintaining heritage bylaws

3.1.4. Ministry of Environment, Forest and Climate Change (MoEFCC)

MoEFCC oversees natural World Heritage properties through:

- Forest Departments

- National Tiger Conservation Authority (NTCA)
- Wildlife Institute of India (WII)
- National Biodiversity Authority
- Project Tiger and Project Elephant programs
- Natural World Heritage Sites are managed under ecosystem-based conservation approaches.

3.1.5. Indian National Commission for Cooperation with UNESCO (INCCU)

The Commission coordinates India's engagement with UNESCO, facilitating communication between national authorities and UNESCO World Heritage Centre.

3.2. At State Government Level

State agencies often provide infrastructure, tourism management, local conservation support, and implementation of planning regulations surrounding World Heritage Sites [10]. The State Governments play a crucial role through the Co-ordination of:

- Departments of Archaeology
- Departments of Tourism
- Urban Development Departments
- Forest Departments
- Public Works Departments
- Municipal Corporations
- Development Authorities

Many World Heritage Sites involve State Archaeology Departments for:

- Community coordination
- Local conservation
- Heritage regulation
- Buffer zone management
- Urban heritage planning

3.3. At Property (Local) Level

Individual World Heritage properties are generally managed through dedicated management structures comprising:

- Site Director or Superintending Archaeologist
- Conservation Engineers
- Architects
- Archaeologists
- Structural Engineers
- Horticulture staff
- Security personnel
- Interpretation officers
- Forest officials (for natural sites)

Many sites establish Site Management Committees that include representatives from:

- Local Administration;
- Municipal Authorities;
- Tourism Departments;
- Police;
- Local Communities;
- Academic Institutions;
- NGOs;
- Religious Trusts (Where Applicable).

Integrated Management Plans define responsibilities, conservation priorities, visitor management strategies,

disaster preparedness, monitoring systems, and stakeholder participation.

4. Heritage Management Planning

UNESCO requires every World Heritage property to possess an effective management system.

Indian World Heritage Sites increasingly adopt and generally address the following criteria:

- Conservation Objectives
- Documentation
- Comprehensive Management Plans
- Conservation Management Plans
- Visitor Management Plans
- Disaster Risk Management Plans
- Heritage Impact Assessment procedures
- Environmental Management Plans
- Climate Resilience
- Buffer Zone Regulations
- Sustainable Development.

Monitoring is undertaken through periodic inspections, structural assessments, biodiversity surveys, GIS mapping, digital documentation, and UNESCO Periodic Reporting exercises.

5. Financial and Human Resources

5.1. Government Funding

The primary financial support is provided through:

- Government of India budget allocations;
- Ministry of Culture;
- Archaeological Survey of India;
- Ministry of Environment, Forest and Climate Change;
- State Government budgets.

Special funding is also available through:

- National Culture Fund
- Swadesh Darshan Scheme
- PRASHAD Scheme
- Smart Cities Mission
- CSR partnerships
- International cooperation projects
- UNESCO International Assistance (where applicable)

5.2. Human Resources

World Heritage management involves multidisciplinary expertise including:

- Archaeologists;
- Architects;
- Conservation Engineers;
- Structural Engineers;
- Historians;
- Conservators;
- Chemists;
- Geologists;
- Ecologists;

- Foresters;
- Wildlife Biologists;
- Planners;
- Gis Specialists;
- Tourism Professionals;
- Interpreters;
- Disaster Management Experts.

The training is provided by:

- Archaeological Survey of India Institute of Archaeology;
- National Research Laboratory for Conservation;
- Wildlife Institute of India;
- Indian Institute of Heritage;
- School of Planning and Architecture (SPA);
- Indian Institute of Technology (IITs) and other Universities.

6. Community Participation

Contemporary heritage management in India recognizes communities as essential stakeholders.

- Community participation includes:
- Traditional Custodians;
- Village Committees;
- Local Artisans;
- Religious Institutions;
- Non-Government Organization (NGOs);
- Tourism Operators;
- Resident Welfare Associations;
- Academic Institutions.

Participation occurs through:

- Awareness Programs;
- Heritage Walks;
- Public Consultations;
- Livelihood Generation;
- Eco-Development Committees;
- Traditional Conservation Knowledge;
- Cultural Festivals;
- Volunteer Programs.

This participatory approach supports UNESCO's Historic Urban Landscape (HUL) Recommendation and Sustainable Development Goals.

7. Heritage Conservation Methodology

Conservation follows internationally accepted principles emphasizing minimum intervention, authenticity, integrity, and scientific methods [11,12]. India's conservation methodology and management system for UNESCO World Heritage Sites combine legislative frameworks, scientific preservation techniques, and multi-tier governance to protect its Outstanding Universal Value (OUV) [13]. The conservation methodology adopts the following measures:

- Principles of Minimal Intervention: Preservation emphasizes scientific chemical conservation, structural consolidation, and non-destructive testing over reconstruction.

- Authenticity and Integrity: Material compatibility is maintained using traditional techniques and local materials (e.g., lime mortar, sandstone).
- Buffer Zone Planning: Micro-zoning restricts urbanization, industrial pollution, and unchecked development around core protected areas (e.g., eco-sensitive limits around the Taj Mahal).

The emphasis is on retaining authenticity rather than replacing original fabric. The major conservation activities include:

- Structural Stabilization;
- Masonry Conservation;
- Chemical Preservation;
- Archaeological Excavation;
- Documentation;
- Landscape Management;
- Biodiversity Conservation;
- Preventive Conservation;
- Climate Adaptation;
- Digital Recording Using Gis, Lidar, Laser Scanning, Drones, And Photogrammetry.

Natural heritage sites employ ecosystem management, habitat restoration, species monitoring, anti-poaching measures, fire management, invasive species control, and community-based conservation.

8. Monitoring and Reporting

The monitoring and reporting operate at multiple levels. The property managers regularly evaluate the followings:

- Physical Condition;
- Visitor Numbers;
- Environmental Indicators;
- Biodiversity Status;
- Structural Stability;
- Tourism Impacts;
- Disaster Risks.

At the national level, ASI and MoEFCC review conservation performance and prepare reports for UNESCO. Internationally, India participates in:

- UNESCO Periodic Reporting;
- Reactive Monitoring Missions (where required);
- State of Conservation reporting;
- Advisory missions by ICOMOS, ICCROM, and IUCN [14].

9. Key Challenges in Heritage Management

Strengthening inter-agency coordination, enhancing digital heritage management, expanding community participation, improving climate resilience, and integrating heritage into sustainable urban planning remain key priorities [15,16]. National policy reviews have emphasized that post-inscription management often requires stronger coordination and sustained investment to meet UNESCO expectations. Despite a robust institutional framework, several challenges remain:

- Rapid Urbanization;

- Delayed Preparation and Implementation of Management Plans
- Urban Encroachment around Heritage Sites
- Infrastructure Development Pressures
- Impact Of Tourism Carrying Capacity
- Inadequate Staffing And Funding Relative to the Number of Protected Monuments
- Environmental Degradation;
- Climate Change
- Pollution
- Limited Coordination among Multiple Agencies
- Need For Greater Use of Digital Documentation and Heritage Impact Assessments

10. Conclusions

India's management system for UNESCO World Heritage Sites represents a comprehensive, multi-level governance framework combining constitutional mandates, legislative protection, institutional coordination, scientific conservation, and community participation [17]. The existing management system for the architectural conservation of India's World Heritage Sites is founded on the UNESCO World Heritage Convention, the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958, and a multi-level institutional framework led by the Archaeological Survey of India. It combines legal protection, scientific conservation, documentation, visitor management, risk preparedness, and stakeholder participation to safeguard the Outstanding Universal Value of heritage properties [18]. While the framework is comprehensive, strengthening integrated management plans, inter-agency coordination, community participation, and sustainable financing remains essential for addressing increasing urbanization, tourism pressures, and climate-related risks [19,20]. The management plans, legal safeguards, multidisciplinary expertise, monitoring systems, and sustained financial support collectively contribute to maintaining the Outstanding Universal Value (OUV), authenticity, and integrity of World Heritage properties. Continued emphasis on sustainable development, climate resilience, stakeholder engagement, and integrated management will further strengthen India's capacity to conserve its exceptional cultural and natural heritage for future generations while fulfilling its

obligations under the UNESCO World Heritage Convention.

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