

# **S**TRATEGIC PLANNING FOR SUSTAINABLE CONSERVATION. CASE STUDY: ANCIENT CITY OF “ISTAKHR”, IRAN

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## **1. Introduction**

Historical sites represent a crucial aspect of our heritage, housing a diverse array of artifacts that possess both movable and immovable value. Preserving these sites necessitates the application of efficient management strategies, such as Conservation Management Planning (CMP). To effectively safeguard and maintain these sites, it is imperative to establish a dynamic and centralized management plan rooted in global conservation trends. This planning should be crafted with a comprehensive grasp of the theoretical underpinnings of ancient site protection, customized to suit the distinct attributes of each site. Before formulating a strategic plan, it is paramount to acquire complete information regarding the site's current condition and impact. By utilizing this information, a comprehensive conservation plan can be formulated [1-2]. Safeguarding an ancient site effectively involves using indicators from global practices and aligning them with the site's distinct features [3].

The broad approach to cultural heritage protection and the examination of related aspects, while at times extending beyond restoration, can aid in preserving the site and enhancing infrastructure [4-5]. This study aims to assess contemporary methods for creating management frameworks for safeguarding ancient sites and introducing a strategic planning approach utilizing a SWOT analysis (identifying strengths, weaknesses, opportunities, and threats). Following the development of the model, a one-year protection plan was designed for the historical site of Istakhr. Istakhr, an ancient city with origins dating back to the pre-Achaemenid period, holds significant importance as a major city within the Sassanid Empire.

Despite its cultural significance, the city of Istakhr lies buried, with limited visible remnants [6].

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Extensive speculation and excavations are necessary to reveal and present this heritage. However, before any actions, a protection strategy must be established. To achieve these objectives, fundamental questions need clear answers. Queries such as: What is the importance of global conservation management planning?

Which references shape the principles guiding protection management programs, and in what structures do they operate? What are the attributes, aspects, and models of protection management frameworks for the holistic safeguarding of an ancient site? What outcomes have been observed from implementing such strategies thus far? Several hypotheses were contemplated in this context.

Effective management planning for ancient site protection demands a global perspective alongside local and regional implementation. Initial reviews should involve examining global charters and guidelines.

This study is oriented towards development and practicality in purpose, employing a deductive-hypothetical problem-solving approach. The primary aim of this program is to safeguard the values of the ancient site of Fars Pool. Consequently, the following objectives can be categorized as sub-goals under this overarching objective.

- Identifying the features and introducing the site.
- Financial protection and intellectual backing to fully safeguard the area's values.
- Conservation measures need urgent attention.
- Groundwork for crafting a sustainable, long-term protection strategy for the site.

A planning framework for managing, directing, and controlling a historical collection towards optimal preservation conditions is essential.

The significance of an area is determined by its intrinsic characteristics, including historical, cultural, and scientific values. Recognizing these values is an ongoing process that can enhance public awareness of science and culture [7].

Ancient heritage is a part of cultural heritage that involves archaeological excavations revealing information about human activities in the area. This includes tangible and intangible human remains, uninhabited structures, and various artifacts found underground [8-9].

## 2. Literature review

Understanding the values of a site is crucial before describing it. Many international charters often confuse "description" with "interpretation" which is a vital part of the evaluation process. The Venice Charter was the first global charter to outline criteria for evaluating a heritage site. While the Athens Charter focused on the historical values of architectural structures, later charters like the Burra Charter (a document published by the Australian ICOMOS) emphasized preserving the values of the site itself. Heritage values are categorized into different types, and "typology" is a key aspect [10-11]. With such an approach, heritage values in historical sites can be categorized and adjusted according to the needs, possibilities, and urgency of the intended interventions of planners, in line with national and global policies and guidelines.

Interpretation is a creative tool to highlight cultural heritage values and their positive impact on the community. The Burra Charter emphasizes utilizing the economic

and social benefits of heritage by making rational use of the site, including its historical, artistic, and scientific values.

Cultural heritage values lead communities and professionals to support and protect them and thus manage their conditions. In the table below, two models of categories that have been considered by some groups of experts (Martha Demas, Erica Avrami, Randall Mason) are reported (Table 1).

*Table 1. Summary of research on the values of heritage sites with Martha Demas, Randal Mason and Erica Avrami.*

<b>Martha Demas</b>	<b>Randall Mason and Erica Avrami</b>
Symbolic values (identity)	<i>Artistic and historical values</i>
Urban and social values	<i>Urban and historical values</i>
Spiritual or religious values	<i>Spiritual or religious values</i>
Research values / Scientific value	<i>Research values</i>
Natural values	<i>Natural values</i>
Economic values	<i>Economic values</i>

Different steps have been taken in the direction of managing the protection of the heritage of the past. Drafting bylaws, charters, and conventions are among these measures. Adopting the International Charter for the Protection and Restoration of Monuments and Sites in 1964 - the Venice Charter - is one of the first steps; the 1981 Florence Charter, the 1999 Indigenous Heritage Charter, etc., are also among them. New practical measures in this area include the design of protection management templates. A conservation management plan identifies important components in an area. As a result, it presents strategies and policies to improve the conditions and empowers these indicators to maintain and develop the collection in the future as a plan [12]. Experiences gained from conservation management in Norway and the United Kingdom have led to the widespread use of conservation management systems. By creating a systematic framework, it is possible to identify latent and potential indicators by which the quality of conservation activities can be assessed [13]. Until 1989, there were no specific guidelines for managing the conservation of archaeological sites. Several international charters have often cited archaeological sources as part of their entirety, acknowledging that they did not draw a clear line between heritage, ancient buildings, and archaeological sites. Although the Athens Charter (1931) first mentions archaeological sites, their greatest focus was on the preservation of monuments and international cooperation, not on the management or planning process [14-16]. It was the Recommendation on International Principles Applicable to Archaeological Excavations (UNESCO 1957) that first introduced general principles for archaeological excavations to regulate specific archaeological activities and interfaith collaboration. International and other archaeological issues, including antique trade, are among these principles. The Delhi Recommendation, however, did not include management principles. For example, the question arises: "How should archaeological sites be protected?" And "What can the process of comprehensive management of these archaeological sites in today's conditions be after excavation activities?" The Delhi Recommendation, developed at the 1956 Delhi Conference, assessed the challenges facing archaeological excavations and made suggestions for better manage-

ment of such sites [17-20]. International charters do not usually directly describe the planning process for the management of heritage sites. However, most of these by-laws provide principles and recommendations for various issues and other matters related to the area. Based on the principles and recommendations derived from selected international regulations related to archaeological sites, however, a general management plan can be adopted (Table 1) [21]. Individual experiences with programming more clearly define planning methods. Based on the information gathered from available sources, five of the models experienced in archaeological site management planning are presented in this text:

- Victorian Heritage Conservation Management Planning Guide [22].
- Management Guidelines for World Heritage Sites by Bernard Fielden [23].
- Marta Demas Program Process.
- The management plan of Michael Pearson and Sharon Sullivan [24].
- The study of objects, model E. McClang Fleming [25].

As can be seen in Table 2, the topics presented in each of these methods can be broadly divided into three main sections:

- Data collection
- Assessment of current conditions and values
- Preparation of applications

*Table 2. Steps in the management planning process*

Management planning model	First stage	Second stage	Third level
Burra Charter(1991)	Understanding values	Explain policies	Management
Michelle & Sharon(1995)	Location, identification, and documentation	Assessment	Planning and implementation
Martha Demas(2000)	Identify and describe	Evaluation and analysis	Reaction
Bernard Fielden and Yuka Yokelto(2000)	Describe the place and location	Evaluate and make the situation tangible	Prescription for managing all areas
New Guides(2005)	Documentary	Analysis	Reaction

In Table 2, five different models in land management processes were compared by examining their goals and strategies. The programs involve three general processes: documenting, analyzing the situation, and responding to needs.

### 3. Research findings

The ancient site of Istakhr is situated on the royal road of Dasht-e Marvdasht (Figure 1). This road, traveling from Pasargad to Persepolis, passes through the city of

Istakhr and Naghsh-e Rostam. Marvdasht Plain is located at a longitude of 52, a latitude of 29 degrees, and an altitude of 1594 meters above sea level.

*The location of the Ancient Site of Istakhr in Google Maps report is:*

*Fars Province, Iran*

*29.981040, 52.912362*

This area is located 65 km north of Shiraz [26]. The significance of the ancient Istakhr area extends beyond just the city itself, so any document related directly or indirectly to this site can provide valuable information for us to delve deeper into our understanding. Let us elevate our appreciation for this ancient site.



Figure 1. Geographical location of the city of Istakhr relative to Persepolis (source: Google Earth).

### 3.1. Geographical location

The city of Istakhr, situated at the highest altitude of 1642 meters above sea level, is located on the eastern edge of the Marvdasht plain. This area is positioned 7 km north of Persepolis and 16 km northeast of the new city of Marvdasht. The Marvdasht Plain is an alluvial flat area that is surrounded by mountainous units to the north, west, and south. This plain is enclosed by vast mountains to the north and south, with several single hills scattered throughout.

The historical site of Istakhr is, moreover, located near the World Heritage Site of Persepolis. This proximity affects the importance of the archeological site of Istakhr, both historically and from a tourist perspective.

One of the most significant hills is the Mountain of Rahmat. This mountain range spans 41 km in length, with a width ranging from 5 to 8 km, following the folds of the

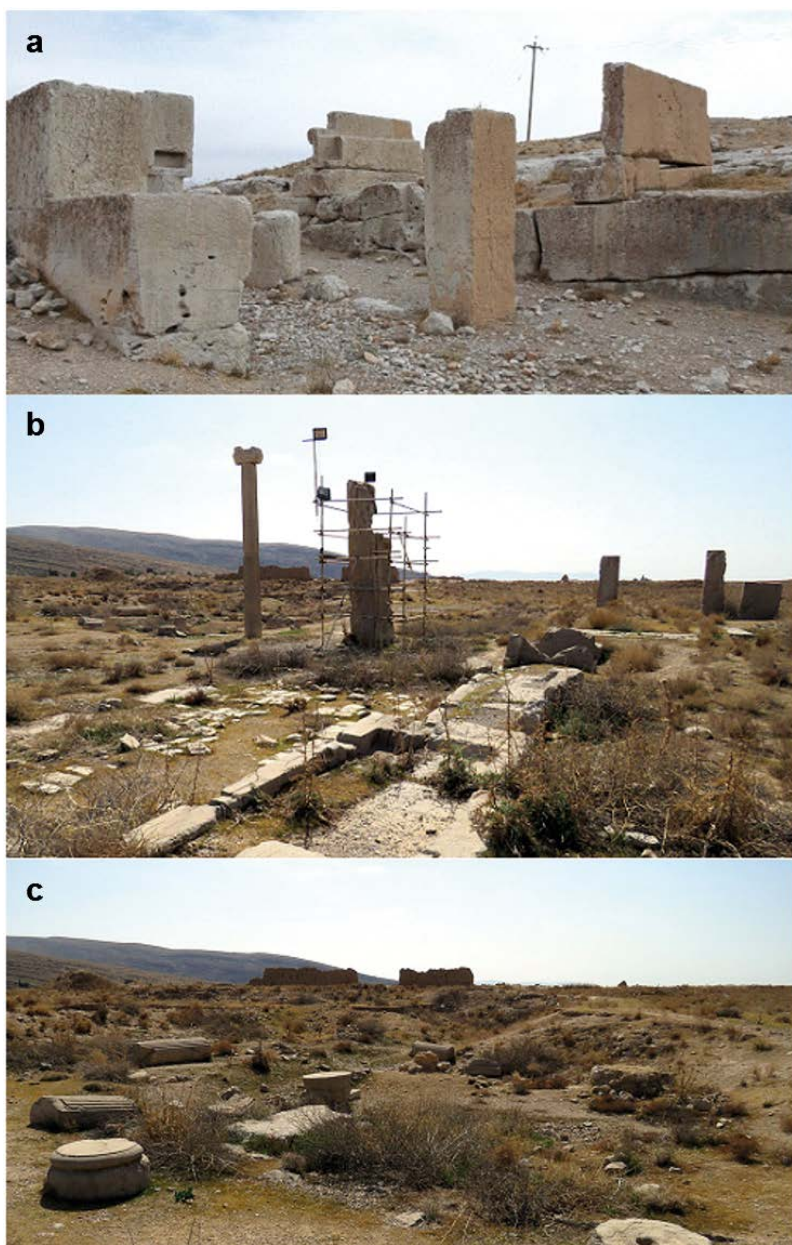
Zagros unit. The highest point of this mountain range is 2559 meters above sea level (Figure 2 [27-28]).



Figure 2. Aerial image of the ancient site of Istakhr City and the mountain of Rahmat (source: Google Earth).

The city of Marvdasht is situated in the catchment area of Bakhtegan Lake. The water resources in this region include both surface and groundwater sources. Surface resources consist of Lake Tashk and Bakhtegan, as well as the Sivand and Kor rivers. Groundwater resources comprise the calcareous and non-calcareous groundwater aquifers of the Black Mountains, Rahmat, and Zarqan [29-30]. The ancient city of Istakhr is a historical site with a large collection of ancient Iranian remains. These works include architecture, pottery, and metal objects, among others (Figure 3). According to historical documents, this city was one of the most prosperous cities in Persia from the Achaemenid period to the early Islamic period. It is said that after the destruction of Istakhr in successive wars with the Arabs, the city's inhabitants moved to Shiraz. The present city, which was considered a workshop city of Persepolis during the Achaemenid period, was relocated.

The ancient city of Istakhr covers an area of approximately 80 hectares and is completely under the supervision of the Cultural Heritage Organization. The Parseh Pasargad Research Foundation, on behalf of this organization, is responsible for supporting this area. Despite appearing empty, the Istakhr area still contains fields and several sheds within its boundaries. The ancient site of Istakhr is located in an area that can be boldly called the flagship of the Achaemenid civilization, as it contains more well-known works from that period compared to other regions. Persepolis is located 3 km away, Pasargad 30 km away, and Naghsh-e-Rostam 1 km away from the Istakhr area, adding to its importance. The tomb of Suleiman's mother and the Naghsh-e-Rajab are also archaeological sites in this region. The city was situated on a crucial royal route during the Achaemenid period at a strategic point, being the only route from north to south through the central plateau [31-33]. A thorough understanding of the values of this site necessitates extensive and ongoing excavations. Consequently, comprehensive support and protection must be provided for the area before and after any archaeological activities. Safeguarding a site of this magnitude requires a comprehensive approach to conservation and planning for its preservation.



*Figure 3. Remains of stone artifacts of the ancient city of Istakhr related to Achaemenid and Sassanid architecture: a. Stone remains that probably belonged to the city's entrance gate; b. a collection of remains of columns and architectural structures located in the center of the compound; c. a set of column bases that can indicate the location of a landmark building (Image source: iranwonders.com).*

### 3.1. Area excavations and conservation actions

Most of the archaeological excavations in the city of Istakhr date back to the 1930s and coincide with the excavations in Persepolis. Archaeologists from the Institute of Oriental Studies at the University of Chicago - Herzfeld & Schmidt - also excavated Istakhr from 1932 to 1937 while working on Persepolis. Herzfeld explored Istakhr for the first time between 1932 and 1934 during his activities in Persepolis. In addition to excavating the site, Herzfeld also created a site map [34-35]. Despite numerous archaeological excavations and research in the area, the efforts made have not been able to gather enough information to create a complete visual model of the site and the area still holds many mysteries that require extensive, organized exploration.

According to excavation reports conducted on the site, it contains settlements from the Achaemenid and post-Achaemenid periods (550–330 B.C) to the early Islamic era (7th century). The area thrived during the rule of the Sassanid empire (224–651 C.E.), and probably many of the empire's princes were born and crowned in this city. It is worth noting that a number of paintings in historical travel books show evidence of the remains of the historical city of Istakhr, indicating that, over the years, the surface of the area has probably undergone changes. These changes include natural erosion, and the movement of surface remains which, doubtless to say, doubles the need to preserve the area so that the situation does not become worse than it is at present (Figure 4).

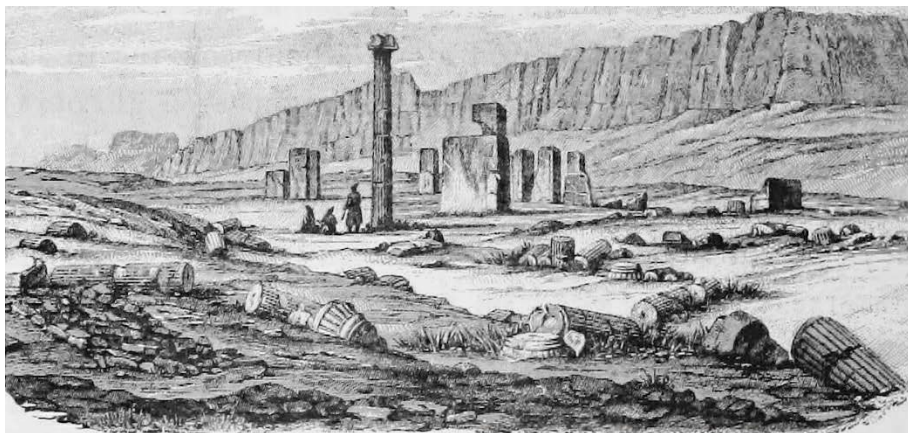


Figure 4. A picture of the ruins of the city of Istakhr in the 19th century (source: wikipedia.org).

Surface artifacts in the area include architectural rock fragments and pottery that cover almost the entire area (Figure 5). Excavation reports indicate that a large volume of pottery was unearthed in the few excavations that were conducted. Additionally, coins dating from the Achaemenid to Islamic periods have been found in the area. Despite the limited number of excavations, the presence of a wide range of artifacts suggests the area's historical richness. As mentioned previously, further exploration of the site is necessary to answer many historical questions. Fortunately, there are well-planned and organized investigations, along with a comprehensive pro-

tection plan in place to minimize errors. Regarding the protection of the area, a permanent guard room is located by the Fars Province Cultural Heritage Organization, and permanent security and protection of the premises is controlled in this building. According to reports by the Parse World Heritage Site located in Persepolis, in recent years, groups of conservation and restoration experts have investigated and carried out practical measures in this area, among them, Mr. Majid Abedi, Mehdi Sotoudeh and Ms. Maryam Ferasat, who have conducted scientific conservation and restoration activities in the area.

#### **4. Planning by strategic analysis**

One of the most important measures taken for each ancient site is its registration in the list of national and world monuments. The area was nationally registered with the number 18 on September 15, 1961, and has been using the facilities of the Cultural Heritage Organization ever since. It seems that this site has the conditions to be introduced as one of the candidates for registration in the World Heritage List. The site has been guarded permanently for about fifty years, although the presence of a guard may not fully guarantee the area's 80 hectares. A series of symbolic conservation and restoration measures, including the reconstruction of a column (anastylosis) have been carried out in recent years, but due to the large volume of rock debris on the ground, it seems that much work still needs to be done. The construction of the campus' administrative building is one of the most important measures taken in this area, but unfortunately it is not currently in use. The construction of toilets, determining the boundaries for visitors, and equipping a small part of the area with lighting facilities are other valuable measures taken to maintain and introduce the area. Currently, visitors can visit the site, but visitor statistics show that tourists to cultural sites visit this site less often.

#### **5. Internal and external conditions**

To create strategic planning, information is extracted from the internal and external conditions of the site. In the field of conservation planning of an archeological site, in addition to developing an operational plan and reviewing the required conditions and facilities, general strategies and goals should be addressed. In planning, we face two aspects:

##### **1) Issues related to heritage sites:**

- A. Determining the importance of heritage sites, both materially and spiritually.
- B. The duties of society and governments towards these areas.
- C. Evaluating its values to plan for the identification, protection, and introduction of these values.
- D. Evaluation of internal and external conditions with the assumptions of strategic planning and as variables of weakness, strength, opportunity, and threat.
- E. Defining policies based on the intellectual foundations of cultural heritage and regional, national, and global policies about cultural heritage sites.

## 2) Guidelines and fundamentals of planning science for ancient sites

One of the important issues in the field of cultural heritage is to pay attention to the issue of protection along with conservation and other auxiliary concepts. With a brief look at the city area of Istakhr, despite its unique cultural and historical values, unfortunately, due to the absence of a continuous research and archaeological program in this historical site, not all the valuable features of this site are known yet. In the absence of this support - whether materially or spiritually and intellectually, from domestic and foreign partners, government and private, whether from the government or society, whether from the point of view of officials and experts or just interested people - any protection program is corrupted and unenforceable. Therefore, it seems that one of the important policies that should be considered in planning the protection of this area is to take measures to attract and obtain domestic and foreign material and spiritual support, both privately and governmentally. In the basics of planning, we face two types of goals: short-term goals and long-term goals. If the long-term goal of our planning is comprehensive protection of the area, the above is the first step, and as short-term goals, that of obtaining comprehensive material and intellectual support are important. The next step is to take the necessary measures regarding the identification and presentation of the area, which can help the initial step to some extent. Another step involves activities related to physical protection, including immediate protection and restoration measures. To achieve these goals, the first step is to identify internal factors (strengths and weaknesses) and external factors (opportunities and threats).

- *Weaknesses:*

- 1) The ancient city of Istakhr is not on the World Heritage List; the lack of a coherent case to bring this important action to fruition.
- 2) Lack of government financial support.
- 3) Lack of priority in heritage protection over other social matters-
- 4) Rejection of cultural heritage as an economic infrastructure from the point of view of society.
- 5) Lack of full knowledge and awareness of the area.
- 6) Ignoring the values of the area.
- 7) Lack of proper understanding of the values of the area.
- 8) Integration of matters related to the area with the Parseh-Pasargad Research Foundation.
- 9) Lack of a codified plan for the protection and development of the city of Istakhr.
- 10) Lack of interest of officials in doing such projects requires long-term plans.

- *Strengths:*

- 1) The values of the area are material and spiritual, and include cultural, social, economic, historical, artistic, political, and religious values.
- 2) Large amounts of cultural heritage remain buried underground and preserved in this position for years.
- 3) Remarkability of the site from a global perspective.

- *Opportunities:*

- 1) Experience significant material and spiritual results of supporting other sites inside or outside the country.

- 2) Existence of domestic and foreign experts in planning to attract support.
- 3) The possibility of using a comprehensive upstream tourism plan.
- 4) Recognized capacities and reputation of Fars province in terms of cultural heritage.
- 5) The possibility of increasing the number of cultural tourists in terms of quantity and quality.
- 6) The proximity of the area to the Parseh-Pasargad Foundation.
- 7) Facilities of Parseh-Pasargad Research Institute in Persepolis.
- 8) Facilities of the Deputy for Preservation and Restoration of Cultural Heritage and Tourism in Shiraz.
- 9) Facilities of the Conservation and Restoration Research Institute in Shiraz.

• *Threats:*

- 1) Increasing erosion of the area due to lack of conservative restoration.
- 2) The quiet forgetting of the silent values of the area as historical and cultural documents.
- 3) Lack of importance of archaeological sites from the public point of view in case of lack of support from the authorities.
- 4) Possibility of illegal drilling and smuggling.

Using the above information and SWOT planning strategic model guidelines, some strategies were suggested (Table 3).

*Table 3. SWOT analysis: Goals, strengths, weaknesses, opportunities, threats and strategies.*

Goals	Strengths	Weaknesses
<p>The long-term goal of conservation-oriented planning is comprehensive protection of the premises.</p> <p>The first step or short-term goal is obtaining comprehensive material and intellectual support.</p> <p>Recognize and introduce the valuable features of the area.</p> <p>Protective activities that require immediate action.</p>	<p>Material and spiritual values of the Istakhr area: cultural, social, economic, historical, artistic, political, religious.</p> <p>The proximity of the area to the Parseh-Pasargad complex.</p> <p>Facilities of Parseh Pasargad Research Institute in Persepolis.</p> <p>Facilities of the Deputy for Preservation and Restoration of Cultural Heritage and Tourism in Shiraz.</p> <p>Facilities of the Conservation and Restoration Research Institute in Shiraz.</p>	<p>Lack of interest of specialists and management to work on matters from scratch.</p> <p>Lack of government financial support.</p> <p>Lack of priority on heritage protection over other social matters.</p> <p>Lack of trust and acceptance of the government and society toward cultural heritage as an economic infrastructure.</p> <p>Lack of complete knowledge and awareness of the area.</p> <p>Ignoring the values of the area.</p> <p>Integration of affairs related to the area with the Parseh-Pasargad complex.</p> <p>Lack of a codified site protection and development plan.</p> <p>This site is not on the World Heritage List.</p> <p>Erosion of remains.</p>

Opportunities	Offensive strategy	Conservative strategy
<p>Experience significant material and spiritual results of supporting other sites inside or outside the country.</p> <p>Existence of internal and external experts in planning to attract support.</p> <p>Use of a comprehensive upstream tourism plan.</p> <p>Recognized capacities and reputation of Fars province in terms of cultural heritage.</p> <p>Ability to increase the number of cultural tourists in terms of quantity and quality.</p>	<p>Holding a meeting and conference with the facilities of the Deputy of Preservation and Restoration and Research Institutes of Conservation and Restoration and Parseh-Pasargad on the macro-planning of the site.</p> <p>Preliminary steps to register the site in the World List.</p> <p>Propose to include the protection and management plan in the comprehensive tourism plan as an upstream plan.</p>	<p>Putting the archaeological site of Istakhr in public tourism programs for public acquaintance.</p> <p>Measures leading to the independence of the affairs of the site.</p> <p>Using the facilities of mass media and social media in presentations of Istakhr lead to maintenance and conservative aims.</p> <p>Site monitoring.</p> <p>Interdisciplinary research.</p> <p>Using digital technologies to record and store site documentation and conserve all current information.</p>
Treatment	Competitive Strategy	Defensive strategy
<p>Erosion of surface and subsurface layers and loss of artifacts.</p> <p>Possibility of illegal drilling and smuggling.</p> <p>Historical distortion.</p>	<p>Evaluation of values and documentation of surface works should be done as soon as possible before further erosion of artifacts.</p> <p>Using all available facilities should prevent further erosion of surface works.</p> <p>Fencing the area and raising the security level of the area should be seriously pursued.</p>	<p>Due to the lack of facilities and the enormous volume of historical remains in the area, which are often buried underground, it is necessary to form a follow-up committee.</p> <p>Any intervention, whether exploratory or conservative, must be documented and applied in a completely conservative manner.</p> <p>Gathering information about the artifacts removed from the site is essential in the first steps of site protection.</p>

According to Table 3, strategies in the form of macro-plans with a focus on "conservation" are presented in the following order:

1. Holding a meeting and conference with the facilities of the Deputy of Preservation and Restoration and Research Institutes of Conservation and Restoration and Parseh-Pasargad regarding the macro-planning of the site.
2. Preliminary steps to register the site in the World Heritage List.
3. Propose to include the protection and management plan in the comprehensive conservation, archaeological, and tourism plan as an upstream plan.
4. Offer to register the site in the list of endangered (at risk) works.

5. Defining and redesigning touristic routes and infrastructure facilities required for cultural tourism.
6. Investigating flood paths and water accumulation points, and the movement and exit of water from the area, considering the location in an area of high rainfall and the importance of preserving the buried works.
7. Including the site in public tourism programs to promote and diffuse knowledge among the general public.
8. Necessary measures to make affairs related to the site independent.
9. Using mass media and social media to present and promote all the features and values of the area.
10. Despite the lack of facilities and increasing corrosion, forming a follow-up committee is necessary.
11. Any intervention, whether exploratory or protective, must be documented and applied in a completely conservative manner.
12. Gathering information about the artifacts that have been moved or removed from the site is necessary for the first steps of site protection.
13. Evaluation of values along with documenting surface works should be done as soon as possible and before further erosion of the on-site artifacts.
14. Using all available facilities should prevent further erosion.
15. Fencing the area and raising the security level of the area should be seriously pursued.
16. Monitoring the site and recording any changes using periodic reports.
17. Conducting interdisciplinary research on the characteristics and values of the area.
18. Emphasis and feasibility studies related to site revenue.
19. Suggest excavation planning to gain more information in the first step and to represent and introduce it as the next step.

Based on the analysis of the strategic model, the above findings can be effective in the process of protecting this area. In the following conclusion, a summary of important points is proposed as general guidelines.

## 6. Conclusion

Preserving an ancient site involves recognizing, presenting, and preserving its values. The following can be used to express the values of an area comprehensively and to provide for conservation management planning. Assessing values is the most necessary and important process for archaeological sites and provides a layout of its history and all relevant tangible and intangible evidence. The originality of the ancient Istakhr area should be considered and examined more broadly, i.e., taking in the whole area of the Persepolis Plain. Its importance has been repeated many times in historical discussions about this area and the architecture of its surface remains indicates architectural similarities with Persepolis. The tall towers and fortifications of this city are other examples of the importance of this area in the distant past, as in ancient times in most prosperous urban areas these protective measures were commonly used. From the remains of this city, it can be concluded that its architecture is based on the construction techniques of that time; based on the history of this area and the

archaeological findings and remains and surviving ruins, the Istakhr city area is considered to be a rich landscape and a significant cultural feature. The GIS maps show the marking of the historical boundary of the area, as well as some visible remains on the surface (Figure 5).



Figure 5. ArcGIS maps of the Istakhr area and surrounding lands (source: Author).

It includes small hand-carved caves that appear to have been used for burials in the Sassanid style, known as "*studans*"; in addition, there are signs of stone cutting that resemble ancient quarries.

Also, the river path is close to the area, industrial workshops, and fields, and the remains in the surrounding mountains and the stone structures in the path of the river can be used in the next conservation research and management plans (Figure 6).

The historical authenticity of the site has been confirmed through historical records, excavations, archaeological research, and reports by historians and art historians. Given the extensive recorded historical periods of the surviving artifacts, accurately determining the authenticity of the site and its remains seems complex because there are still many more ancient artifacts that have survived but are buried underground. Additionally, the originality of the components ranging from pottery to sculptures is equally high. Little restoration work has been carried out on the existing remains and, due to the high importance of authenticity, these measures need to be reviewed. It is challenging to measure and determine the value features of the historic city of Istakhr because most of it is buried.

According to historical information, the city limits and its area can be estimated. Life in this area is documented from before the Achaemenid period to the early Islamic period. However, despite the importance of this area, scientific research has been sparse, and no extensive excavations or studies have been conducted. After thorough archaeological excavations are carried out, the history of this region will undoubtedly become more clear and will consequently be revised.

This area appears to be the place where people performed normal activities in ancient times, so it preserves facts and valuable information from those historical periods. A values-based recognition process - identifying, preserving, and promoting - is crucial for developing a conservation management plan for an archaeological site. Recognizing and implementing decisions and plans that fully support the area's val-

ues is essential, with protection goals at the forefront. In this regard, the following points should be observed.

- Determine a protection framework in different situations.
- Fully understand the values of the site and consequently implement the necessary conservation strategies.



*Figure 6. Remains of the ancient site of Istakhr (source: author). A-B: remains of historical graves in the surrounding mountains; C- F: remains of the historical gate of the area, which is now located outside the protective fence of the site; D-E: remains of columns. It is noteworthy that some column bases and capitals from the site have been transferred to the Persepolis Museum or the on-site protective shelter for further preservation. Over the years, before the government and heritage protection intervened, stone remains were re-used for building by the natives which have sometimes been observed in buildings in nearby villages. Of course, in recent decades, these actions and changes have been prevented by the protection of the Cultural Heritage Organization.*

This recommended one-year management guide focuses on activities needed to identify and introduce the site's values, the first step in protecting any area. In addition to

site registration measures, periodic monitoring and supervision should be included in short-term and long-term management plans.

Any changes at the archaeological site should be documented, published, and included in a long-term plan with a conservation strategy to prevent decay and deterioration. Planning considerations should include determining the boundaries of agricultural lands around the site, locating catchment pits, establishing protected areas, planning for fencing, identifying site buildings, documenting, and stabilizing surface debris, and planning for restoration and protection of discovered works. Strategic plans should include a variety of elements such as landscape view stations, ticket counters, parking, vegetation, fences, restaurants, and more. Budget planning and detailed scheduling based on operational planning characteristics are also essential for implementing these strategies. While some measures may seem ancillary, they are crucial for overall site protection. To provide the best solutions for area protection, obtaining environmental information, productivity data, and stakeholder identification is also essential. Further studies are also needed to obtain comprehensive information on geology, agriculture, earthquake history, storm conditions, and stakeholder involvement.

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**Hossein Ahmadi** is a full professor in the Department of Conservation and Restoration of Historical Monuments of Isfahan University of Art. He defended his doctorate at the Polytechnic University of Valencia, Spain. His subjects cover the theoretical and technical fields of conservation and restoration of historical, cultural, and artistic works and objects including tiles, pottery, ceramics, glass, metal, stone, and generally works made of mineral materials, carrying out research experiments on works made of organic materials including wood and paper, investigating pests and biological damage, such as fungi, insects and vegetation, which are unwanted in historical sites.

**Mohammad Hassan Talebian** is a full professor at Tehran University. He is a scholar of architecture and the preservation of architectural remains. He has been involved in executive affairs in the Cultural Heritage Organization and the Ministry of Cultural Heritage for many years and has various management experiences in his portfolio. Some of these activities include being a member of the scientific committee of the National Conference of Kashan Historical Gardens; Secretary of the Board of Trustees of Chaghazanbil and Haft Tepe cultural-historical Complex; Member of the Strategic Council of Saad Abad Historical and Cultural Complex; Member of the National Cultural and Natural Heritage Committee of Iran's UNESCO National Commission; Member of the Scientific Committee of Horaman International Conference, World Registration, Culture and Sustainable Development; Member of the Policy Council of the Second National Conference on Cultural Heritage and Sustainable Development; Member of the Technical and Urban Design Committee of Tehran City Beautification Organization; Scientific and Executive Director of Parse-Pasargad World Heritage Site; Member of the Monitoring and Evaluation Commission of the Secretariat of the National Committee of World Memory of UNESCO in Iran.

## Summary

Given the significant importance of conservation management planning, especially in Iran with its extensive archaeological sites, this study explores the creation of conservation management plan templates for ancient sites. The Fars Istakhr site, one of Iran's key historical sites, was chosen as a case study. This research is both developmental and applied, employing a hypothetical-deductive method to assess the need for and importance of establishing a management plan to outline a conservation program for ancient sites. The study highlights the critical stages of examination, identification, and accurate assessment of values in developing a scientific and standardized program within the management plan for archaeological site conservation. Through these stages, a comprehensive overview of the historical tangible and intangible evidence of the ancient site is presented. Significant assessment and site presentation with mass and social media are the most important actions. This sector can lead to public and local support and actions by relevant organizations, especially the Cultural Heritage Organization. Conservation work for artifacts and other on-site assets, and provision of tourism facilities are in the second step. After that, new archaeological projects to help in the compilation of history and data documentation need to be implemented. All of these measures help the site with sustainable management planning.

## Riassunto

Data la notevole importanza della pianificazione per la gestione della conservazione del patrimonio culturale, soprattutto in Iran con i suoi vasti siti archeologici, questo studio esplora la creazione di modelli dedicati ai piani di gestione della conservazione per i siti archeologici. Il sito di Fars Istakhr, uno dei principali siti storici dell'Iran, è stato scelto come caso di studio. Questa ricerca è sia di sviluppo che applicata, impiegando un metodo ipotetico-deduttivo per la valutazione dei piani. Lo studio evidenzia infatti le fasi critiche di esame, identificazione e valutazione, al fine di sviluppare un programma scientifico e standardizzato all'interno del piano di gestione per la conservazione dei siti archeologici. Attraverso queste fasi, viene presentata una panoramica completa delle testimonianze storiche tangibili e intangibili di un sito archeologico. Una valutazione significativa e la presentazione del sito attraverso i media e i social media risultano come le azioni più importanti. Questo settore può portare al supporto e all'azione del pubblico e del territorio da parte delle organizzazioni competenti, in particolare da parte della Cultural Heritage Organization. I lavori di conservazione dei manufatti e di altri beni in loco e la presenza di strutture turistiche sono analizzate nella seconda parte del lavoro. Infine, sono analizzati gli effetti dovuti a nuovi progetti archeologici, atti a contribuire alla compilazione della storia e alla documentazione dei dati. Tutte queste misure contribuiscono comunque alla pianificazione di una gestione sostenibile del sito.