

An Integrated Model for Archaeological site Preservation implemented in the Zohreh Prehistoric Project at Chega Sofla, Southwestern Iran

ارائه یک الگوی یکپارچه برای حفاظت از محوطه‌های باستان‌شناسی در قالب پروژه پیش‌ازتاریخی زهره در محوطه چگاسفلا، جنوب‌غربی ایران

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ABSTRACT

This article presents the Zohreh Prehistoric Project (2016–2020) at Chega Sofla, one of the largest prehistoric sites in Iran, as a case study in applying an integrated model of archaeological excavation, preventive conservation, and public awareness. Located in the fertile floodplain of the Zohreh River, Chega Sofla preserves valuable evidence of human life and burial traditions from six millennia ago. Decades of neglect, industrial encroachment, and environmental damage had placed the site at severe risk. The project's approach combined meticulous research design, in situ conservation strategies, community involvement, and context-focused heritage presentation, drawing on global best practices such as those implemented at Çatalhöyük in Turkey. This integrated methodology not only safeguarded fragile archaeological remains during excavation but also enhanced public awareness and institutional cooperation. The study demonstrates that in regions facing both developmental pressures and endangered heritage resources, conservation-oriented excavation can be a viable and replicable strategy for sustainable archaeological site management.

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چکیده: یافته‌های دو دهه اخیر در حوزه باستان‌شناسی نشان داده است که به‌کارگیری الگوی یکپارچه، متشکل از کاوش‌های علمی، راهبردهای حفاظت پیشگیرانه و برنامه‌های آگاهی‌بخشی عمومی، می‌تواند نقشی تعیین‌کننده در صیانت از محوطه‌های باستان‌شناختی ایفا کند. پروژه پیش‌ازتاریخی زهره (۱۳۹۴-۱۳۹۸) نمونه‌ای از چنین رویکردی است که در مواجهه با یکی از مهم‌ترین و در عین حال آسیب‌پذیرترین محوطه‌های باستانی ایران، یعنی چگاسفلا، به اجرا درآمد. چگاسفلا، واقع در دشت حاصلخیز زهره (زیدون) و در فاصله‌ای اندک از کرانه‌های شمالی دریای پارس، از بزرگ‌ترین محوطه‌های پیش‌ازتاریخی ایران به شمار می‌رود. این محوطه واجد شواهدی ارزشمند از نوآوری‌های انسانی و سنت‌های آیینی و تدفینی متعلق به حدود شش هزار سال پیش است. با وجود شناسایی نخستین آن در اوایل دهه ۱۳۵۰، طی نزدیک به پنج دهه این محوطه در معرض تهدیدهای متعددی از جمله توسعه فعالیت‌های صنعتی و کشاورزی، آسیب‌های محیطی و بی‌توجهی اداری قرار داشت؛ وضعیتی که تنها با ثبت در فهرست آثار ملی، تعیین و ابلاغ ضوابط عرصه و حریم و آغاز پروژه زهره تغییر یافت. رویکرد این پروژه بر مبنای طراحی دقیق پژوهشی، اجرای تدابیر حفاظتی در محل و، به‌ویژه، ارتقای سطح آگاهی جامعه محلی شکل گرفت و در این مسیر از الگوهای موفق جهانی – همچون تجربه چتل‌هویوک در ترکیه – الهام گرفته شد. در نوشتار حاضر، ضمن تبیین چارچوب‌های نظری پروژه، فعالیت‌های متنوعی که در پنج سال نخست اجرای آن به انجام رسید، مرور و تحلیل می‌شود. نمونه چگاسفلا می‌تواند نشان دهد که توجه نظام‌مند به محوطه‌های باستان‌شناختی و به‌کارگیری الگوی یکپارچه از پژوهش باستان‌شناختی، حفاظت پیشگیرانه و معرفی ارزش‌های فرهنگی در سطوح محلی، ملی و بین‌المللی، می‌تواند به‌عنوان راهبردی مؤثر و تکرارپذیر برای مدیریت پایدار میراث باستانی مورد استفاده قرار گیرد.

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حفاظت پیش‌گیرانه
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1. Introduction

The northern shore of the Persian Gulf in southwestern Iran has long been a focal point for human–environment interaction. Among its most significant archaeological landscapes is the Zohreh Plain, home to Chega Sofla, a prehistoric site of exceptional scale and integrity. Situated in the fertile floodplain of the Zohreh River, Chega Sofla offers unparalleled potential for reconstructing prehistoric lifeways, ritual landscape, and intercultural connections.

Despite its importance, Chega Sofla remained largely absent from Iran’s archaeological priorities for decades. Intermittent surveys in the 1970s identified its significance, yet no sustained research or conservation program followed. In the meantime, industrial activities, unregulated construction, and environmental degradation caused severe and, in some cases, irreversible damage.

This study addresses a central question: Can an integrated model of archaeological excavation, preventive conservation, and public awareness serve as an effective tool for the sustainable preservation of prehistoric sites in Iran? To explore this question, the article examines the design, implementation, and outcomes of the Zohreh Prehistoric Project at Chega Sofla (2016–2020), situating it within both national heritage management challenges and global debates on responsible excavation.

The claim that archaeological activities, particularly excavations, can be inherently destructive is not without merit (Beaudet and Elie 1991). This concern arises from instances where excavations are undertaken without a clear understanding of their ethical and functional role, reducing archaeology to the mere extraction of material evidence. In such cases, a site may be subjected to invasive intervention, its archaeological layers disrupted, and then abandoned once research objectives have been fulfilled. This extractive and short-sighted approach has parallels in some conservation and restoration practices as well, where, under the guise of preservation, the historical integrity of a site or object may be irreparably altered, removing it from the cycle of living heritage.

Thus, it is not archaeological activity per se that is destructive, but rather the absence of responsibility, foresight, and integration between excavation, conservation, and public awareness. Conversely, when preservation is treated as a central priority, archaeological excavation, despite its inherently invasive nature, can serve as a means of safeguarding a site. The act of meticulously recording archaeological data, managing environmental risks during excavation, and ensuring the appropriate

dissemination of findings constitutes, in itself, a vital form of heritage protection.

Over the past several decades, the global discourse in archaeology has shifted toward an increasingly integrated understanding of research, conservation, and education as mutually reinforcing components. The once rigid boundaries between "excavation" and "conservation", formerly seen as distinct or even conflicting stages, have gradually been replaced by a more holistic model, wherein conservation is embedded as a core element within the archaeological process. As Roberto Nardi notes in his analysis of Mediterranean case studies, "conservation, more than ever, has become part of archaeology and works in tandem with it" (Nardi 2010). He identifies four key pillars for embedding conservation in archaeological work:

- Detailed pre-intervention documentation to identify site features, assess risks, and guide intervention strategies.
- Preventive conservation to minimize the need for costly or emergency measures.
- Specialized and public education a long-term cultural investment.
- Effective communication with the public to articulate heritage value and strengthen cultural memory.

Matero’s (2008) review of international charters, from the Athens Charter (1931) through the Venice Charter (1964), the Burra Charter (1979), and the ICAHM Charter (1990), underscores a consistent global shift toward integrating conservation into the entire archaeological process. These documents collectively stress accurate documentation, preventive measures such as protective backfilling, and the recognition of archaeological sites as cultural landscapes, where context, traditional use, and stakeholder engagement are essential to authenticity and integrity. The Zohreh Prehistoric Project at Chega Sofla operationalized these principles in a regional context by requiring non-invasive surveys before excavation, enforcing protective zoning, planning for backfilling where public display was not feasible, and involving residents as active custodians. In doing so, it addressed the very deficiencies Matero identifies in many projects worldwide: the absence of pre-excavation conservation planning, inadequate management strategies, and limited community integration. Moreover, the project’s dual commitment to safeguarding fragile site fabric and fostering public awareness resonates with Matero’s call to balance scientific, associative, and aesthetic values in a manner that resists the reductive treatment of archaeological sites as mere outdoor museums. In this way, Chega Sofla offers a

localized yet replicable embodiment of the conservation ethos articulated in international heritage discourse. These principles have been successfully operationalized in a number of international projects, the most influential in the Middle Eastern context being the long-term Çatalhöyük Project in Turkey.

2. The Çatalhöyük Model: A Benchmark for Integrated Practice

Çatalhöyük, a UNESCO World Heritage Site since 2012, is one of the world's most extensively studied Neolithic settlements. Discovered in 1958 by David French, Alan Hall, and James Mellaart, the site was excavated by Mellaart from 1961 to 1965 (Mellaart, 1967), revealing a remarkable assemblage of architecture, sculpture, pottery, and wall paintings. Following a 28-year hiatus, excavations resumed in 1993 under Ian Hodder, who redefined the project's scope by embedding conservation and public presentation into the research design (Hodder, 2000, 2006; Baird, 2012).

The renewed project began with non-invasive surveys and re-analysis of earlier data to ensure targeted excavation. Archaeological interventions were deliberately limited to answering specific research questions about social organization, architecture, and daily life, and were conducted with rigorous stratigraphic documentation and advanced scientific analyses. Conservation was a parallel priority: fragile mudbrick architecture was stabilized, wall paintings were treated in situ, environmental conditions were monitored, and two large protective shelters (2007, 2008) were installed with minimal disturbance to underlying deposits (see: <https://www.catalhoyuk.com>).

Public awareness was equally central. Safe visitor routes, interpretive panels, a reconstructed Neolithic house, a visitor center, exhibitions, workshops, annual festivals, and multimedia content connected the site to both local communities and an international audience. Corporate sponsorship from Boeing, Shell, and many other companies provided sustained funding for the integrated program of research, conservation, and education, ensuring the project's longevity and global impact.

Çatalhöyük thus stands as a model for responsible, context-driven archaeology—one that aligns closely with the objectives of UNESCO's 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO, 2013), emphasizing public awareness, sustainable protection, and the framing of heritage as a shared human legacy.

In the Zohreh Prehistoric Project at Chega Sofla, these theoretical and practical insights were translated into a comprehensive set of protocols that integrated archaeological research, preventive conservation, and public awareness from the very outset of fieldwork. The project was founded on the understanding that the long-term preservation of this prehistoric site required structured, actionable guidelines in which excavation practices, conservation measures, and tourism development were conceived as mutually reinforcing components of a unified management strategy. This integrated approach is illustrated in the diagram below (Fig. 1).

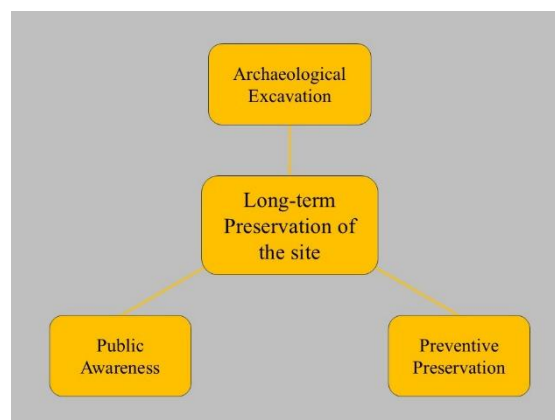


Figure 1. The integrated archaeological research, preventive conservation, and public awareness from the very outset of fieldwork.

3. The Zohreh Prehistoric project action since 2016

As a foundational principle of the Zohreh Prehistoric Project, a comprehensive framework was established before any field activities. This framework included detailed protocols for conducting archaeological excavations and surveys, implementing conservation practices during and after fieldwork, enforcing protective regulations for the site and its surrounding landscape, and developing responsible tourism strategies. The following section summarizes the three principal guidelines formulated by the project team (for more detail, see Moghaddam, 2016b; Moghaddam *et al.*, 2017), highlighting the components that were implemented in practice where financial resources and administrative support permitted.

3.1. Excavation and Survey Guidelines

Excavations at Chega Sofla were to be conducted to reconstruct the life and cultural practices of past communities, while maintaining the integrity of archaeological contexts and materials.

-Non-invasive methodologies, particularly archaeogeophysical surveys, were mandated before any intrusive interventions. Excavation was prohibited unless subsurface features and soil stratigraphy had been identified in advance—except in the case of limited test trenches to assess sedimentological profiles.

-All artifacts recovered were to be curated at the local Cultural Heritage Base and, where feasible, exhibited at a future Chega Sofla Museum.

-During fieldwork, temporary protective structures were required to shield both personnel and exposed architectural remains from environmental factors such as rain and direct sunlight, thus ensuring both researcher safety and the preservation of materials.

-Extensive excavations were discouraged unless sufficient financial and logistical resources were available to guarantee the conservation and long-term storage of finds and architectural features.

-The network of natural gullies surrounding the site, known to be susceptible to erosion, was to be studied in detail. At least one gully was to be stabilized, cleaned, and fitted with interpretive signage, serving both conservation and educational purposes.

-The geomorphology and sedimentary processes of the Zohreh Plain, particularly changes in the Zohreh River's course, were considered critical to understanding the site's broader environmental history.

-All identifiable cultural features in the landscape, including mounds, qanats, irrigation canals, ancient roads, and ritual sites, were to be registered as national heritage assets to secure legal protection.

-The project is committed to producing and publishing a detailed monograph after each field season to ensure transparency and wide dissemination of results.

3.2. Conservation Guidelines

-The physical boundaries of Chega Sofla were to be clearly delineated, and all relevant zoning laws and heritage protection regulations strictly enforced.

-Community education programs were to be developed and delivered to residents of *Tol Chegahe Sofla* village and surrounding villages, to transform local inhabitants into active custodians of their cultural heritage.

-Site security was to be maintained through the hiring of locally based guards, fostering a sense of communal ownership and responsibility for the preservation of the site.

-Any new construction within the vicinity of the site was required to comply with heritage buffer zones and adhere to conservation-sensitive development standards.

Where conditions permitted, select architectural remains were to be stabilized and prepared for public display. In cases where preservation in situ was not feasible, excavation units were to be backfilled with appropriate conservation-grade materials. Educational outreach targeting local schools was considered essential to instill a sense of cultural value and historical awareness among younger generations. Conservation measures during excavation seasons were treated as integral to the research process, with all necessary conservation materials and equipment procured before the commencement of each field season.

3.3. Public awareness and Tourism Guidelines

A central visitor center was proposed to function as the primary interface for site interpretation. This center would offer informational brochures, maps, periodic bulletins, and a modest shop featuring locally crafted items inspired by excavated artifacts. Architectural features uncovered at the site were to be presented to visitors in a manner consistent with conservation best practices and site integrity. Multimedia tools, including documentary films and digital animations, were encouraged as part of the site's outreach and educational programming. Large interpretive panels were planned for the site entrance, supplemented by additional explanatory signage throughout the site to contextualize key features.

A designated parking zone was to be established outside the archaeological site's protective perimeter. Basic visitor amenities, including restrooms and a shop, were to be integrated into this facility. Residents were to be encouraged to engage with eco-tourism initiatives by offering accommodations, preparing traditional meals, and developing guesthouses, thereby creating economic opportunities aligned with cultural preservation. A dedicated children's learning area was envisioned to provide age-appropriate educational activities focused on archaeology and local heritage.

Finally, a "Heritage Experience Center" was planned to provide visitors with immersive, hands-on experiences related to prehistoric life, including pottery-making, ritual reenactments, traditional craftsmanship, and demonstrations of ancient technologies.

4. The Fate of Chega Sofla

Despite the comprehensive measures adopted under the Zohreh Prehistoric Project plan, the long-term preservation of Chega Sofla has remained vulnerable to external pressures beyond the direct control of the project team. While initial

conservation protocols, community awareness initiatives, and controlled excavation practices slowed the pace of deterioration, broader structural and environmental challenges have persisted. One of the most persistent threats has been the expansion of the modern village of *Tol Chegahe Sofla*, located within the core zone itself. Despite zoning regulations and awareness campaigns, gradual

encroachment, driven by population growth, economic necessity, and infrastructural development, has incrementally eroded parts of the site's physical integrity.

Agricultural activities, particularly deep plowing and irrigation works, have altered soil stratigraphy and exposed subsurface features to accelerated weathering (Fig. 2).



Figure 2. The settlement sector of Chega Sofla (Core Zone) and the primary threats it faces, particularly the expansion of the modern village of Tol Chegahe Sofla (photograph taken from the southwest).

Infrastructural interventions initiated without adequate heritage impact assessment have also posed significant risks. The substandard asphalt road constructed decades earlier by the Williams Brothers Oil Company, which altered the natural drainage patterns of the area, continues to exacerbate seasonal flooding and erosion.

These hydrological disturbances, coupled with the lack of large-scale erosion control works at the regional level, threaten not only the site's

architectural remains but also its broader landscape context (Figs. 3 & 4).

While the recruitment of local guards and the implementation of educational programs have enhanced community involvement in site stewardship, these measures have not fully eliminated instances of illegal encroachment. Continued pressure for expansion within the existing village means that stratigraphic disturbance remains an intermittent yet significant threat.



Figure 3. Aerial and satellite imagery of Chega Sofla illustrates the extent of human intervention over the past six decades.



Figure 4. The image, captured during the heavy rains of February 2017, clearly illustrates the long-term impact of the Williams Company's substandard road construction on the plain's natural drainage system. The elevation difference between points A and B highlights how the poorly built road has disrupted the landscape over several decades.

In this respect, the case of Chega Sofla exemplifies a broader pattern in Iranian archaeology, wherein preventive conservation strategies are persistently undermined by socio-economic pressures and the absence of a coherent national framework for heritage site protection.

Nevertheless, the integrated model piloted at Chega Sofla has demonstrated clear benefits. The combination of non-invasive survey, preventive conservation, local involvement, and controlled excavation has preserved significant portions of the site that might otherwise have been lost. Moreover, the project's public awareness initiatives have embedded Chega Sofla in local cultural consciousness to a degree that was previously absent. While the site's ultimate fate will depend on sustained governmental support, inter-agency coordination, and continuous community participation, the Chega Sofla experience provides a replicable framework for managing similar high-risk prehistoric sites in Iran.

5. Practical Conservation Actions: Before, During, and After Excavation

Defining the Site and its Protected Zones

In the first step to protect Chega Sofla, determining the criteria for the protection of the area and the boundary was placed on the agenda of the

Prehistoric Zohreh Project. Due to the damage that has been done to Chega Sofla over the decades, our first priority was to approve and notify the criteria for the protection of the area and the boundary of the site as soon as possible. Therefore, the operation to determine the area and the boundary of Chega Sofla was carried out with a multifaceted approach and using various field strategies, including: landscape archaeology, archaeogeophysical surveys and archaeological speculations in the spring of 2015 (Moghadam, 2016a; also, Mohammadkhani, 2016), and the criteria for the protection of Chega Sofla under number 9421100/42628 were approved and notified to the Governor of Khuzestan on 15/12/2015.

As mentioned earlier, the area and the territory of Chega Sofla have been irreparably damaged over the past few decades. Large parts of the central and western areas of the site have undergone extensive changes, such that the more recent prehistoric Late Susiana layers of Chega Sofla have been permanently destroyed by the construction of residential houses, schools, mosques, streets and water supply canals. Reinhard Dittmann (1984: Karte 1) reported the first-hand-drawn sketch of the multiple mounds of Chega Sofla. It is clearly seen in this sketch that at least five small and large mounds

existed at the time of the initial survey of the site in 1350/1971.

Today, almost the eastern and northern mounds of the site have been spared from the damage of village construction (Fig. 5). Therefore, approving and announcing the rules and regulations for the

Chega Sofla area and sanctuary (which, in an unprecedented manner, the field plan and the approval and announcement process were completed in less than six months) was our first and most important step in protecting Chega Sofla.

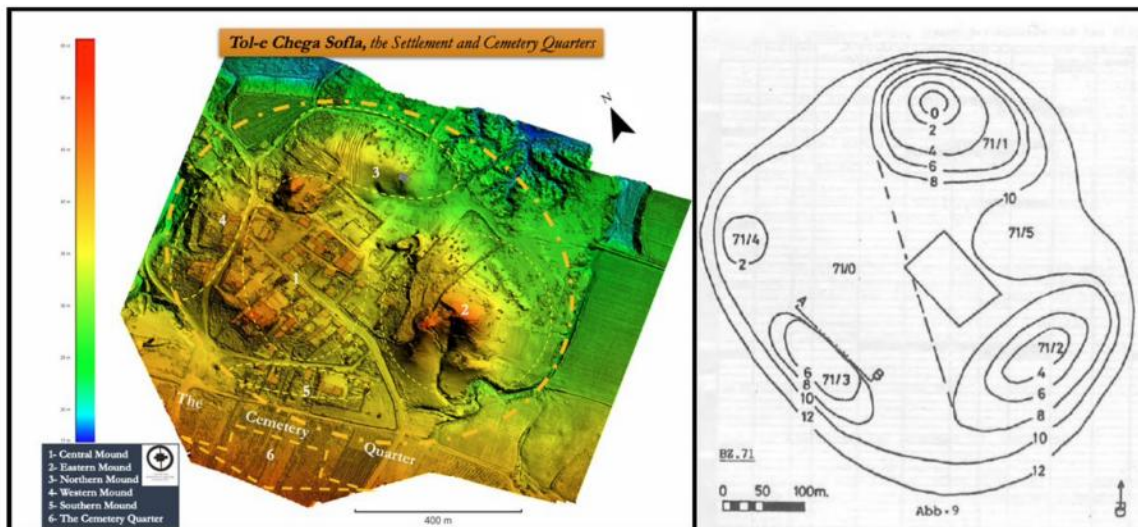


Figure 5. On the right, a hand-drawn sketch of the mounds visible in 1350 AH (Dittmann, 1984: Karte 1), and on the left, a photomap of the current state of the mounds of the remaining settlement sector and showing part of the area of the Chega Sofla cemetery (Moghaddam, 2021).

6. Research within the framework of archaeological excavations

Chega Sofla is a site that was abandoned for some reason in the mid-4th millennium BC. We still do not know anything about the antiquity of the ancient layers in the lower levels of Chega Sofla because none of our excavation workshops were created with the intention of stratigraphy and reaching the underlying deposits. Based on the available evidence, we know that no cultural layer was deposited on the ancient layers of Chega Sofla after the mid-4th millennium BC. Of course, the slopes of the site were used to create earthen canals in the late Qajar period, but there is no evidence of a cultural layer that represents a settlement period after the mid-4th millennium BC. The last settlement layer created is related to the presence of the Williams Company, and after that, the present-day inhabitants of the village of *Tol Chegahe Sofla*.

This settlement quality has prevented the ancient layers of Chega Sofla from being buried under the mounds of later settlements, as is the case at many other sites. On the other hand, the considerable height of the site's ridges relative to its surrounding areas has prevented it from being affected by environmental depositional processes and has

prevented it from being buried under the mounds of natural deposits, as is the case at many sites in alluvial plains. Therefore, the ancient layers of Chega Sofla are located at a shallow depth, and even in some areas of the site, architectural remains or ancient features can be easily observed without any excavation.

Outside the settlement area, the cemetery section of the site is extensive (Fig. 5). Although large parts of the cemetery are buried under sedimentary deposits, the presence of the southwestern ravine and the occasional activity of flood currents in it have caused the 6,000-year-old Chega Sofla graves to be washed away and exposed. Therefore, the quality of the ancient Chega Sofla deposits in most parts of the site and cemetery is at risk of destruction. One of the pieces of evidence that has led to better identification of parts of the cemetery has been the presence of scattered boulders on the surface of the southwestern ravine (see Moghadam, 2018: Fig. 17). Those scattered boulders that clearly belonged to ancient Chega Sofla graves had been removed from their original places and scattered on the surface of the ravine due to occasional floods. Therefore, it is very likely that parts of the cemetery have been destroyed by erosion by now.

So far, during four seasons of fieldwork in the cemetery and the eastern and northern mounds, an area of 163 square meters has been excavated (Fig. 6). Due to the lack of conditions for the preservation of the excavated structures, all excavations, both in the cemetery and in the residential area, have been filled with wind-blown sand and gravel according to

the established criteria after the completion of the excavations and the implementation of the initial conservation frameworks (for details of the excavations carried out and the implementation of post-excavation conservation frameworks, see Moghaddam, 2018, 2024; Moghaddam, 2016c, 2021; Moghaddam & Miri, 2021).

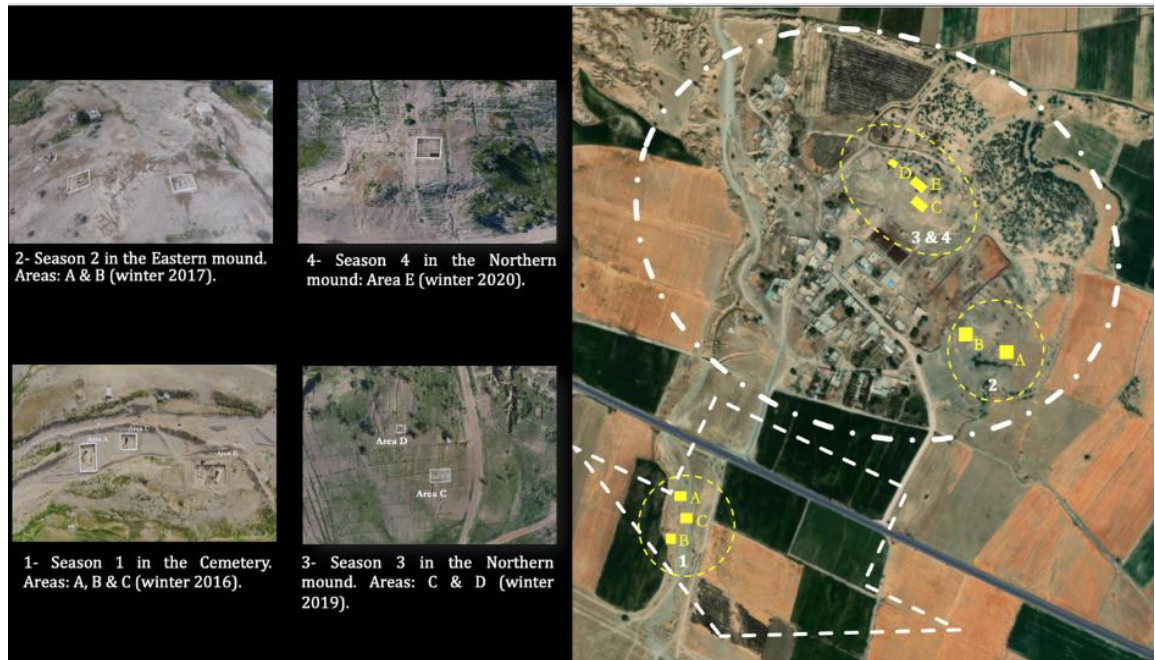


Figure 6. Various sections of the Tell Chega Sofla cemetery and settlement sectors, excavated by the Zohreh Prehistoric Project between 2016 and 2020.

7. Protection during and after excavations

During the four seasons' excavations at Chega Sofla, our priority was to create temporary shelters for all the excavation sites. Because our excavations coincided with the rainy season in Khuzestan (January and February), creating temporary shelters was effective in preserving the excavated remains and in the process of excavation. Also, temporary shelters were effective on days with intense sunlight and prevented the rapid drying of the excavated tissues. In addition, creating shelters over the excavation areas is a factor in better physical protection of the sites for the guards (Fig. 7).

Our next priority is the cases we encountered during the excavations, and the evidence that was obtained from the excavation areas, which were in an inadequate state of preservation, has been given initial care. In the excavations of the cemetery and the *sanctuary*, an important part of our activities has been focused on stabilizing the distressed evidence (Fig. 8).

During the excavations of the cemetery and due to the location of the graves, which were located in

the southwestern ravine of the site, efforts were made to devise measures to control possible flooding in order to prevent flood damage and flooding of the excavation areas. These measures included canalization to direct and divert the flood from the areas and the creation of a low earthen dam around the excavation areas.

As mentioned earlier, our main approach is to preserve the excavation sites in order to create a platform for introducing the identified structures to visitors. Unfortunately, we never managed to convince the authorities to create favourable conditions for this important matter to be implemented. On the other hand, the budgets of the project during the first five years have been in the "research" category of the Research Institute of the Cultural Heritage and Tourism. As a result, with the small research budgets, it has not been possible to create a suitable platform for preserving the excavated structures. In the cemetery section, after conducting the excavations and obtaining archaeological information, all the graves were returned to their original pre-excavation state using various protective layers, including wind-



Figure 7. Creating a temporary protective roof for excavation areas in the cemetery and settlement sections of Chega Sofla.



Figure 8. Conservation activities during and after excavations at various parts of Chega Sofla.

blown sand, non-woven fabric, and sand. This strategy was also adopted in the excavated workshops of the settlement sector, with the difference that the excavated surfaces and structures were first covered with a layer of thatch and then all workshops were filled with sand (Fig. 8).

8. Creating a flood barrier to protect the cemetery

The actions of the Williams Oil Company in creating an asphalt road caused the previously stable area surrounding Chega Sofla to undergo topographic changes over time. The changes made by the Williams Company caused the waterways that seasonally transported surface water from the southern heights, the Rag Sefid, to the bed of the

Zohreh River in the north of the plain to encounter an obstacle in their path, such as the non-standard asphalt road (Fig. 4). This change in the drainage regime of the plain caused drastic changes in the topography of the plain. Especially on the eastern and western fronts of the Chega Sofla site, the activity of the gullies to drain the water from the torrential rains has caused deep channels to be created. Drastic changes followed this in the topography of the area, which is in its natural state and, on average, about 17 m higher than the surrounding areas. Today, clear evidence of changing hydrological regime and the emergence of claw erosion can be seen in various parts of the site, especially on the western and eastern walls (Fig. 9). To control floods in the western part of the site, an

earth dam was built at a point determined by experts from the Zohreh Prehistoric Project (Fig. 10) in cooperation with the General Department of Heritage and the Technical Office of the Governorate of Khuzestan Province (see Salmanzadeh, 2018: 137-150).

9. Establishing a Cultural Heritage Base

Another of our conservation efforts was the ongoing pursuit of establishing a cultural heritage base in Chega Sofla. Finally, in March 2017, a base was born under the name of “Arjan and Chega Sofla Cultural Heritage Base”. Unfortunately, due to the lack of attention of some officials in the base affairs to expert recommendations, the merger of two important and problematic sites and various opponents into a single cultural heritage base has not had any positive impact on the process of their conservation. Arjan and Chega Sofla are two sites with two different natures, and the spatial distance between the two is more than 70 km.

Our goal in pursuing the establishment of the Chega Sofla Cultural Heritage Base was exclusively based on the roadmap prepared for the conservation of Chega Sofla, including 1) protecting the existing condition of the site and its surrounding areas, 2) clearing the area from the current village and moving it to another location, and 3) providing public participation in the conservation of Chega Sofla. Unfortunately, it must be admitted that the establishment of a low-quality base, which has become a stereotype in many parts of the country, has not had a positive impact on the preservation of Chega Sofla.

10. Presenting the monument = Sustainable Conservation

Our guidelines for introducing Chega Sofla to the public and the domestic and foreign scientific community are clear and transparent. It is not an exaggeration to say that so far, more than 60 percent of our efforts have been spent on introducing the values of this site to the general public. For a prehistoric project, informing the public is an undeniable principle. Because we believe that informing is a form of preventing further destruction. The correct and diverse introduction of the monument can be considered as a kind of vaccination of the minds. If the values of Chega Sofla are deposited in the minds of the public, a significant part of the existing concerns will be resolved from a conservation point of view. During the excavations in the Chega Sofla cemetery, we witnessed the highest number of visitors to the excavation workshops. Due to the sensitivity of the excavations, both from a research and conservation perspective, a schedule was considered to prevent the huge flood of people eager to visit the excavated graves. According to that schedule, it was only possible to visit the excavation workshops on Fridays. Like museum guides, the members of the excavation team informed various groups of enthusiastic people, from young children to adults, about the achievements of the excavation. Interestingly, 4,209 people visited the excavation workshops over 58 days, which is a considerable record.

In order to familiarize people with archaeological achievements, a training program was designed for the women of the village of *Tol Chegahe Sofla* in the second season of the excavation.



Figure 9. The western wall of Chega Sofla and extensive erosion due to the activity of the western gully of the site over the past years (aerial photo by Loghman Ahmadzadeh).



Figure 10. Creating an earthen dam to protect the cemetery and the western wall of the Chega Sofla compound.

For that purpose, a handicraft instructor from Behbahan was invited to teach the women of the village how to produce handicrafts, inspired by the findings of the Chega Sofla excavations. Fortunately, we were met with a great reception at the beginning, but after a while, that handicraft class failed. Of course, one of the handicrafts produced during that training course was donated to the first group of tourists who came to Chega Sofla from the University of Berlin during that season.

In the village of *Tol Chegahe Sofla*, there is a small school with two classrooms. Given the small

number of students living in the village, one of the classrooms in that school is always empty. Therefore, we decided to turn that empty classroom into a cultural room in the village, where signs will be installed to introduce the valuable heritage of Chega Sofla. The project's goal in proposing this was to give the villagers themselves the opportunity to introduce the heritage of Chega Sofla to guests or visitors to the village. The then head of the Chega Sofla Cultural Heritage Base was tasked with talking to the education authorities of the county and obtaining permission to do so. Fortunately, the

education authorities agreed to our proposal, and with a small amount of credit from the Arjan and Chega Sofla Cultural Heritage Base, the aforementioned classroom was painted and prepared. Unfortunately, due to factors such as the COVID-19 pandemic, the closure of the Zohreh Prehistoric Project excavations, and the reluctance of the provincial trustees, the cultural room was not built according to the design made by the Zohreh Prehistoric Project to be one of the facilities available to raise awareness among the public. Of course, the important feature of this work is to establish a dialogue between the current residents of the village and other members of the community about the values of Chega Sofla (Fig. 11). A story that was not possible before due to its abandonment and lack of proper awareness of the quality of an important settlement such as Chega Sofla.

The story of Tepe Sohz and Chega Sofla, two paramount prehistoric settlements in the Behbahan township, was prepared simply and understandably for ordinary people in the form of a small book (under the name of the *Endangered Heritage of Tepe Sohz and Tel Chega Sofla*) and was given to the people of the region to raise awareness (Pollock & Moghaddam 2018). This book was compiled and published with the assistance of Professor Susan Pollock from the University of Berlin and was unveiled during a ceremony in the Education Hall of Sardasht Zeydun, a small city near Chega Sofla. A large number of students, enthusiasts, and especially the overwhelming majority of residents of the village of *Tol Chegahe Sofla* were present at the unveiling session. This book not only drew the attention of the public to the values of Tepe Soz and Chega Sofla, but also made the people of the region inclined to protect their cultural heritage.

From the very beginning of the implementation of the Zohreh Prehistoric Project, awareness raising among the scientific community has been on the agenda. Given the lack of adequate knowledge of the eastern regions of Khuzestan, especially the areas near the shores of the Persian Gulf, the efforts made to raise awareness among the scientific community about the achievements of the Zohreh Project have drawn the attention of researchers and scientific institutions to these areas, which are rich in cultural heritage. If, in the early 1980s, with the discovery of the Elamite tomb of *Kiddin-Hutran* on the southern bank of the Maroon River in the north of the Behbahan Plain, the archaeology and cultural heritage system, instead of an emotional and fleeting reaction, had sought to create a basis for research, conservation, and introduction of various parts of the Elamite city of Argan (Arjan), today we would not

have witnessed the destruction of the valuable relics of the Elamite royal residence in that area. Today, not only is the actual location of the Elamite tomb of *Kiddin-Hutran* unknown, but the area has been turned into green space for the Maroon Irrigation Company. The main reason for this neglect was the lack of planning for extensive research and, especially, proper awareness-raising.

Our approach to raising awareness is precisely for the preservation of Chega Sofla. Two detailed books on the achievements of the excavations (Moghaddam, 2018, 2020, the latter of which was reprinted in 2024); *The Six Thousand-Year-Old Cemetery of Tell Chega Sofla* (Moghaddam, 2017); *Tepe Sohz and Tell Chega Sofla heritage at risk* (Pollack and Moghaddam, 2017); a one-day dedicated seminar on Chega Sofla at the National Museum of Iran, in which more than 12 lectures were given by members of the Prehistoric Project (Fall 2018); a dedicated seminar on Tepe Sohz and Chega Sofla at the University of Berlin (Summer 2017); a particular exhibition on the achievements of the excavations at Chega Sofla cemetery (organized by the National Museum of Iran for one month in the fall of 2017); a dedicated exhibition of excavation achievements in the Chega Sofla cemetery (organized by the General Department of Cultural Heritage, Tourism and Handicrafts of Khuzestan Province at Khatam Al-Anbiya University in Behbahan city in the winter of 2017 for a month); making brochures, posters and awareness raising about Chega Sofla; and finally, printing and publishing the book "My Chega Sofla" by Dadkin Publishing (fall 2011). The latter book is an effort by children's artists from all over Iran. In fact, in a period of five years, the valuable site of Chega Sofla, which was one of the most unknown sites in Iran, and was on the path to destruction due to ignorance, has now become one of the most well-known archaeological sites in Iran.

11. Exhibiting Context: The Case of the "Khatun" Burial from Chega Sofla

During the 2016 excavation season at the prehistoric cemetery of Chega Sofla, our team uncovered a remarkably well-preserved and contextually rich burial (Moghaddam, 2025). The grave belonged to a young adult female, estimated to be around 25 years of age, accompanied by a diverse and finely crafted assemblage of grave goods. Due to the distinctive character of the burial and the impression it left on the team, we designated it as "Khatun", a term historically used to denote a noble or respected woman. This burial immediately stood out not only for the quality and variety of the artifacts but also for the intentional spatial arrangement of objects in rela-



Figure 11. To raise awareness among the residents of Tol Chegahe Sofla and share the history of Chega Sofla with the few children attending the village school, we sought to convert one of the school's unused rooms into a cultural space. Senior Iranian archaeological officials also participated in this initiative.

tion to the body, which was positioned in a squatting posture. The coherence between form, material, and placement suggested a high degree of symbolic investment. From a curatorial and interpretive perspective, Khatun's grave offered a rare opportunity to reconstruct and present an intact mortuary context to the public.

In close adherence to established conservation protocols and under the direct supervision of Kazem Borhani, the project's conservator, the burial was carefully removed en bloc and transferred to the Susa Archaeological Museum. This complex and highly sensitive operation was carried out over several days with the coordinated efforts of the excavation team and in full consultation with local people (Fig. 12).

The decision to relocate Khatun's burial was guided by two interrelated objectives. First, we aimed to preserve the burial in its entirety as a coherent archaeological unit. Second, we sought to offer museum visitors a unique opportunity to engage with a complete prehistoric burial, presented as close as possible to its original form and arrangement. Unlike traditional displays where artifacts are detached from their archaeological contexts, this exhibition was designed to emphasize contextual integrity and narrative potential.

The placement of Khatun's squatting skeleton in conjunction with her grave goods creates a silent, yet compelling, dialogue between the viewer and the material past. Through this display, and with the support of interpretive guides, we sought to foster a more nuanced and affective understanding of prehistoric lifeways, social identities, and funerary practices.

In parallel, the exhibit was also conceived as a form of public education regarding the value of archaeological context. Looting and the commodification of antiquities remain critical threats to cultural heritage across the region. By showcasing the burial as an integrated unit, rather than a collection of isolated objects, the exhibit challenges object-centric paradigms and illustrates that the interpretive value of archaeological materials lies not in their aesthetic or market worth, but in their embeddedness within a cultural and temporal framework.

Since its installation, the Khatun showcase has become one of the most visited exhibits in the Susa Museum. Visitors are drawn not only to the beauty of the objects, but also to the intimacy of the burial narrative. For many, it represents a rare, tangible connection to the social and emotional world of a community that lived over six thousand years ago.



Figure 12. Stages in the recovery, transfer, and installation of Khatun's burial from the Chega Sofla cemetery to the Susa Archaeological Museum for permanent exhibition.

In addition to all this, again under the guidance of the Zohreh Prehistoric Project, Chega Sofla was included in the UNESCO World Heritage Tentative List as a “ritual landscape.” This achievement is due to the diligent efforts of all members of the Zohreh Project and many caring officials.

12. Beyond Expectations

The functions of the Zohreh Prehistoric Project have shown that preventive measures are essential for the protection of cultural heritage. Principled and up-to-date excavations are one of the most important pillars of this conservation process. Archaeological excavations and surveys are tools through which we can listen to the cherished narratives that various works have contained for thousands of years. If a work does not introduce itself well, its values cannot be properly understood. Along with archaeological excavations, attention to and observance of conservation principles can be effective in preventing the damage that always exists in relation to ancient works.

Here, one of the most important factors in the preventive conservation of archaeological sites, which is raising awareness among members of society, was discussed. In particular, raising public awareness and the values hidden in the layers of our ancient sites and monuments has been able to leave a deep sense of cultural heritage among the people of the region, which in itself guarantees the preservation of the monuments. In our opinion, if all we produce at the current state are reports, articles,

and boring technical books and databases related to archaeological sites, it is as if we have tried to think only about our benefit, which is the production of diverse agricultural products, without considering the climatic potential of the region and without protecting its soil and water resources. Surely, if we continue such a strategy, the resources available in our region will be exhausted, and there will be no more possibility for agricultural production. This ratio is also true when faced with archaeological sites.

Undoubtedly, the preservation of Chega Sofla as one of the most unique cultural heritages of Iran owes its existence to the efforts of archaeologists who have the task of making silent sites speak. Over the past decade or two, parts of the site have been destroyed forever by the current inhabitants. This unfortunate trend was accelerating when the Zohreh Prehistoric Project was born. When we first encountered Chega Sofla in 2016, heavy road construction and land levelling equipment in the center of the village (read: the core zone of the site) was ready to resume the destruction of the remaining mounds of the site (Fig. 14). A few profit-seeking residents, although well aware of the values of Chega Sofla, are always trying to dig up a part of the life of the ancient mounds of Chega Sofla and add it to their cucumber, watermelon, and melon fields (Fig. 15). Unfortunately, such profit-seeking has never been dealt with seriously and cannot be, because those who are responsible for protecting Chega Sofla are less concerned about doing their duty.

The screenshot shows the UNESCO World Heritage Convention website. The header includes the UNESCO logo, navigation menus for 'Our expertise', 'The List', 'Activities', 'Partnerships', and 'Publications', and a search bar. The main content area features the title 'Chega Sofla (Ritual Landscape of Chega Sofla)' and a 'Description' section. The description text reads: 'The prehistoric site of Chega Sofla is also known as Tol-e Chiga Payini, Tol-e Chiga Domeni and Chogha Sofla. This site is located in the Zeydun plain south of a provincial city of Behbahan southeast Khuzestan province and a short distance from the northern shores of the Persian Gulf. Chega Sofla includes a settlement and a cemetery section. In the settlement section, five low and high mounds have been identified, with the elevation of the highest remaining ridge reaching more than 30 m from the surrounding land. The cemetery section begins right on the southern slope of the site and continues to near the heights of the Rag Sefid in the south. The settlement area is about 20 hectares and the cemetery area is ca. 2,000 by 800 meters. In the 1970s, during an archaeological survey by Hans Nissen from the Oriental Institute of the University of Chicago and the Frei University of Berlin, the site was identified and marked as BZ.71 as the widest prehistoric site in the Zuhreh Plain.' To the right of the description is a box containing submission details: 'Iran (Islamic Republic of)', 'Date of Submission: 24/08/2021', 'Criteria: (i)(ii)(iii)(iv)(vi)', 'Category: Cultural', 'Submitted by: Iranian Ministry of Cultural Heritage, Tourism and Handicrafts', 'State, Province or Region: Khuzestan province', 'Coordinates: UTM 9R 417614.00 m E 3355056.00 m N', and 'Ref.: 6549'.

Figure 13. Provisional inscription of Chega Sofla as a ritual landscape on the UNESCO World Heritage List.



Figure 14. In the early days of our presence at Chega Sofla, we encountered heavy road construction and land-leveling equipment positioned at the center of the village, poised to resume the destruction of the site's remaining mounds.

Managers and officials have also not been seriously involved with us after the efforts that have been made to introduce the values of Chega Sofla. This lack of cooperation can be very destructive in some ways. Because our efforts to create a correct and principled attitude regarding the protection of cultural heritage may not achieve the desired result, and may even have the opposite result. The silent experience of the plan to establish a museum in

Chega Sofla and the plan to relocate the village of *Tol Chegahe Sofla* from the archaeological site to another location is a clear testimony to this disappointing trend. We are sure that if the officials are a little aware of their national and civic duty towards Chega Sofla, the aforementioned plans will be implemented and, more importantly, will strengthen hope in the hearts of the people of the region.



Figure 15. Some profit-driven residents of Tol Chegahe Sofla village, despite being fully aware of the site's significance, persist in attempting to excavate portions of the ancient mounds of Chega Sofla.

13. Conclusion

The Chega Sofla case study demonstrates that archaeological research, when conceived as an integrated process encompassing excavation, preventive conservation, and public awareness, can serve as both a scientific endeavor and a mechanism for long-term heritage protection. The Zohreh Prehistoric Project's approach, rooted in meticulous documentation, conservation-conscious excavation, and active collaboration with local communities, has yielded tangible preservation outcomes in a context historically marked by neglect, infrastructural damage, and looting.

While external factors such as hydrological disturbances, agricultural expansion, and infrastructural encroachment have continued to pose significant risks, the project's preventive framework has slowed the pace of site degradation and enhanced its visibility within both local and scholarly contexts. The experience also underscores that even the most carefully designed site management strategies are not immune to broader socio-economic and environmental pressures. For sustainable protection, such projects must be embedded within a robust national policy framework that ensures legal enforcement, resource allocation, and inter-agency cooperation.

Perhaps the most enduring legacy of the Chega Sofla initiative is its demonstration of a transferable model for safeguarding other endangered archaeological sites in Iran. By adapting and

operationalizing global best practices, such as those articulated by Nardi and Matero and effectively implemented in the Çatalhöyük Research Project, within a distinctly local socio-cultural and environmental context, the project offers a pragmatic framework for integrating scientific research with conservation priorities. It further underscores the principle that heritage protection achieves its greatest impact when knowledge production, community awareness, and identity-building are advanced in tandem.

The Chega Sofla experience makes clear that the future of Iranian archaeology depends on moving beyond the excavation-as-endpoint model toward a vision in which fieldwork is only the first stage of a sustained stewardship process. In this vision, archaeological sites are not merely repositories of data but active cultural resources, sources of meaning, education, and community pride that require ongoing care. Institutionalizing such an approach across Iran's vast and varied archaeological landscape is not simply desirable; it is essential for ensuring that the lessons and legacies of the past remain accessible to future generations.

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