

Digital Archaeological Documentation of Iranian Monuments – DADIM

Recording and Monitoring Cultural Heritage

Sandra HEINSCH, University of Innsbruck, Austria
Walter KUNTNER, University of Innsbruck, Austria
Rahoullah SHIRAZI, University of Sistan and Beluchistan, Iran
Ali DARVISH-ZADEH, University of Innsbruck, Austria
Luca BEZZI, Arc-Team
Alessandro BEZZI, Arc-Team
Rupert GIETL, Arc-Team
Giuseppe NAPONIELLO, Arc-Team

Keywords: *Cultural Heritage, Digital Archaeological Documentation, Photogrammetry, 3D, Cultural Preservation, Near Eastern Archaeology*

CHNT Reference: Heinsch et al. 2020. Digital Archaeological Documentation of Iranian Monuments – DADIM, W. Börner and CHNT Organization Committee. Proceedings of the 25th International Conference on Cultural Heritage and New Technologies). DOI:xxxxxxx.

Introduction

The intentional destruction of well-known archaeological sites such as Palmyra in Syria or Hatra and Nimrud in Iraq has vividly shown the impotence of the modern world against ideological deception of extremists but at the same time made us also clear how vulnerable cultural monuments are in the Near East as elsewhere. In fact, archaeological monuments such as old settlements, monumental architectural buildings, sanctuaries and graves are not only largely destroyed by systematically organized illicit diggings or illegal building activities but also severely affected by climate impact and tourism especially when located far outside in vast unprotected but nevertheless easily accessible landscapes. Frequent touching of the objects, often only due to ignorance of the sensitivity of cultural monuments, but sometimes also due to deliberate chopping in order to get “precious” souvenirs of the unforgettable monuments, led to irreparable damages. The poor state of preservation of the objects, caused by natural and human factors, often requires quick action to protect cultural heritage. The digital archaeological documentation of Iranian monuments - DADIM, conducted by the University of Innsbruck aims at digital recording of large and small monuments in Iran in order to secure them as digital copies that can serve both as a basis for research purposes as well as for the cultural authorities for monitoring and preserving cultural heritage for posterity.

Digital Cultural Heritage: Mapping the past

The DADIM project was launched in 2015 as part of the Iranian-Austrian cooperation agreement in order to preserve the cultural heritage of Iranian monuments. The need to fulfill this endeavor on large scale is based on the experiences made in 2015 while documenting the Palace of Ardashir in Firouzabad (Fig. 1), whose state of preservation is severely affected by climatic conditions. The restoration of the masonry is documented and strategies for maintaining of the building structures were developed in order to help local authorities to monitor and plan further reconstruction projects. Since then, the University of Innsbruck has been working in cooperation with the University of Sistan and Baluchistan on the photogrammetric documentation and data processing of on-site documentation of different monuments for monitoring, preservation and scientific research. The data were also used to contextualize the monuments in their spatial environment and historical landscape. The possibility of digital recording not only protects the preservation of the cultural monuments, but also opens up to opportunities for a detailed examination of the monumental cultural assets, which have to be prepared and elaborated as basis for a scientific and didactic reassessment of the individual cultural assets. The data collected on the cultural assets can be accessed digitally via a database generated with WebGIS. Within the database, all digital records are combined with detailed iconographic, stylistic and historical analyses as well as associated bibliographic resources and a selection of historical images as well as (old) drawings of sites and monuments.

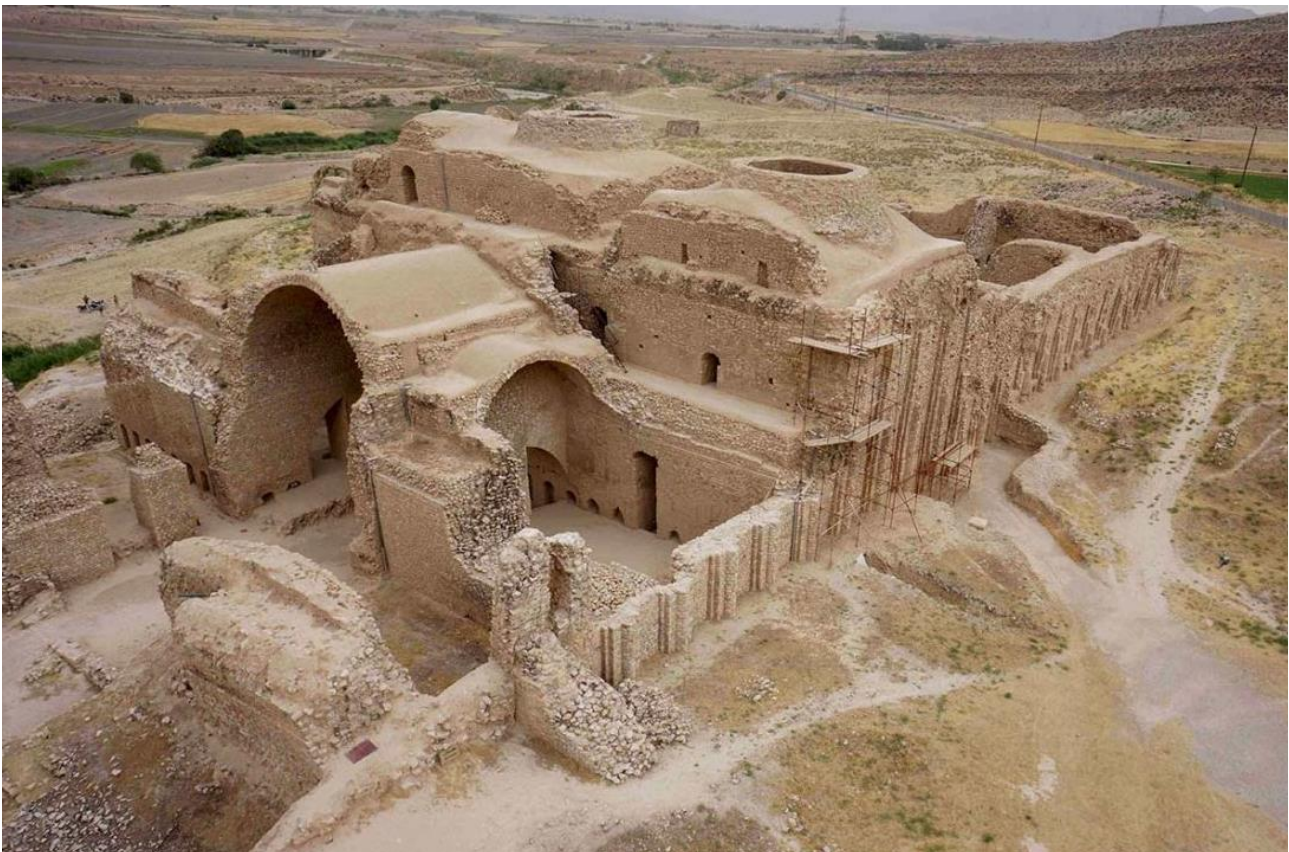


Fig. 1. Palace of Ardashir, Firouzabad (Photo: L. Bezzi).

Overview 2015-2019

The DADIM Team has been conducting fieldwork since 2015; so far, we have been concentrated on the Sasanian period, covering the extensive area of Firouzabad in the province Fars. From 2015 until 2019, we extended the documentation areas over the provinces in South-, Northern and Western and Northwest-Iran. In the context of the presented objects (Fig. 2), the focus is on the already completed partial perspectives; the detailed observations on the recording, evaluation process and results have sparked new achievements and interpretations among researchers in the field of digital cultural heritage, as well as in the fields of history, writing and archeology.



Fig. 2. Documentation of Sasanid Rock Reliefs (Photo: R. Gietl)

References

- Heinsch-Kuntner S., 3D&4D archaeological documentation, in: Barden M. & Ostermann A. (eds.), *Scientific Computing @ uibk*, Innsbruck 2013, 47-49.
- Heinsch-Kuntner S. et al., *Sasanian Rock Reliefs*, in "1669 Förderkreis – Universität Innsbruck" Innsbruck 2019.