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The Twenty-second Regular Report

公益財団法人　ユネスコ・アジア文化センター文化遺産保護協力事務所
Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO (ACCU)

ACCU Nara International Correspondent

The ACCU correspondents periodically send reports on cultural heritage protection activities in which they have been recently involved. This is a collection of nine reports submitted by international correspondents in the Asia-Pacific region.

The Twenty-second Regular Report

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Cambodia

The Progress of Conservation Activities at Sambor Prei Kuk Site

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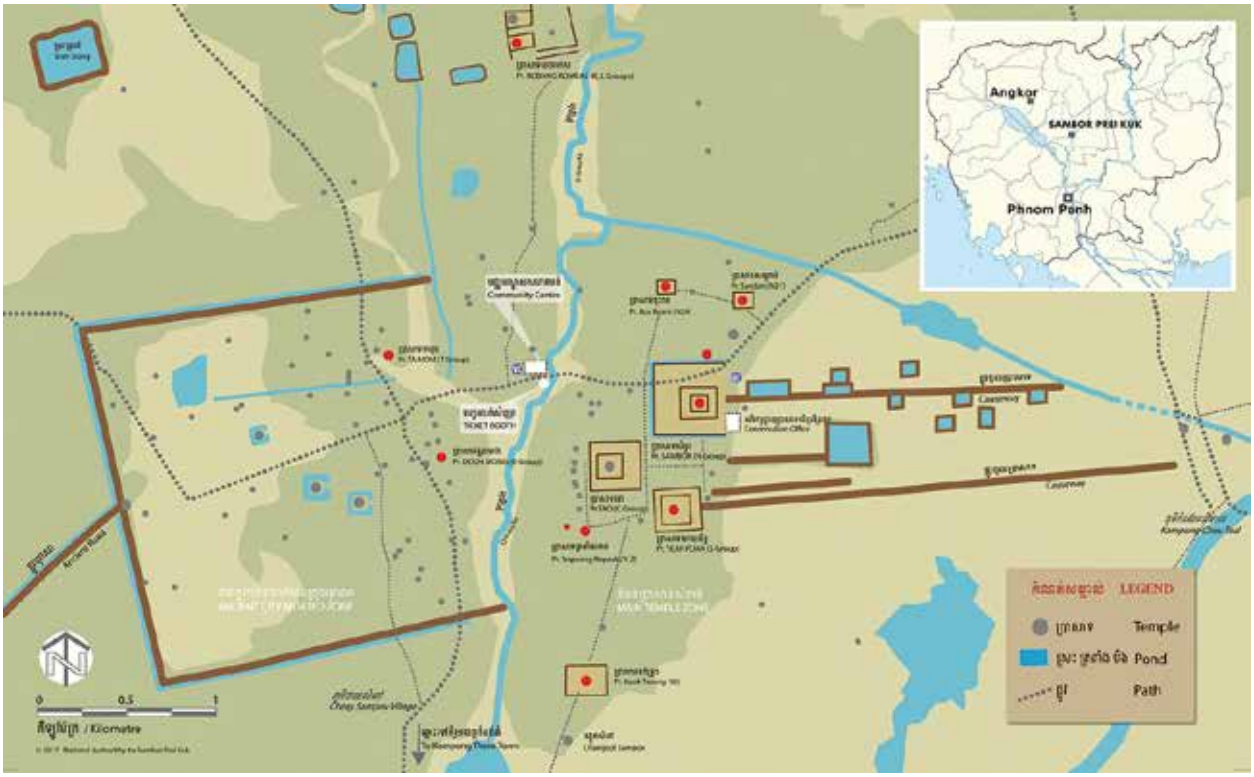
1. Introduction

Since this is the fourth International Correspondent Report presented about the Sambor Prei Kuk Site (see *Reports* vols 12/2013, 13/2014 and 20/2018), for the sake of brevity I will not repeat the historical and general aspects of the site in this introduction. In the previous reports the new steps that were taken under the management of the National Authority for Sambor Prei Kuk (NASPK) were mentioned, as well as those after it was designated as a World Heritage Site in 2017.



Map of Sambor Prei Kuk Archaeological Site: ● Complexes and towers in the progress of conservation activities.

2. Progress of Conservation Activities

This report presents the progress of conservation as it enters a new stage, implemented by the Department of Site, Archaeology and Conservation of NASPK, of which I will highlight four principle activities:

2-1. Emergency Conservation

"The Emergency Conservation of Octagonal Towers in Prasat Yeay Poan": As presented in the last report, this activity is presently an efficient and effective ongoing project to preserve the octagonal towers' structures and their artistic decorative elements. From this state, the Department has taken a wider approach for greater protection, conservation, and restoration efforts than for other monuments on the site. This project has provided the partial preservation of temples such as:

—In 2018, Prasat Yeay Poan (S7, S8, S9, S10 and Walls) Prasat Trapeang Ropeak (Z1 and Z2), Prasat Srei Krup Leak (L5) and Prasat Doung Mong (D)
—In 2019, Prasat Trapeang Ropeak (Y), Prasat Kuok Troung (W), Prasat Ta Mon (T), Asram Moharusei (N17), N19 tower and Prasat Sandan (N21).

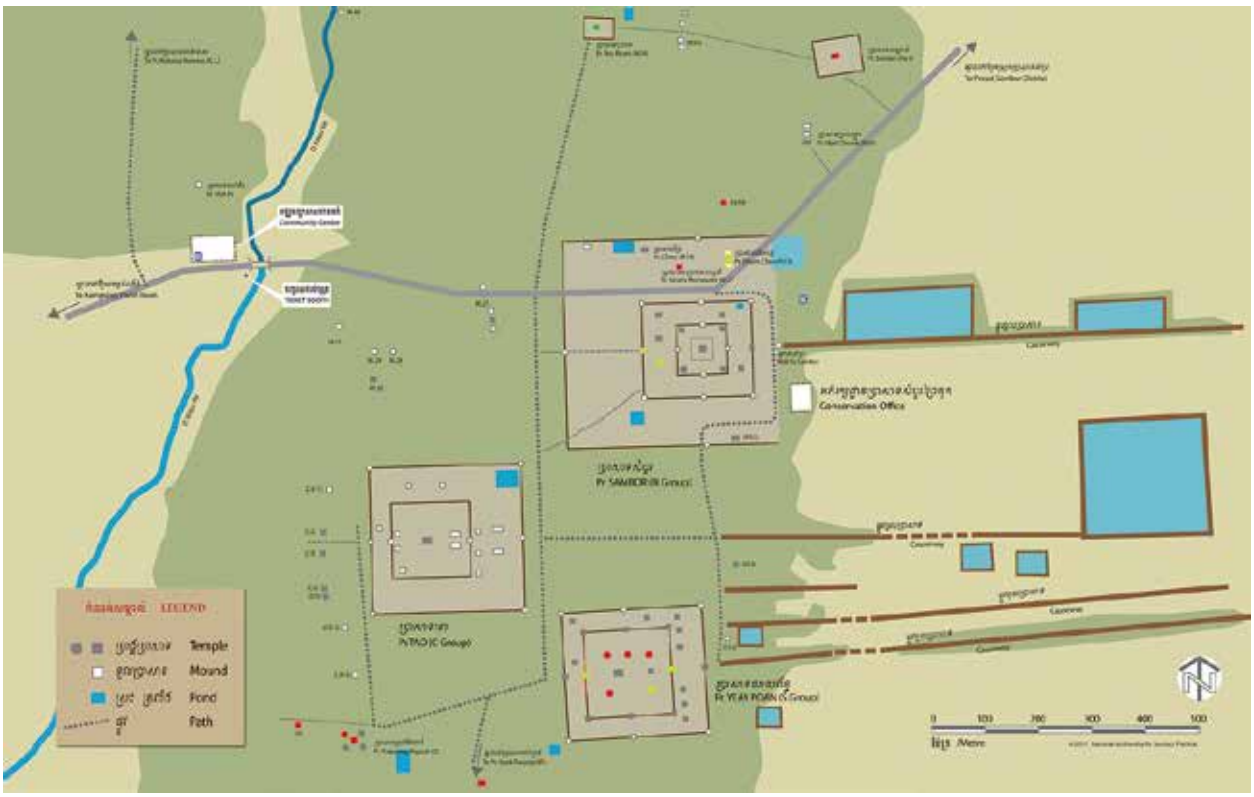
The emergency conservation efforts, based on current risk examination information, may include more intervention in the partial restoration with brick masonry, however, the use of wire restraints and wooden propping, and shoring and bracing are still practiced.

2.2. Restoration Work

In this report, I will present three projects (among five).

A.S11 Tower

As mentioned in the previous report, the S11 tower is an octagonal tower restored in 2018 (see *Report* vol. 20/2018: 9-10). In 2006, the MCFA team installed a temporary cabling harness to reinforce the cracked wall structure. After monitoring the structure, in 2011, MCFA decided to enhance the supported structure with a roof covering. The lessons learned and elements that have been identified as risks of varying degree will be applied to the emergency conservation of other towers and used as a basis for future conservation requirements. As new risks are identified, they will be prioritized and incorporated into the project plan of each tower. Conservation efforts based on current risk analysis knowledge may include



Map of main temple complexes of Sambor Prei Kuk Archaeological Site:
● Emergency conservation ● Restoration work ● Filling back illegal excavated pit

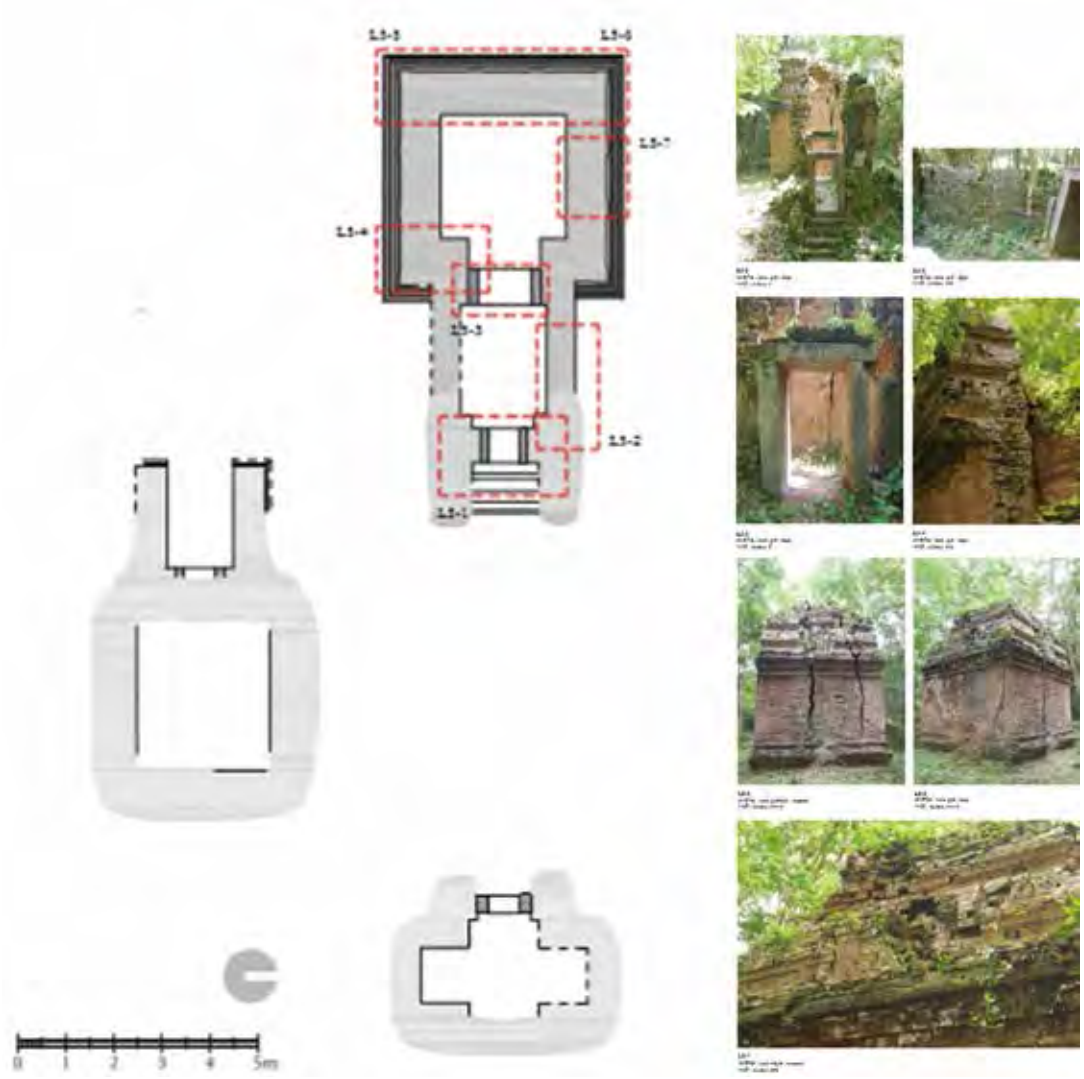
Examples: Partial emergency conservation, before and after conservation.

Example: Z1 tower: Partial emergency conservation, before (left), during (middle) and after conservation (right).

The S11 tower before and after restoration.

The S5 gate before and after restoration.

The S3 gate before, and during restoration and activities.



The risk map of Prasat Sri Krup Leak (NASPK, 2017).

wire restraints, wooden propping, shoring and bracing. This is the first in a series of interim actions to ensure temple longevity. The technical team will evaluate the risks of each temple in advance before starting the data survey and risk mapping.

B. Inner Eastern and Western Gates of Prasat Yeay Poan

"From inaccessible to conservation" is the concept for the project. It is not only for conserving the structures themselves, but making them accessible, which is another way to provide a reintroduction to the monument's original architectural function.

- **Western Gate (S5):** Unstable structural walls and door are the main risks for this gate. Walls were encroached on by tree roots. The doorway was inaccessible because of looting and war activities during the time of unrest. Because of the instability of the structure, an alternative route was created that detoured visitors to the southern side of the wall, which damaged the wall.

- **Eastern Gate (S3):** This project is ongoing, because as the tree and its roots are encroaching on the temple, it has become an attractive sight for tourists who visit this complex. Nonetheless, it is not in concert with the state of conservation of this temple. The load is increasing and the roots are growing and quietly invading the structure of the brick masonry. A four-metre-high accumulation of brick and soil has covered the whole structure which has given rise to a route detour to the lower northern wall for access. The project will remove the accumulated brick and soil to conserve the structure and cut the tree branches so as to reduce the pressed load and vibration that is a primary cause of the instability of the structure.

C. Prasat Srei Krup Leak: L5, L6 and L7

To extend to the north area on conservation activities, Prasat Srei Krup Leak (L5, L6 and L7) is a planned conservation project. Prasat Srei Krup Leak is a very remarkable view for scholars in terms of how the architectural style connects the pre-Angkor and Angkor periods. This project will be conducted at the end of 2019 with the preparation of a new visiting route.

2-3. Filling Back Illegal Excavated Pit

During the time of unrest in the country (from the 1970s to the mid-1990s), there were illegal excavation activities in Sambor Prei Kuk. In the middle of the 1990s, the Ministry of Culture and Fine Arts started backfilling the destroyed accumulated foundations to prevent the loss of the fragile structures, mostly in the chamber of the tower. However, these works were conducted in the major three complexes (Prasat Yeay Poan (S), Prasat Sambor (N) and Prasat Tao (C)). From 2004 to 2005, the Sambor Prei Kuk Conservation Project also continued to contribute to reinforcing the lost foundation from the first stage and the rearrangement of the pedestals. This work was not done in the satellite complexes, and the activity has been restarted with the following activity at Prasat Bos Ream (N24).

This project will not only be for the stability of the monument structure, but will also provide a more comprehensive understanding of ancient construction techniques and materials through the profile of the foundation. It is also part of an enhancement of the visiting route for the entire site, not only the three major complexes. This project will also enhance the other satellite complexes.

2-4. Training Program

Six students from the Royal University of Fine Arts were selected for this program that took place at Sambor Prei Kuk. This program is a pilot project of the Department to introduce a new generation to the fields of archaeological research and architectural conservation. It not only gives them the opportunity to learn with on-site experience, but also the opportunity to practice conservation/restoration action with specialists from diverse departments in NASPK as well. It will also contribute to an increase in trained human resources for the continuation of conservation work. This program is planned as part of the long-term vision of the NASPK in the field of Pre-Angkor studies.

The N24 tower: front view with a pile of looted accumulated soil and foundation (left) and interior illegal excavated pit (right).




Training activities for RUFA students.

3. Conclusion

As presented above, the activity in progress is not only for maintaining the monument, but is also a new enhanced program of educational outreach to university students to produce the next generation of archaeological researchers and conservation experts by providing on-site practical experience. It also gives a new conservation aspect to the monument visiting route without harm to the monument (its authenticity, integrity and value).

Remarks: This report is part of the conservation works which are being carried out by the Department of Site, Archaeology and Conservation, National Authority for Sambor Prei Kuk. Most of the photos in this report were taken during the conservation period by members of the project team.

A Brief Report on the Evaluation of the Overall Conservation and Utilization Projects in the First Batch of 51 Traditional Villages Where Many "National and Provincial Priority Protected Sites" Are Concentrated

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1. Working background

The traditional village is not only the foundation and essence of Chinese excellent traditional culture, but also an important carrier of modern culture and the spirit of the times. Since the 18th National Congress of the Communist Party of China, the Party and the government have attached great importance to the conservation and inheritance of traditional villages. The National Cultural Heritage Administration, the Ministry of Housing and Urban-Rural Development and seven other departments have recognized a total of 6,803 traditional Chinese villages in five batches.

In order to promote the conservation and utilization of traditional villages, the National Cultural Heritage Administration in 2014 launched an overall conservation and utilization project for traditional villages where many "National and Provincial Priority Protected Sites" are concentrated. Three batches of conservation and utilization projects covering 270 villages have been carried out one after another, involving such various aspects as village cultural relics repair, environmental preservation and renovation; display and utilization; fire protection, safety protection and lightning protection of cultural relics, and so on. Through solid progress over nearly five years, initial results have been achieved in the first batch of overall conservation and utilization projects in 51 traditional villages where many "National and Provincial Priority Protected Sites" are concentrated.

Entrusted by the National Cultural Heritage Administration, our company organized a research group to conduct a comprehensive investigation and evaluation on the conservation and utilization of these 51 traditional villages in 2018. Through this evaluation, we have basically grasped the specific situation of the first batch of 51 traditional villages and the difficulties and problems existing in the process of implementation, and have put forward targeted strategies and suggestions on the basis of analysis and research, with the purpose of providing a useful reference for follow-up work. Due to space limitations, this report mainly provides a brief introduction to the overall situation of the conservation and utilization project.

2. Overview of the Assessment

1) Object of Evaluation

The first batch of 51 traditional villages where many

Distribution map of the first batch of 51 traditional villages where many "National and Provincial Priority Protected Sites" are concentrated

Tujia Village in Western Hunan-Shiyanping Village, Hunan Province

Seaweed House on the Coast of the Yellow Sea —Dongchu Island Village, Shandong Province

"Red" Ancient Village—Wuliping Village, Hubei Province

Large Manor House in Eastern Sichuan-Shipaifang Village, Sichuan Province

"National and Provincial Priority Protected Sites" are concentrated involve 24 provinces/municipalities/autonomous regions and 49 districts and counties, have a wide range of distribution, a number of rich and diverse themes, and cover the most representative and wonderful part of the local heritage in our country.

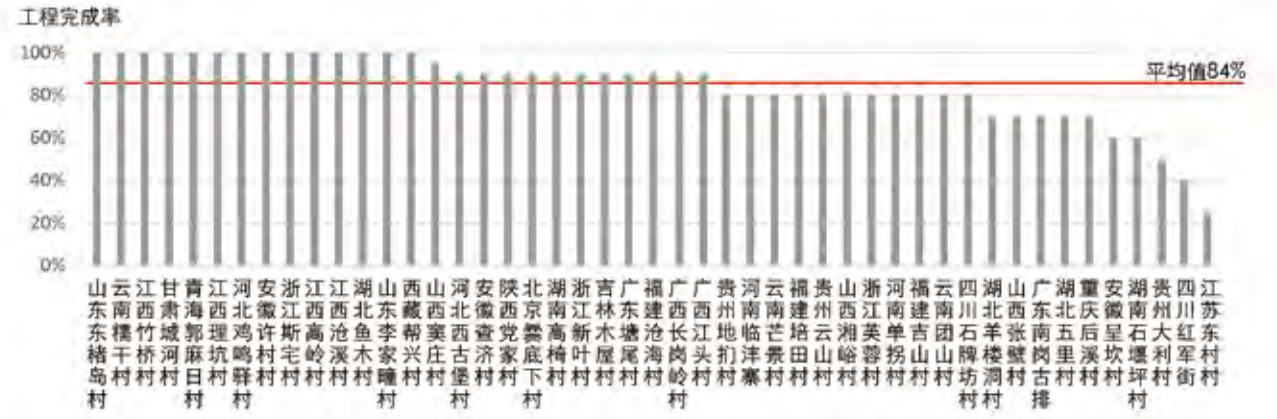
2) Content of the Evaluation:

This evaluation is carried out on the basis of the existing project evaluation, focusing on comprehensive evaluation of the implementation effect and the comprehensive benefits of the project. Special attention is paid to the positive role of the project in promoting local cultural and economic development, helping to alleviate poverty, improving the living standards and pride of local communities, and so on. At the same time, we should pay attention to the analysis of various factors affecting the implementation effect from the aspects of the mode of management organization and the method of activation and utilization, then sort out the existing outstanding problems and constraints, summarize the experience of local people and any advanced practices, and select outstanding model cases.

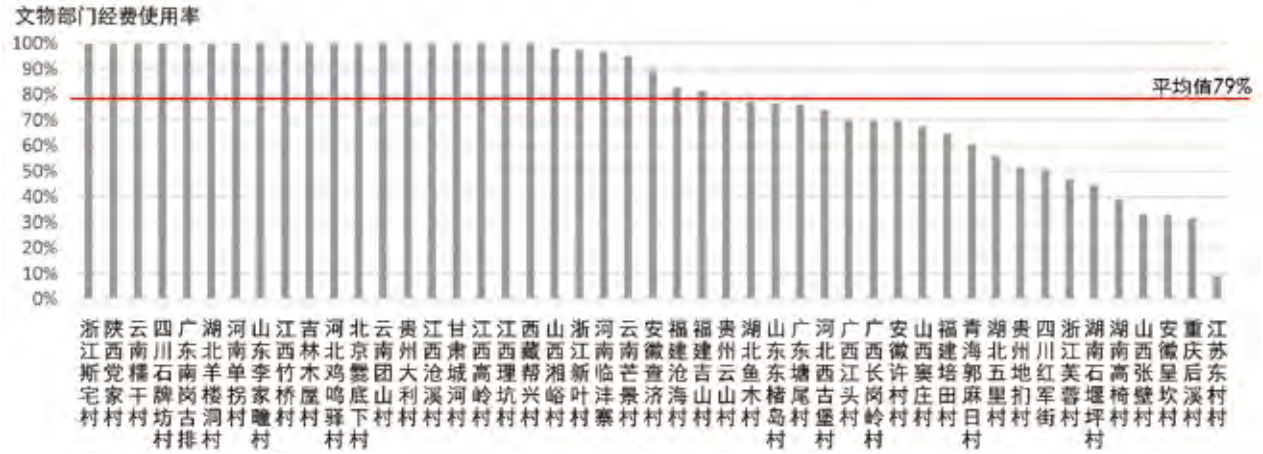
3. Completion and overall effect of the project

1) Progress of the project and use of funds:

The evaluation results show that there were high completion rates for the overall conservation and utilization



Statistical chart of completion rate of each village project



Statistical chart of utilization rate of the special central funds in each village

projects in the first batch of 51 traditional villages. The average completion rate of each village project is about 84%, and the average utilization rate of the special central funds allocated by the National Cultural Heritage Administration is about 79% (as of July 2018). Through the data, we can see that the use of funds is basically consistent with the progress of the implementation of the project, which means that expected goals have been achieved, and remarkable achievements have been made in the efficiency of work promotion.

2) The overall effect of the implementation of the project:
In giving full play to its professional functions, the Cultural Heritage Administration, at all levels, actively cooperates with local governments, and through nearly five years of hard work, the state of the conservation of the first batch of 51 traditional villages has been substantially improved. The comprehensive evaluation of the four projects concluded that excellent or better villages accounted for more than 70% of the total. Among them, the result for the cultural relics repair project (in the excellent or better categories) was 76%, in the environmental renovation project this figure was 61%, in the display and utilization project, 64%, and in the fire protection project, 62%.

Great improvements have been made in the preservation and security guarantee for most of the cultural relic buildings in the villages. At the same time, in terms of

Photos before and after the renovation of Dangjia Village in Shaanxi Province

Photos before and after the renovation of monasteries damaged by an earthquake in Pangxing Village, Tibet

Dengshen Village, Guizhou Province
—Fire protection facilities coordinated with the village environment

Zhejiang Sizhai Village
—Restoration of a traditional independent firewood house

engineering practice, various localities have carried out a series of useful explorations on the concepts of conservation, technical methods, engineering organization and so on. For example, in Dangjia Village in Shaanxi Province, through the long-term presence of experts providing engineering guidance, they strike the perfect balance between the principle of minimum intervention and the demand for improving residential quality according to the preservation and usage requirements of each building. In the renovation of the temple in Pangxing Village in Tibet, local technical personnel have been required to be used in the design and construction, which better ensures realization of the original technology and form in the project. In Sizhai Village, Zhejiang Province, the practice of the traditional "independent firewood house" has been restored and improved with a fire protection design, which has economically and efficiently solved the fire protection problem for cultural relics under the special space constraints.

Through this project, the historical environment of the villages has been preserved, the regional characteristics have been further highlighted, and the quality of the environment has been improved. For example, Mangjing Village and Tuanshan Village in Yunnan Province have adopted the idea of finding key problems and carrying out micro-transformation according to the logic of recreating the original environment, which has achieved the good effect of "optimizing but not changing" the traditional environment.

According to the actual situation regarding village value and development conditions, various localities also adopted certain models, such as vernacular architecture museum, living community, tourist village, and so on, and carried out a series of explorations and practice in the rational transformation and activation, and utilization of cultural relics, which promoted the development of the village economy and further stimulated the vitality of the community. For example, Jilin Jinjiang Wooden House Village tried the villager-led residential cooperative model and the multi-participation PPP model, and actively introduced folklore, painters from other villages into the village to establish a studio, so that the village transformed itself from an abandoned village into a dynamic tourist destination. As another example, in Zhaji Village, Anhui Province, the use of an ancestral temple as a place of Sinology and local culture education has achieved a good combination of the use of cultural relics and the inheritance of traditional culture.

3) Social Benefits of the Project

The implementation of the overall conservation and utilization project has not only greatly improved the appearance of the material relics of traditional villages, but also promoted the revitalization of the local economy and the continuation of traditional culture. The implementation funds for the first batch of 51 traditional villages are special funds mainly allocated by the National Cultural Heritage

Mangjing Village, Yunnan Province

Yunnan Tuanshan Village

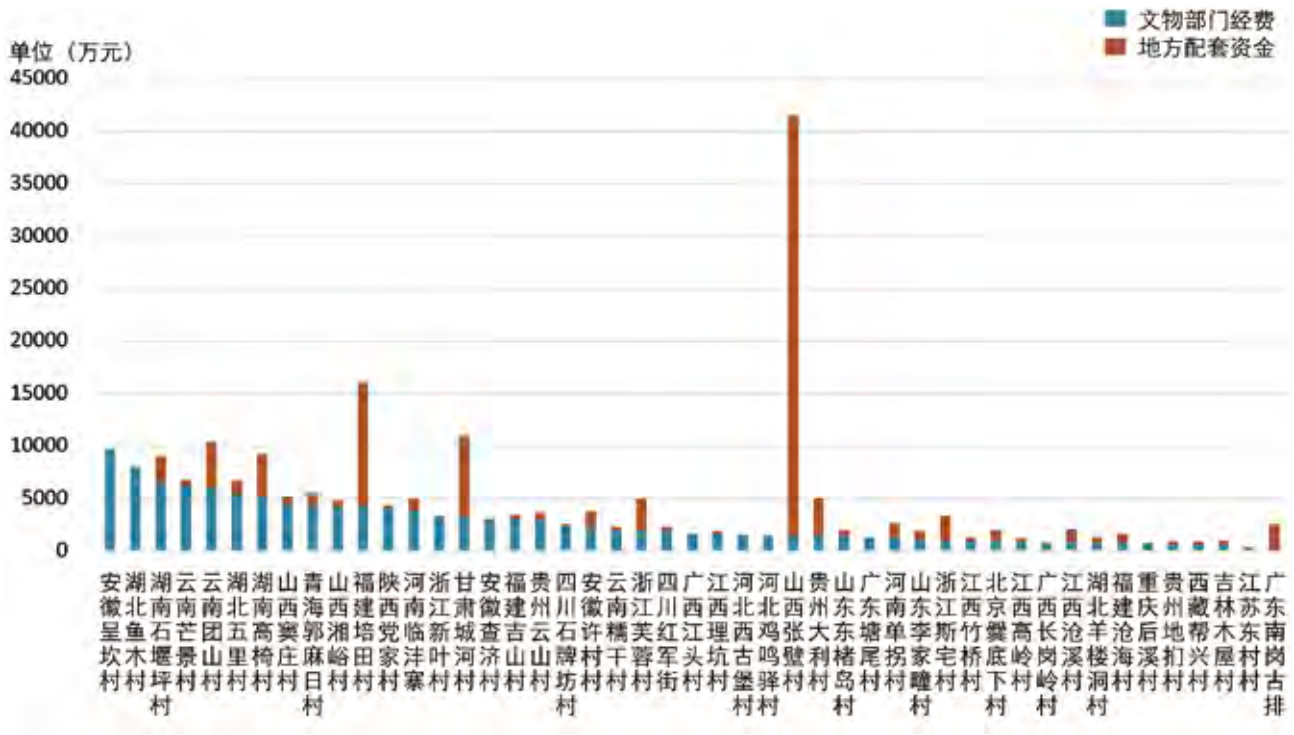
Jilin Jinjiang Wooden House Village, using cultural relic architecture as residential accommodation and an artist's studio

Zhaji Village, Anhui Province, using an ancestral temple as a place for Sinology and Local education

Administration, totaling 1.32 billion yuan, while 41 villages have invested a total of 1.03 billion yuan in local supporting funds, the ratio of cultural relic special funds to local supporting funds is close to 1:1, the driving effect of which is obvious.

The conservation and utilization of villages has effectively promoted the development of the tourism industry and the improvement of residents' income levels. With the implementation of the project, the tourism income of all villages has increased in recent years. For 34 villages with income statistics over a number of years, the average increase in tourism income has reached 37.3%. In Guizhou Dimeng Village, Yunnan Nuogan Village, Sichuan Hongjun Street, Hubei Yumuping Village and Yunnan Mangjing Village, which were previously rated as national-level poor counties, income per capita is significantly above the average county level. Income per capita in Nuogan Village and Yumu Village is twice the average income of the rural population in their respective counties, and the income per capital in Mangjing Village is nearly three times as high as that of its county.

In addition to driving the development of the local economy, the overall conservation and utilization project has also played a positive role in promoting the inheritance of local traditional culture and the development of local heritage conservation. On the one hand, the implementation of the conservation and utilization project provides more places for village cultural activities and historical displays, promotes the development of village non-heritage activities and traditional folk activities, and strengthens the villagers' sense of belonging and pride in local traditional culture. For example, Dongchu Island Village in Shandong Province, Cuandi Village in Beijing, Mangjing Village in Yunnan Province, Lijiatuan Village in Shandong Province, etc., have set up village history museums with rich content and high quality displays, which are deeply loved by local residents. In Peitian Village, Fujian Province, the use of cultural relics to carry out traditional performances, the



Statistical chart of the ratio of national special funds to local supporting funds in each village project

Villagers watching an exhibition in Mangjing Village, Yunnan Province

Ancient theatres used to perform martial arts in Peitian Village,Fujian Province

setting up of characteristic workshops, and the organization of a spring ploughing festival and other non-heritage activities effectively promoted the development of village folk culture.

Hunan Shiyanping Village is promoted by the villagers, village committee and government media, and the beautiful scenery of the village peach garden is presented to the public by organizing photography activities and shooting special films at the Farming Culture and Art Festival. Two consecutive years of selection as Hunan Satellite TV Spring Festival Gala has also played a good propaganda effect on the village.

On the other hand, through the implementation of the project, we have cultivated a number of talented individuals in design and construction areas who are committed to the conservation of local heritage, and promoted research into and inheritance of traditional construction technology.

The overall conservation and utilization of traditional villages is a complex, systematic project which requires the cooperation of government departments at all levels, village committees, and stakeholders from all walks of life. Through the development of this project, various localities have accumulated a great deal of experience in the optimization of collaborative management mechanisms, the construction of management capacity, exploration of the modes of conservation and utilization of cultural relics with non-state-owned property rights, and the participation of the community and social elements. In the cities and counties where 51 villages are located, the vast majority of them have set up special leading groups, management committees and other coordination bodies for this work, and have held regular joint meetings, which have played an important role in promoting the overall planning of the work. In terms of management capacity building, the National Cultural Heritage Administration promptly issued the 'Guidelines for the Conservation and Utilization of Vernacular Buildings in Traditional Villages where Many "National and Provincial Priority Protected Sites" Are Concentrated (trial version' and organized two training courses throughout the country. Local governments have also strengthened the staffing of relevant departments, and Guangxi, Hunan, Yunnan, Fujian, Zhejiang, Guizhou and other provinces have also implemented a village-based expert system. The technical guarantee for the implementation of the project has been strengthened. Many other places have made remarkable innovative attempts according to their own reality, which has played an important role in promoting the level of rural heritage conservation and management, and even in the solution of some rural social problems.

4. Summary

Chinese traditional villages are the highest-quality historical and cultural resources in the country, and provide the most characteristic ecological and human environment, and the most basic conditions for industrial development. The practice of the conservation and utilization of these traditional villages can play a positive and leading role in the strategy of rural revitalization. In recent years, China has been working hard to find a sustainable development path that is compatible with the conservation and inheritance of traditional local culture in China. Through this evaluation, we can see that the implementation of overall conservation and utilization projects in the first batch of 51 traditional villages where many "National and Provincial Priority Protected Sites" are concentrated has taken a solid step along this path, and five years of efforts in bringing changes to these villages have raised expectations for the conservation and utilization of traditional villages, gradual achievement of the harmonious development of man and nature in the midst of the opportunities presented by the times, and an important way to achieve a bright future of "seeing the mountains, seeing the water, remembering to live in homesickness".

Indonesia

The Ombilin Coal Mining Heritage of Sawahlunto: Its Conservation Issues and Government Efforts to Maintain its Preserved Condition as a UNESCO World Heritage

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Ministry of Education and Culture of the Republic of Indonesia

Introduction/background

OCMHS (Ombilin Coal Mining Heritage of Sawahlunto) is a coal mining heritage and integrated transportation system for coal, i.e., transportation from the mining location via railway tracks along Lake Singkarak to the final coal storage at Emmahaven Port. It consists of several cultural properties and heritages which are intertwined into one global narrative and has now become a UNESCO World Heritage site. It is located in West Sumatra, Indonesia, and was built in the Dutch era during the late 19th to early 20th centuries.

Competition between colonial countries to control energy resources forced the Dutch government to search for energy resources in their colonies. The discovery of a large number of high quality coal deposits in the Ombilin Basin, Sawahlunto, West Sumatra, motivated the Dutch government to invest in coal mining operations in this region. Operation of the coal mine in Sawahlunto started in 1891. From then until Indonesian independence, the ownership and management of Ombilin coal mining changed hands several times, from the Dutch government to the Japanese military and then to the Indonesian government.

The exploitation and management of Ombilin coal mining continued until Ombilin coal mining was declared inefficient for exploitation, with mining activities being discontinued in 2002. Nearly 40 percent of Sawahlunto residents were miners, so after the miners left, Sawahlunto slowly became a dead city. To prevent that situation, in 2001 the Mayor of Sawahlunto at that time, Mr. Amran Noor, established and announced a vision for the city: "Sawahlunto as Cultural Tourism Mining City by 2020," as an initial step to revive and develop the city.

On one hand, the development plan to revive and develop the city has brought optimism to the people of Sawahlunto. On the other hand, however, there are concerns from conservationists that urban development will change the face of the city and affect heritage conservation, because it is assumed that growth equals destruction.

Therefore, proposing OCMHS to become a UNESCO World Heritage site is expected to support the preservation of the city. It can also help revive the city and bring prosperity to local communities through site visitation and therefore help them maintain a good quality of life.

Properties to preserve in the Ombilin Coal Mining Heritage of Sawahlunto Area

There are 12 component-parts of cultural heritage located in three areas (Area A, Area B, and Area C) in the Ombilin Coal Mining Heritage of Sawahlunto Area. The location is in West Sumatra, Indonesia; to be precise, encompassing Sawahlunto Municipality, Solok Municipality, Solok Regency, Padang Panjang Municipality, Tanah Datar Regency, Padang Pariaman Regency, and Padang Municipality. The three areas comprise 268.18 hectares, with buffer areas totaling 7,356.92 hectares.

Area A: Sawahlunto Mining Site & Company Town consisting of six components-parts:
- Component-part A1: Soengai Doerian Mining Site. (It has five attributes: Doerian Mining Pit Compound, Padang Pandjang Mining Pit Compound, Soengai Doerian Mining Pit Compound, Loento Mining Pit, Mining Tunnel).
- Component-part A2: Mining School. (It has one attribute: Mining School)
- Component-part A3: Coal Processing Plant Compound. (It has one attribute: Coal Processing Plant Compound).
- Component-part A4: Ombilin Railway Transportation. (It has four attributes: Sawahlunto Train Station, Kubang Sirakuak Power Plant, Kalam Railway Tunnel, Muara Kalaban Train Station).
- Component-part A5: Company Town. (It has five attributes: Mining Administrative Compound, Labour Quarters Compound, Health Facilities, Market, Supporting Facilities).
- Component-part A6: Salak Power Plant and Rantih Water Pumping Station. (It has two attributes: Salak Power Plant Compound, Rantih Water Pumping Station Compound).

Area B: Railway Facilities & Engineering Structures, consisting of five component-parts:
- Component-part B1: Railway System. (It has one attribute: Railway System).
- Component-part B2: Batu Tabal Train Station. (It has one attribute: Batu Tabal Train Station).
- Component-part B3: Padang Pandjang Train Station. (It has one attribute: Padang Pandjang Train Station).
- Component-part B4: Tinggi Bridge. (It has one attribute: Tinggi Bridge).
- Component-part B5: Kayu Tanam Train Station. (It has one attribute: Kayu Tanam Train Station).

Area C: Coal Storage Facilities at Emmahaven Port, consisting of one component-part:
- Component-part C1: Coal Storage. (It has one attribute: Coal Storage).

(See annex: List of Significant Objects of All Attributes)

Conservation Efforts

Proposing OCMHS to become a UNESCO World Heritage site is a possible way to conserve the heritage and yet still develop the region and bring prosperity and a good quality of life to the local communities. In other words, we should implement sustainable development in

OCMHS to achieve prosperity and a good quality of life for local communities and not just conservation of the heritage.

There are several conservation issues in the OCMHS area, such as the potential degradation of the landscape due to illegal mining and the lack of care shown toward the heritage buildings and their surrounding areas. The solution to these conservation issues is collaboration regarding space management and coordination amongst related parties. An example of this is the potential degradation of the landscape due to illegal mining. To address this issue in a former mining area in Sawahlunto, PT Bukit Asam, Tbk, despite being a mining company, has committed itself to supporting OCMHS as a UNESCO World Heritage site by extending the concession contract to the coal mining area to protect the whole area, and being against the possibility of the relevant ministry's granting new mining permits to other mining companies. PT Bukit Asam, Tbk also continues to run a mining school in order to support sustainable development in Sawahlunto. The current mining operation is still being carried out for educational purposes on a small scale.

Another relevant issue is abandoned heritage buildings. Because we need to take care of and maintain the buildings and their surrounding areas, the local government together with the central government, through its Regional Technical Implementation Unit, registers heritage buildings on both the local level and national level as cultural heritage properties, so that the government has a formal legal ground for undertaking the conservation. Not only does the government register them, it also socializes the dos and don'ts, the rules, and recommendations for registered cultural properties and heritage among the local communities, so that the local communities can participate and be involved in preserving the heritage buildings by light cleaning, guarding, and being careful not to wreck parts of the buildings.

Aside from the above, there are several recommendations for conservation suggested by ICOMOS. However, not all of them can be described here because they are still in progress.

Conclusion

Proposing OCMHS to become a UNESCO World Heritage site is part of the Indonesian government's efforts to ensure the preservation and sustainability of its present condition into the future.

Conservation issues in the OCMHS area, such as potential degradation of the landscape due to illegal mining and the lack of care shown toward the abandoned heritage buildings, are expected to be resolved through collaborative management and coordination amongst related parties.

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Response for ICOMOS. 2018. Prepared by Nomination Team of Ombilin Coal Mining Heritage of Sawahlunto. The nomination team developed the additional Information to provide further information to clarify and to augment the material submitted in the nomination dossier. The additional information is a request of the International Council on Monuments and Sites (ICOMOS) in its letter Number GB/AA/1610/Add_Info_I dated 01 October 2018. Jakarta.

"Ombilin Coal Mining Heritage of Sawahlunto." 2019. *Response and Additional Information. In reply to letter GB/AA/1610/IR dated 21 December 2018 from the ICOMOS World Heritage Evaluation Unit* and prepared by Ministry of Education and Culture of Republic of Indonesia. In coordination with the Ministry of Foreign Affairs of the Republic of Indonesia; Ministry of Transportation of Republic of Indonesia; Ministry of State-Owned Enterprises of Republic of Indonesia; Office of Education and Culture of West Sumatra Province; Office of Culture, Heritage Remains and Museum of Sawahlunto Municipality; Bukit Asam Company-Ombilin Mining Operation; Indonesian Railway Company. Jakarta.

ANNEXES:

- List of Significant Objects of All Attributes
- Map of Ombilin Coal Mining Heritage of Sawahlunto
- Photos of Ombilin Coal Mining Heritage of Sawahlunto

List of Significant Objects of All Attributes

ID no.	Attributes	Significant Objects
Component-part A1: Soengai Doerian Mining Site		
A1.1	Doerian Mining Pit Compound	Doerian Mining Pit
		Ventilator
		Compressor Building
A1.2	Pandjang Mining Pit Compound	Pandjang Mining Pit
		Ventilator Pit Pandjang
A1.3	Soengai Doerian Mining Pit Compound	Soengai Doerian Mining Pit
		Ruins of Gevangenis Soengai Doerian (Prison Chains)

A1.4	Loento Mining Pit Compound	Loento I Mining Pit
		Loento II
		Loento III Mining Pit
A1.5	Mining Tunnel	Minning Tunnel
Component-part A2: Mining School		
	Mining School	Mining School
Component-part A3: Coal Processing Plant Compound		
	Coal Processing Plant	Coal Processing Plant
Component-part A4: Ombilin Railway Transportation		
A4.1	Sawahlunto Train Station	Station Building
		Emplacement
		Locomotive Turntable
A4.2	Kubang Sirakuak Power Plant	Station Building
		Emplacement
A4.3	Kalam Railway Tunnel	Kalam Railway Tunnel
A4.4	Muara Kalaban Train Station	Station Building
		Emplacement
Component-part A5: Company Town		
A5.1	Mining Administrative Compound	A5.1.a. Head Office of Ombilin Mining Enterprise
		A5.1.b. Engineer Residence W-24
		A5.1.c. Engineer Residence W-28
		A5.1.d. Engineer Residence W-29
		A5.1.e. Engineer Residence W-30
		A5.1.f. Engineer Residence W-46
		A5.1.g. Engineer Residence W-14
		A5.1.h. Engineer Residence W-15
		A5.1.i. Engineer Residence W-16
A5.2	Labour Quarters Compound	A5.2.a. Tangsi Tanah Lapang
		A5.2.b. Tangsi Baru
		A5.2.c. Soup Kitchen Complex
A5.3	Health Facilities	A5.3.a. Hospital
		A5.3.b. Doctor Residence W-1
		A5.3.c. Doctor Residence W-2
		A5.3.d. Doctor Residence W-3
A5.4	Old Market Area	A5.4.a. Comedy House
		A5.4.b. Pek Sin Kek House
		A5.4.c. Ons Belang Co-operative
A5.5	Supporting Facilities	A5.5.a. Ombilin Ground
		A5.5.b. Assembly Hall
		A5.5.c. Ombilin Hotel
		A5.5.d. Santa Barbara Catholic Church
		A5.5.e. Santa Lucia School
		A5.5.f. House of the Assistant Residence
		A5.5.g. House of the Court Chief
		A5.5.h. House of the State Attorney
		A5.5.i. House of the Court Clerk

		A5.5.j. House of the Municipal Government Official 1
		A5.5.k. House of the Municipal Government Official 2
Component-part A6: Salak Power Plant & Rantih Water Pumping Station		
A6.1	Salak Power Plant Compound	Salak Power Plant Complex
		Salak Official Residence W-301
		Salak Official Residence W-302
		Salak Official Residence W-303
A6.2	Water Pumping Station Compound	A6.2.a. Ombilin River
		A6.2.b. Pumping Station Building & Structure
Component-part B1: Railway System		
B1.	Railway System	Railway System
Component-part B2: Batu Tabal Train Station		
B2.	Batu Tabal Train Station	Station Building
		Emplacement
Component-part B3: Padang Pandjang Train Station		
B3.	Padang Pandjang Train Station	Station Building
		Emplacement
		Locomotive Depot
		Water Pumping
		Locomotive Turntable
Component-part B4: Tinggi Bridge		
B4.	Tinggi Bridge	Tinggi Bridge
Component-part B5: Kayu Tanam Train Station		
B5.	Kayu Tanam Train Station	Station Building
		Emplacement
Component-part C1: Coal Storage		
C1.	Coal Storage	Coal Storage/ *Kolen Magazin*
		Emmahaven Old Wharf

Map of Ombilin Coal Mining Heritage of Sawahlunto

(Copyright Owner: Office of Cultural Affairs, Historical Remains Museum of Sawahlunto Municipality)

Photos of Ombilin Coal Mining Heritage of Sawahlunto

Figure 1: The Compressor Building is one of significant objects in Doerian Mining Pit Compound (in Area A)
(Copyright Owner: Office of Cultural Affairs, Historical Remains Museum of Sawahlunto Municipality)

Figure 2: Salak Power Plant Complex in Salak Power Plant Compound (in Area A)
(Copyright Owner: Prita Wikantyasning)

Figure 3: The Soup Kitchen Building in the Labour Quarters Compound (in Area A). The building now functions as a museum (Copyright Owner: Prita Wikantyasning)

Figure 4: Tinggi Bridge (in Area B) (Copyright Owner: Prita Wikantyasning)

Figure 5: Aerial View of Coal Storage Facilities at Emmahaven Port (in Area C) (Copyright Owner: Office of Cultural Affairs, Historical Remains Museum of Sawahlunto Municipality)

Kyrgyzstan

Ethnocultural Attribution of the Oval-Shaped Burial Mounds in Tien Shan

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One of the most interesting and challenging issues in medieval archaeology of Eurasia is the identification of medieval Mongolian burials. A number of different types of burials attributed to the Mongolian tribes of the 12-14th centuries have been excavated in Mongolia and Transbaikalia. On the basis of the Eastern Eu-ropean materials of the 13-14th centuries, a well-known Russian archaeologist, G.A. Fedorov-Davydov, distinguished several elements in the burial complexes, which he associated with newly arrived Mongolian and "eastern" tribes. However, the absence of consistent relationships among the elements precluded him from designating the burials as Mongolian by feature complex. In this connection, the tombs with oval-shaped stone mounds in Tien Shan are of special interest.

Such kinds of burial mounds in Tien Shan have been excavated since the end of the 19th century by archaeologists such as A.M. Fetisov, A.N. Bernshtam, A.K. Kibirov, D.F. Vinnik, A.K. Abetekov and K.Sh. Tabaldiev. In 2012-2014, the author of this report, in collaboration with Prof. K.Sh. Tabaldiev, excavated and studied the tombs with oval-shaped mounds in the Ysyk-Köl and Naryn regions. As a result of this research, the author proposed a new hypothesis on the ethnocultural attribution of the tombs.

The overall number of excavated tombs with oval-shaped stone mounds in Tien Shan is a little more than 100. Burials of this type are usually situated on the top of hills and mountains. They rarely form large cemeteries consisting of more than 10 tombs. Mounds for the burials are made up of stones which form an oval shape, with their long sides in a north-south direction. In several cases, a vertically erected stone slab was discovered at the northern end of the mound. The deceased were laid supine with their heads to the north. The grave goods found correspond to the sex of the deceased: men were provided with weapons (bows, arrows, quivers, knives, etc.), horse trappings (bridles, saddles, stirrups), flints, etc.; women were provided with horse trappings, knives, mirrors, earrings, combs, beads and special headdresses known as a *bogtog*. Both male and female burials contain certain bones of a sheep, viz., tibia, shoulder blade and vertebra. In some cases, the tibia was found in a vertical position near the skull of the deceased.

Craniological materials (17 male and 8 female skulls) from the burials with oval-shaped mounds in the Kochkor region were studied by I.R. Gazimzianov and S.S. Tur. According to their analysis, the skulls are characterized by "Mongoloid features" and are "morphologically homogeneous", although "certain Caucasoid features are present". However, in comparison with craniological materials from the Iron Age and early Middle Age burials in Tien Shan, the skulls from the tombs with oval-shaped mounds are "strongly Mongoloid".

Interestingly enough, there are similar tombs among heterogeneous antiquities of the early Mongolian archaeological culture in Mongolia and Transbaikalia. A detailed comparative study of the burial complexes from all three regions demonstrates a close resemblance in their funerary rites and grave goods. Common characteristics include the location of the cemeteries on hills and mountains; the oval-shaped stone mounds, sometimes with a rock vertically erected at the north-ern end of the mound; placing the deceased in a supine position with their head to the north; providing females with a *bogtog* headdress; adding sheep's bones (tib-ia, shoulder blade, vertebra) and saddles with trapeze-shaped pommels. All these features are current in the burial complexes of the 13–14th centuries in Tien Shan, Mongolia and Transbaikalia.

The complex of these analogous features, in our opinion, serves as clear evidence of the ethnocultural affinity of the people who left the burials with oval-shaped mounds in Tien Shan, Mongolia and Transbaikalia in the 12-14th centuries. Evidently, those people were from Mongolian tribes, some of whom found themselves in Tien Shan as a result of the Mongol Empire's expansion.

In conclusion, the detailed comparative study of the archaeological materials from Tien Shan, Mongolia and Tranbaikalia has allowed us to attribute the tombs with oval-shaped stone mounds in Tien Shan to the Mongols, who came to the region during the expansion of Genghis Khan's empire. The ethnocultural characteristics of the burial complexes from Tien Shan, Mongolia and Trans-baikalia that we describe in the article could be of help in identifying and investigating medieval Mongolian burials in other regions.

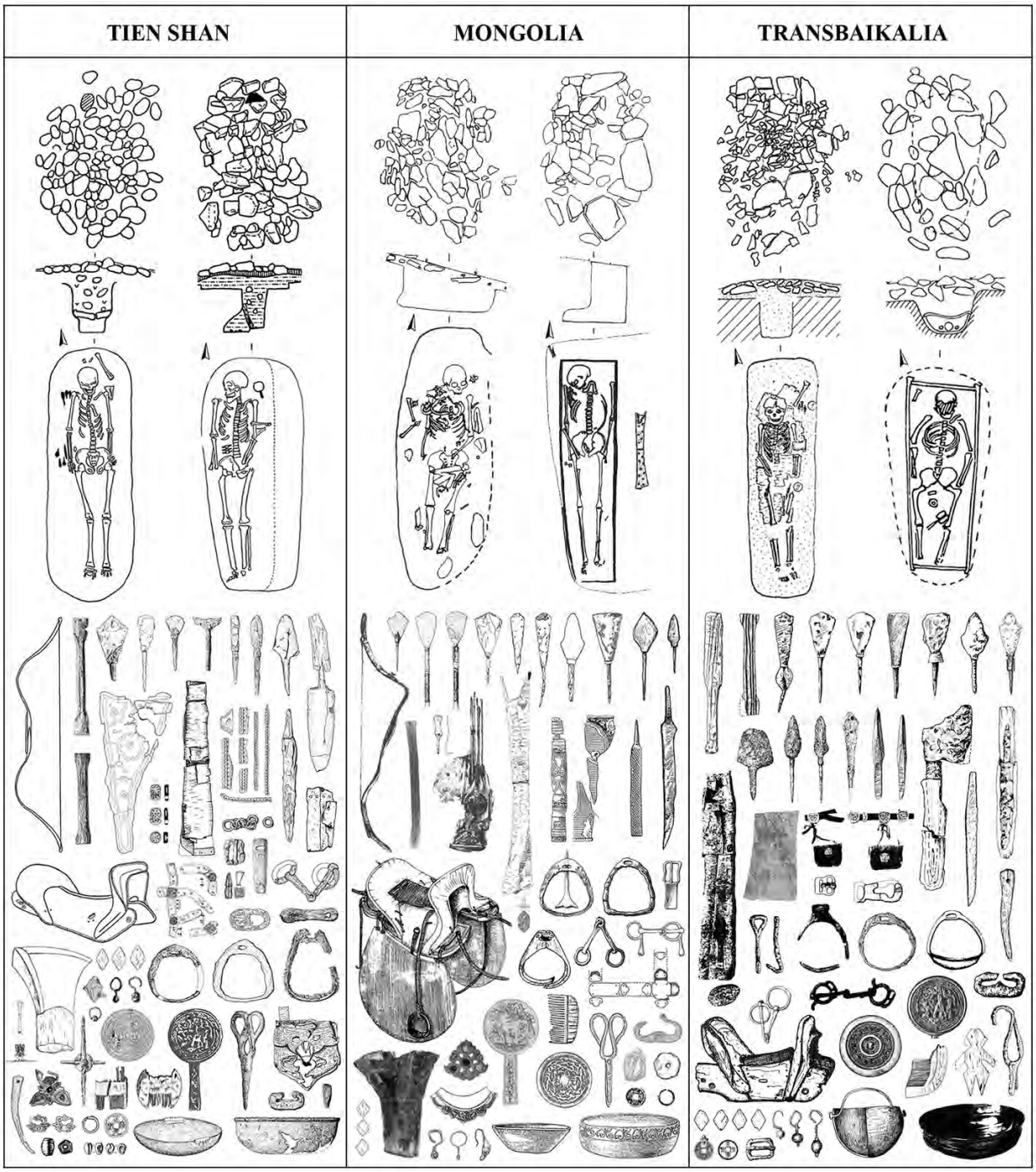

Fig. 1. Comparison chart of the burial complexes of Tien Shan, Mongolia and Transbaikalia of the 12-14th centuries.

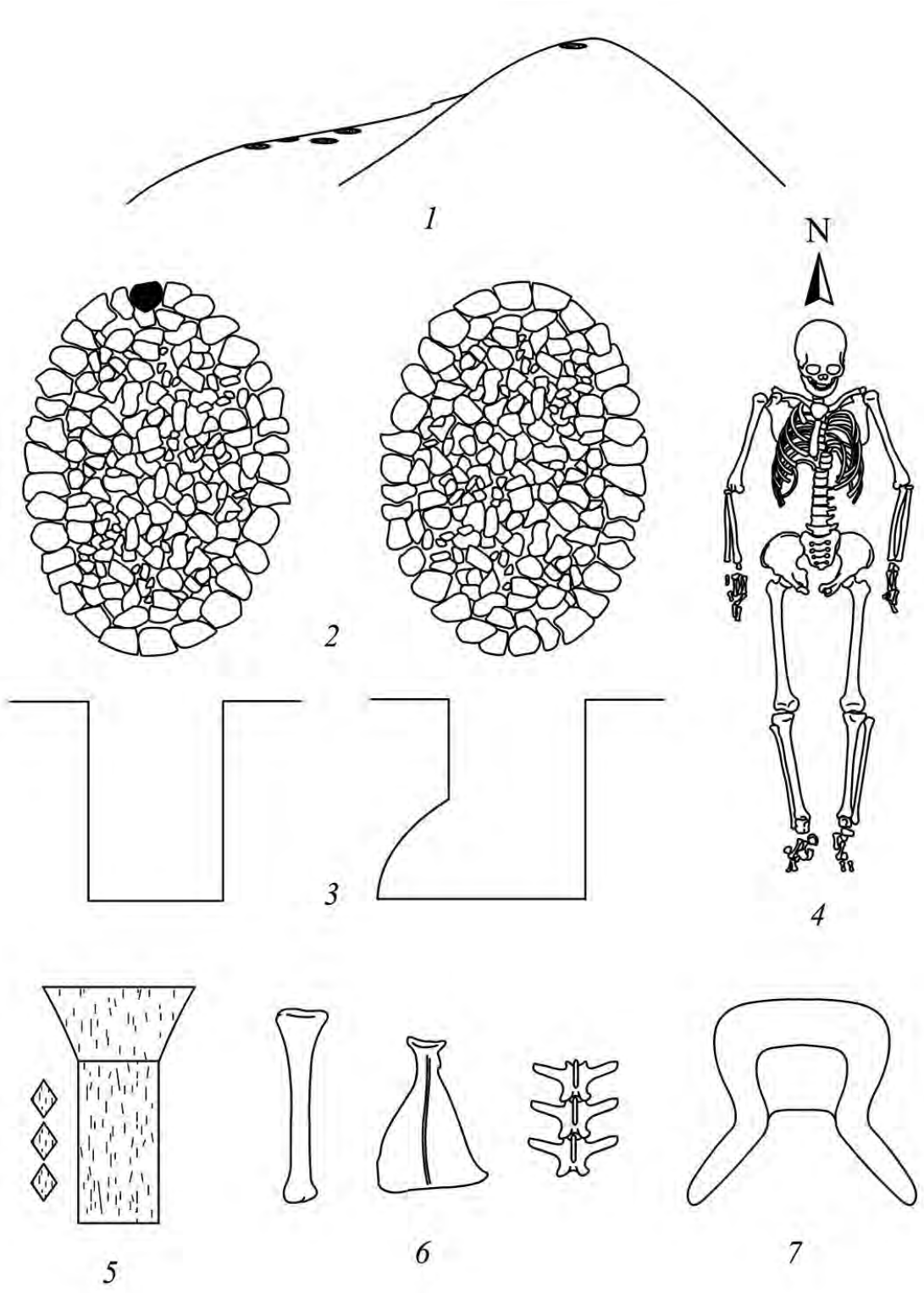

Fig. 2. Complex of ethnocultural markers of the Mongolian burial complexes in the 13-14th centuries:
1. burials at the top of hills and mountains; 2. an oval-shaped, flat, stone mound with a vertically erected stone at the northern end of the mound and one without; 3. grave pits and undercuts; 4. northward orientation of the deceased; 5. a female headdress (*bogtog*); 6. sheep's bones – tibia, shoulder blade and vertebrae; 7. a wooden saddle with trapezium-shaped pommel.

Anantapur Temple: Rehabilitation of Cultural Heritage after the 2015 Nepal Earthquake

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Keywords: Anantapur, *Shikhar* style, traditional system, Swyambhu Mahachaitya, *chhema puja*, local community involvement

1. Introduction

One of the Tantric temples in the Kathmandu Valley located at Swayambhu hilltop, Anantapur Temple, constructed by King Pratap Malla, completely collapsed during the 2015 Nepal Earthquake. However, not only Anantapur, but five other monuments—Pratappur, Tashigomang stupa, Devadharma vihar, Karmaraj vihar, and the stone pillars, except for the private residential houses—also collapsed at Swayambhu hilltop. In total, 140 monuments were damaged in the earthquake, of which 33 completely collapsed within Kathmandu Valley World Heritage property.

Anantapur *shikhar* style temple, a dominant architectural monument, was built in 1654 in the name of King Pratap Malla's wife Anantapriya, just opposite another *shikhar* temple built in his own name, Pratappur; these two very beautiful temples are still visible far away from Kathmandu Valley on the hilltop of Swayambhu on the right and left sides of Swayambhu *Mahachaitya* (stupa). The architecture of this temple is evidence that the *shikhar* style was very popular and flourished during Nepal's medieval period, especially in the Malla period. During this period, dominant construction materials were bricks, mud mortar, stone, wood, metal (brass, copper, bronze, etc.) and vajra (a mixture of different materials traditionally, latterly known as *chuna* surkhi or *surkhi*). Similarly, Anantapur was built with *ma-appa* (a type of traditional brick), wood, mud mortar, stones and brass (esp. pinnacle).

The basic inventory of this temple was in the collection of the Department of Archaeology, Government of Nepal; however, detailed measured drawings were not available when it was collapsed. Therefore, a public appeal was made and some drawings were found and some were able to be prepared before starting the renovation.

Anantapur Temple was on the list of collapsed monuments as it had structurally collapsed; however, a little higher than the first floor (up to cornice level) it was still physically standing, which was very significant for carrying out important studies on this temple during the post-earthquake response, and even in the post-earthquake rehabilitation phase as well. Finally, structural studies came to the conclusion that the remaining parts of the temple were at more risk and could not be strengthened, and the recommendation was that the temple must be dismantled up to ground level. Therefore, the whole structure was dismantled and research was carried out to determine the condition of its foundations before starting renovations.

2. Rehabilitation of Anantapur Temple

The Department of Archaeology (DoA) is the sole government authority for conservation and management of all tangible cultural heritage of Nepal by legislative provisions; however, it should be done in coordination with the other stakeholders as defined and provisioned under a variety of legal tools. Therefore, there is no question of a simple approval from the authority for the rehabilitation of Anantapur Temple, as certain procedures must first be completed within the department before carrying out rehabilitation activities. DoA allocated a budget (as an annual project) with approval from the related budgetary authorities and completed the procurement process by awarding a tender to a contractor.

2.1 Preliminary Study and Conservation Notes

Anantapur was listed as a completely collapsed monument; therefore, a study was carried out by visiting the site several times. It was much easier to carry out the research work after the temple was given appropriate shoring to protect the structure during the post-earthquake emergency period. A training program organized jointly by ICCROM and Ritsumeikan University in coordination with the DoA, carried out an assessment and carried out shoring for the vulnerable structure as well.

The study recommended carrying out the following activities for the rehabilitation of Anantapur Temple:

- protect the structure temporarily
- evacuate all archaeological and religious objects from the temple and store in a secure place following the recommended process and procedures
- before storing the objects, document them or at least prepare a basic inventory
- dismantle the vulnerable parts of the structure
- carefully take out the stone pillars and other important wooden doors, carved elements and other artefacts and store in a safe storage
- study the foundation very carefully

2.2 Tendering and Contractor

The process of tendering is provisioned in the Public Procurement Act of Nepal, which must be followed by all government and other public organizations in Nepal. Therefore, it was processed as per the Act, but technical supervision and monitoring are the clear responsibility of government authorities, in this case, the DoA. A Project In-charge and Site In-charge were deputed for all kinds of supervision; they also set the monitoring mechanism. The conservation notes including basic research works were carried out through the Project In-charge, and in the beginning, preparation of all the necessary drawings as well as an estimate was done by the Site In-charge,

which was approved by a DoA internal mechanism as an administrative process. It is one of the significant steps in the rehabilitation process. Only after this step could the process of tendering be carried out and awarded to the contractor.

2.3 Detail Assessment and Project Implementation

As per the recommendation, all activities were carried out by the contractor and related authorities in coordination with the Site In-charge and Project In-charge Detail assessment was also carried out, which also justified the recommendations by the conservation notes made previously. Therefore, the structure was dismantled completely up to the plinth level. But before dismantling the structure, all possible documentation activities were carried out: i.e., preparing a full inventory, detailing of condition assessment of remaining structure, preparation of detailed drawings, photographs and other important basic activities.

A study of the foundation was also carried out, however the foundation was completely intact; there was no negative impact of the earthquake on the foundation. It was excavated to a depth of up to seven feet; counting from the northern elevation of the foundation, twenty-two layers of bricks were opened, and as all were intact and in the proper position, digging was stopped. As a result, the original foundation was not excavated; however, brick bats and bricks in the overall foundation were found where excavations were carried out.

Therefore, the structure was built on the same foundation but the connections were strengthened using some traditional technologies as well as a few new ideas using traditional construction materials.

The estimated budget for the rehabilitation of Anantapur was 1,7400,000 Nepali rupees, which was allocated through the Post Disaster Reconstruction Framework (PDRF) arranged through the National Reconstruction Authority (NRA).

2.4 Supervision and Monitoring

As was already mentioned, a Project In-charge and Site In-charge were deputed by DoA, and they were fully responsible for carrying out the complete project, including facilitating and coordinating with the contractor, local communities and government authorities.

There was also a monitoring mechanism for all monuments on which rehabilitation works were being carried out. A monitoring mechanism was similarly utilized for Anantapur Temple regarding technical as well as other practical aspects during the rehabilitation and after its completion; however, the activities were supervised and advised by a team consisting of archaeologists and engineers, as well as other relevant experts who were consulted as and when necessary. Therefore, the supervision and monitoring mechanism was strong and adequate, and was supported by local organizations and local residents as well.

2.5 Local Community Involvement

It is a universal truth that any kind of cultural heritage is impossible without the support, consultation and coordination of local residents or people. It has been mentioned that part of the supervision and monitoring during rehabilitation of the temple was done by the local residents. However, it was very informal and invisible; their support and coordination was much stronger.

The rehabilitation of Anantapur Temple was a government-managed project; however, one of the strong stakeholders was the local residents, as they have been attached with the entire temples since time immemorial and have also protected these temples since several years back, before the national legal system brought them under its jurisdiction. Therefore, they were also involved in this process and also had the capacity to take decisions regarding the overall process of rehabilitation of the temple and as local residents. Almost all residents of the Swayambhu area are priests of different temples in the area and their family members, and all local residents of Swayambhu hilltop itself are family members of the priests. That's why they are strong stakeholders in any cultural heritage in the area and are interested in taking decisions on it, especially regarding the implementation of conservation and/or management of cultural heritage.

As the first responders in the post-earthquake phase, the local people of the Swayambhu area, especially the priests' families, safely salvaged, evacuated and stored the elements of the damaged monuments with the help of the Federation of Swayambhu Management and Conservation, one of the leading organizations in Swyambhu regarding conservation and management of Swayambhu. Therefore, local residents/people got involved in the post-earthquake conservation, renovation and rehabilitation process from the beginning.

Each and every tangible monument in Nepal is strongly tied to several intangible traditions or rituals, which is more visible in the Swayambhu area. Anantapur is one them; however, it does not have a specific festival but is linked to other monuments around Swayambhu. But there is a strong tradition of *chhema puja* before touching the structure for maintenance or renovation, as it is a Tantric temple. The locals have their own system to perform *chhema puja*, in which the priests from some specific area of Kathmandu have to be involved from the beginning, i.e., to have *saait* (the tradition of fixing a date for performing *puja* as per their tradition as a lucky or the best day for the gods and goddesses and also for the people and activities within that timeframe) and perform *puja*, etc. The priests of Swayambhu were also involved as a joint performance of *puja*. This kind of *puja* is actually for worshipping the respective god or goddess of the temple (or sometimes common deities) to inform them that their entire place is going to be renovated, and there might be some mistakes or incorrect activities performed unknowingly, or that something may be lost or done differently. The god/goddess is also asked to excuse them for those activities which no one performs intentionally and/or to request help in their smooth implementation.

There are two *chhema puja*: one in the beginning to start the work and one at the end after final completion of the renovation or conservation work. The first one is to request the deity to excuse them if something goes wrong, and the second one is for thanking the deity for its safe and successful implementation. Both of the *chhema puja* were performed by the respective priest communities or families for Anantapur Temple.

One of the important stakeholders which played a key role not only during rehabilitation of Anantapur Temple but also for all the monuments in and around Swyambhu is the Federation of Swayambhu Management and Conservation (FSMC). This is a community-based organization (CBO) consisting of 24 other local CBOs of the Swayambhu area, and the Integrated Management Framework for Kathmandu Valley World Heritage Property has designated it as a Site Manager for Swayambhu Protected Monument Zone. Post-earthquake rehabilitation of many monuments in the area have been carried out by the FSMC with technical support and approval from the DoA. The FSMC was fully involved in the rehabilitation of Anantapur Temple, especially in coordinating the support of the locals. Without this responsibility, it would not have been easy to carry out and complete the rehabilitation of the temple. The most significant role was to coordinate with the main priest, who decides and exposes the *saait* for *chhema puja*. It was very tough to have conversations with priests to do this. Similarly, almost all of the large budget for both *chhema puja* was allocated by the FSMC, as the government is not permitted to directly pay for or perform such activities by law.

In the same way, another performance for the completion is the *praan pratishtha* (give life to the deity as well as to the temple), which is also usually done by the priest during the last *chhema puja*, upon completion of the renovation. This performance was also carried out during the last *chhema puja* by the priests and their group as per tradition, inviting all the stakeholders, which was very nicely arranged. This activity was also coordinated by the FSMC. Therefore, the roles and responsibilities of the FSMC were extremely significant during the rehabilitation of Anantapur Temple.

Other great work done by the FSMC was the salvage, evacuation and storage of almost all of the artefacts, elements or components of damaged monuments within the Swayambhu area with the help of local residents/people and the DoA during the post-earthquake emergency period, which helped so much during the post-earthquake rehabilitation process for all monuments in the area including Anantapur Temple.

In this context, the roles and responsibilities of local communities or people was vital and very significant, as without their involvement, even agency-managed conservation, renovation or rehabilitation of cultural heritage projects cannot be completed easily. These kinds of rehabilitation projects have been carried out through a community-centric or community-focused system however, the support could be invisible sometimes. However, it is a universal truth that without community involvement, no project would be successfully and easily carried out and completed.

3. Conclusion

Swayambhu is a component of Kathmandu Valley World Heritage property. One of the significant monuments on Swayambhu hilltop, Anantapur Temple was badly damaged by the 2015 Nepal Earthquake. There are several tangible as well as intangible cultural heritages in the area, which have been protected by the local communities since time immemorial and also managed by the government legal system when this was introduced. Anantapur Temple almost structurally collapsed during the 2015 earthquake, and was temporarily protected by the local community in coordination with the DoA and other stakeholders in the post-earthquake emergency period. As per the recommendations of the study, the government allocated an adequate budget and the DoA implemented the rehabilitation project of Anantapur, which was completed as per the Nepali Public Procurement Act, related rules, and prevailing legal tools; however, local community participation was fully accepted during this rehabilitation process.

The Anantapur Temple rehabilitation process shows that community participation is most important in carrying out the conservation, renovation or rehabilitation of any kind of cultural heritage. The heritage is actually of the local community or people. Therefore, the community must first know about it and take the initiative to preserve it, and then they usually get involved in the whole process in several ways. Any successful project for the rehabilitation of cultural heritage must acknowledge the local people, their ideas on the heritage—either tangible or intangible—the history of their involvement or connection with the heritage, as well as the existing situation and available legal tools, and link these with their day-to-day livelihoods as they are the first beneficiaries. This could be defined as people-centric or local community-centric cultural heritage conservation.

Some Photographs of Anantapur Temple Activities

Anantapur Temple before the 2015 Nepal Earthquake

Anantapur Temple damaged by the 2015

Anantapur Temple damaged by the 2015

Anantapur Temple during the rehabilitation process

Anantapur Temple during the rehabilitation process

Anantapur Temple after rehabilitation

Solomon Islands

Four New Archaeological Sites and First Radiocarbon Dating in Simbo Island, Western Province, Solomon Islands

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Introduction

Simbo Island is located in the New Georgia Group of Western Province, Solomon Islands. It lies 35 km across the open ocean from Gizo, the administrative capital of Western Province, as shown in Figure 1. Simbo is known locally as Mandegugusu, comprises two islands: the main island and the smaller islet of Nusa Simbo. It is approximately 6.4 km (4 miles) long, less than 1.6 km (1 mile) across at its widest point and has a total area of roughly 12 km^2 (4.6 miles^2). The southern half of the island contains two volcanic cones named Matindingi and Patukio. The northern half of the island is dominated by rolling hills and ridges formed by volcanic activity. Simbo's coastline includes coral sand bays, active reefs and intertidal flats that support highly diverse and productive marine ecosystems. Simbo has five main villages, a number of smaller hamlets and a population of around 1800 people, whose economy relies on fishing and horticulture (Haas et al, 2018). In 1922, Arthur Maurice Hocart carried out a detailed ethnographic survey on Simbo Island. In 1978 and 1980, Daniel Miller also carried out an Archaeological National Site Survey in collaboration with the Solomon Islands National Museum and identified 59 archaeological sites, focusing on recent occupations, shrine sites, headhunting monuments and recently occupied villages by using historical and informant interviews (Haas et al, 2018).

Archaeological reconnaissance fieldwork research was conducted in June 2015 by surveying cave, rock shelters, marine terraces and pottery-bearing localities, as well as interviewing and working with local informants, and using Miller's documents (1978, 1980) as a guide to identifying the sites. This research was a collaboration between San Diego State University, the Archaeology and Anthropology department, Solomon Islands National Museum and the landowners of Simbo Island. The archaeological fieldwork research team carried out the work and identified four new archaeological sites, as shown in Figure 2, including the first radiocarbon dating of the sites on Simbo Island.

Four New Archaeological Sites and First Radiocarbon Dates

The results of the archaeological fieldwork identified one historical site and three new prehistoric sites. The historical site (SI2015-01) consists of a European trading station. The two prehistoric sites (SI2015-02 and SI2015-03) are a cave and rock shelter, respectively, located in a smaller islet of Nusa Simbo. The fourth prehistoric site (SI2015-04) consists of an ancestral shrine located adjacent to the top of the active Ove Volcano.

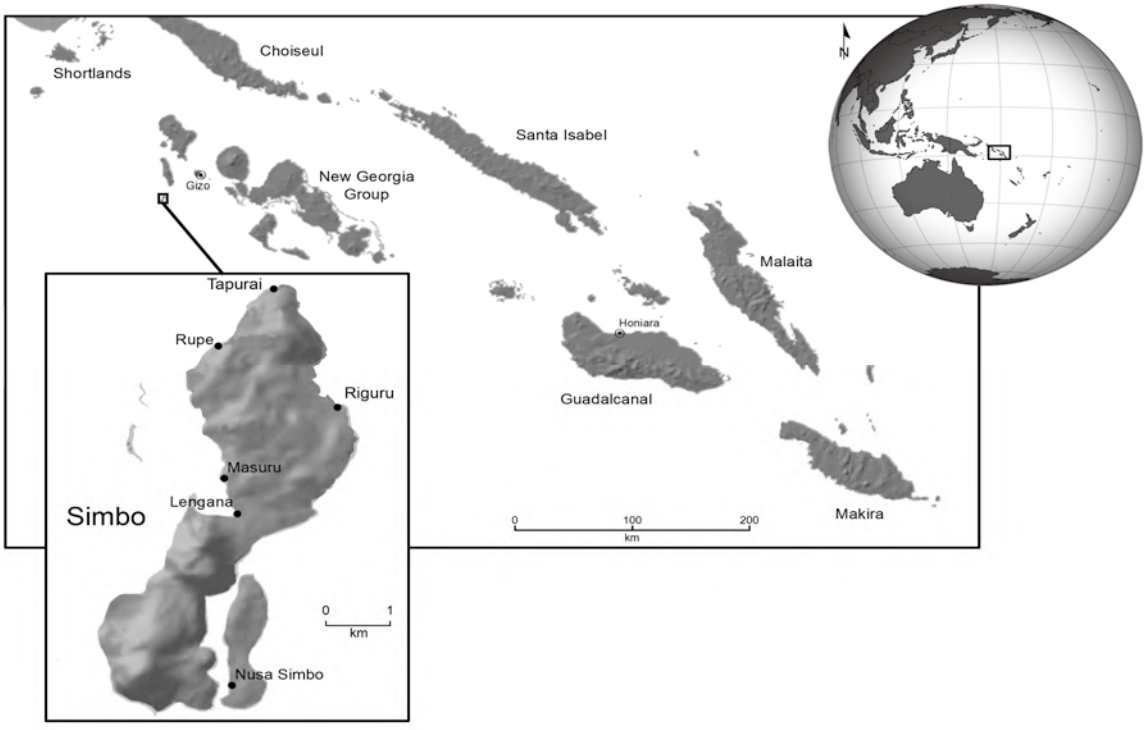

Figure 1: The location of Simbo Island, Western Province. (Source: Haas et al., 2018)

1. SI2015-01: European Trading Station (Historical Site)

Figures 3 to 7 show the historical site (SI2015-01) comprising a European trading station. The site contains the remains of the trading station and basecamp of European traders who occupied the island intermittently beginning in 1844 with the establishment of the first European station by Andrew Cheyne until the early 1900s (Jackson 1978). The site includes the foundation of a storage building, a retaining wall and an anchor chain. A set of stairs with concrete risers leads to what was the residential area, which includes a water catchment system, three terraces, and scattered artefacts such as glass bottles and clay pipe fragments. (Haas et.al, 2018).

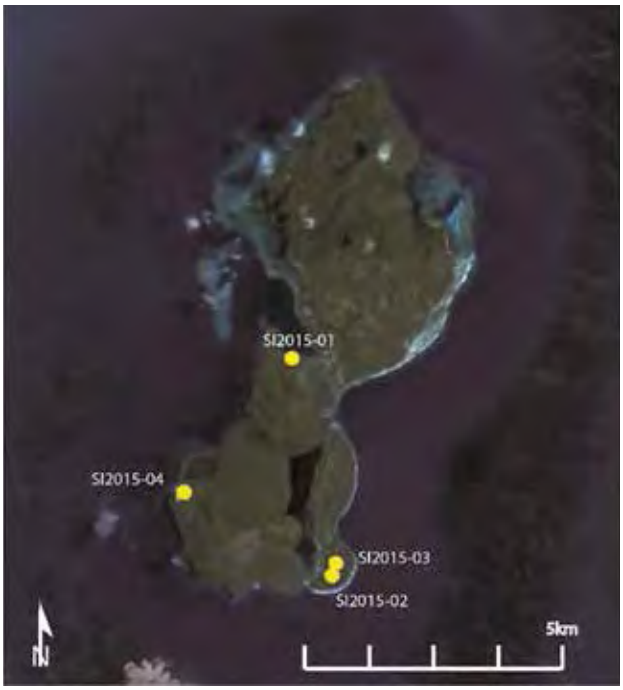

Figure 2: Satellite image of Simbo Island and the approximate locations of the four new archaeological sites identified. (Source: Haas et al., 2018)

Figure 3: European trading station storage area at SI2015-01

Figure 4: Anchor chain at SI2015-01

Figure 5: Stairs at SI2015-01

Figure 6: Artefacts at SI2015-01

Figure 7: Water catchment at SI2015-01

2. SI2015-02: One Cave (Prehistoric Site)
Figures 8 and 9 show the prehistorical site (SI2015-02) cave that produced shell midden deposits. It consists of a low-density shell midden in a rock shelter. The midden contained shell money fragments and pottery sherds. According to the results of ^{14}C dating of shell collected from the site surface, the occupation date is between 1560 and 1820 cal BP. A small hand probe was excavated to a depth of about one meter, but this produced no discernible subsurface deposits (Haas et.al., 2018).

3. SI2015-03: One Rock Shelter (Prehistoric Site)
Figures 10 and 11 illustrate the rock shelter (SI2015-03) prehistoric site. It is a large cave site with a main chamber measuring over 2.0 m high, 4.6 m long, and 2.3 m wide, and two smaller anterior rooms. The main chamber contained five pottery fragments, a shell midden, one shell money fragment, and a European ceramic fragment. The northern anterior room did not appear to contain any archaeological materials and the southern anterior room contained a small shell midden and a canarium nut processing station. The radiocarbon dating chronology is between 1000 and 1240 cal BP. (Haas et.al, 2018). Figure 11 shows the stone and is evidence of how Ngali nuts were processed during prehistory, a method that is still in use nowadays by the people of Simbo.

4. SI2015-04: Ancestral Shrine (Prehistoric Site)
Figures 12, 13 and 14 show the ancestral shrine (SI2015-04) prehistoric site, which is located adjacent to a shrine atop the active Ove Volcano. The shrine is located above the crater, with a commanding view of Simbo's western coastline. The shrine contains shellfish fragments, a possible power stone, 43 pottery sherds and human cranial fragments. Shellfish within the shrine were Tridacna. The radiocarbon dating chronology is between 560 and 700 cal BP (Haas et.al, 2018).

Figure 8: Cave at SI2015-02

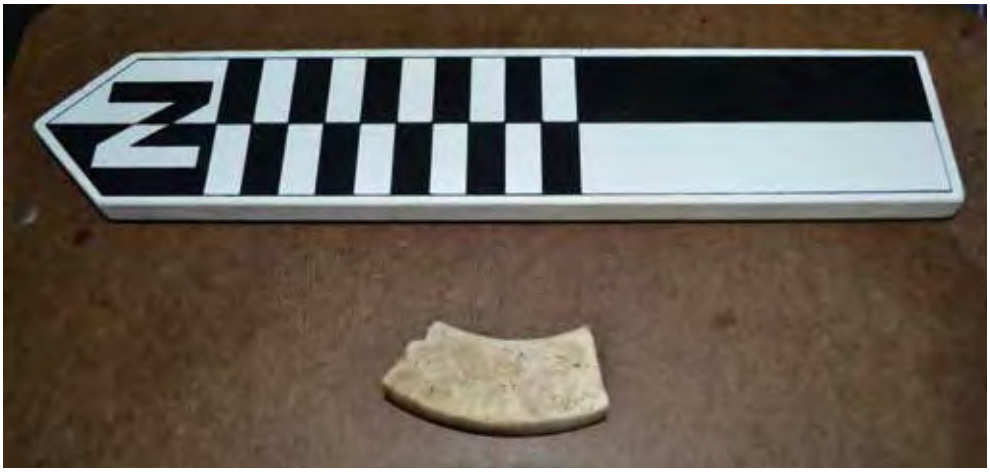

Figure 9: Shell money at SI2015-02

Figure 10: Rock shelter at SI2015-03,

Figure 11: Ngali nut processing at SI2015-03

Conclusion

The archaeological reconnaissance of the four new sites and the first radiocarbon dating give important insights into and understanding of the history of Simbo Island, which must be preserved and protected by the people of the island. The potteries and the shell fragments discovered at the three prehistoric sites are evidence that people settled on this island as early as the post-Lapita period. The oldest date so far is between 1560 and 1820 cal BP, which is the cave (SI2015-02) prehistoric site, located on the islet of Nusa Simbo. The second oldest date is between 1000 and 1240 cal BP, which is the rock shelter (SI2015-03), also located on Nusa Simbo. The fourth site is the shrine, dated between 560 and 700 cal BP, located atop Ove Volcano. The results from prehistoric and historic sites indicate that early settlers came to the island first before the first European traders settled there in AD 1844 and stayed until the 1900s. There is a lot more to learn to better understand the deep human and ecological histories of Simbo Island, especially in terms of doing archaeological excavations.

Acknowledgements

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https://www.pacificarchaeology.org/index.php/journal/article/view/222

Source of photographs: Hannah.Haas

Figure 12: Tambuna Riae at SI2015-04

Figure 13: Tambuna Riae at SI2015-04. Some potteries have been found here.

Figure 14: A pottery sherd, Tambuna Riae at SI2015-04

Tonga

Revival of The Tonga National Museum: An Effort in Cultural and Heritage Preservation in the Kingdom of Tonga

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Introduction

The Tonga National Museum (TNM) revival project is but one of three major culture and heritage preservation and protection projects under the management of the Culture and Heritage Division of the Ministry of Tourism in the Kingdom of Tonga. Already underway are the Intangible Cultural Heritage (ICH) community-based inventorying project and the Cultural Heritage protection project related to the Nomination of the Ancient Royal Tombs- *'Otu Langi of Lapaha*- to the UNESCO World Heritage List. The last of the projects is the revival of the TNM.

Tonga National Museum, early years

The Tonga National Museum was opened in 1988 at the Exhibition Hall of the Tonga National Cultural Centre (TNCC), in Tofoa (a suburb of Nuku'alofa, the capital) on the main island of Tongatapu (please see attached map). This was a cultural centre built by a grant from the Government and the People of Japan and was opened in April 1988 by His Majesty King Taufa'ahau Tupou IV.

The museum consisted of one main gallery that housed/ displayed mainly images and portraits (photographs and drawings) of the Royal Family and their ancestors with a few other artefacts with a royal connection as well.

Photo 1: A bird's eye view of the TNCC after its completion in 1988
(*Source:* Culture & Heritage Division, Ministry of Tourism)

Photo 2: Exhibition Hall at the TNCC, 1988
(*Source:* Culture & Heritage Division, Ministry of Tourism)

Most of the items on display at the time belonged to the Royal household (Tupou Dynasty). During this time, the National Cultural Centre was managed by the Ministry of Labour and Commerce, under whose purview tourism fell.

In 2000, a major exhibition was opened in the adjoining storage building, which saw displays of many great artefacts of our material culture from various collections. The patron of this exhibition was HRH Princess Pilolevu Tuita, and the head curator was Adrienne Kaeppler, with assistance from a number of renowned traditional knowledge holders and practitioners (see Kaeppler, 1999).

The National Cultural Center was privatised in 2006. The organisation that took over the premises closed down the museum and converted the buildings into classrooms.

TNCC and TNM at present

The Cultural Centre was later returned to the government in 2015, and the Culture and Heritage Division which was at the time under the Ministry of Internal Affairs, took over management of the premises. One of its plans was to reopen and revive the National Museum. This plan was delayed when the country was ravaged by Category 4 Tropical Cyclone Gita in February 2018, with the Legislative Assembly taking over the National Centre Complex due to the collapse of the parliament building during the cyclone.

Source: https://www.eua-island-tonga.com/Tongatapu.html
(accessed Friday 30/08/19)

Although this major natural disaster was a great setback to the revival project, work and plans are still underway towards the reopening of the museum in the foreseeable future. At present, a space has been confirmed (although this is not within the TNCC complex) for the museum. Partnership with other cultural heritage practitioners has been strengthened together with ongoing documenting of a small number of items/artefacts already in the possession of the division.

Way Forward

As the only one officer, allocated to this museum revival project, it is imperative that support from all cultural stakeholders is maintained. Continuous participation in training in the field is a must, and assistance is sought from partner organisations not only in terms of funding, but also human resource assistance (expertise) and materials/tools related to museum work.

References: The following are links to news articles relevant to Tonga's journey in cultural preservation.

http://www.looptonga.com/tonga-news/fiji-hosts-tonga-national-museum-specialists-68336 South-south Exchange with Fiji Museum, 2017

http://ats.abris-a.com/nz2003/pic/nz038876.jpg TNM at Exhibition Hall, TNCC

http://www.looptonga.com/content/government-takes-over-management-tonga-national-cultural-centre

http://www.mic.gov.to/news-today/press-releases/4459-preservimg-tongas-museums-archives-and-libraries-for-the-future

https://www.tripadvisor.co.uk/LocationPhotoDirectLink-g317040-d1604983-i100497291-Tonga_National_Cultural_Centre-Tongatapu_Island.html

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New Finding – Stone Disk with Hippocamp Image from Dalvarzintepa

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Among the archaeological finds from the Dalvarzintepa site in the last archaeological season, one item exceled with its shape and content. This is the so-called toilet disk with the image of a fantastic wight – a hippocampus. Brief information about the Dalverzintepa archaeological site and about its latest finds was published in the 19th edition of the International Correspondents Reports, entitled "New Discoveries at Dalvarzintepa in 2015-2016" (Ulmasov, 2017). Therefore, we do not focus on the description of the site and its recent excavations. The main attention in the report is given to this subject, namely its comparative analysis with neighboring historical and cultural areas, as well as iconography of the depicted image (Fig. 1).

In the scientific literature, this stone object is called a toilet disk or a saucer for make-up. The round disk is made of black steatite and resembles the shape of a plate with a diameter of 12 cm and a thickness of 1-1.5 cm (Fig. 2a). It is polished on both sides. One fourth of the disk is roughly beaten (most likely, deliberately). There are also broken parts at the edges.

The flat side of the front is decorated in a circle with paired miniature "pyramids." The row is shared by a concentric shaft. On a flat, but not deep reservoir of the disk, a bas-relief image of an unusual creature is depicted. It consists of a winged horse with a head, protome (upper torso) and front legs, and a rounded snake-like body that ends with a huge trapezoidal fish tail. The horse's head is peculiar: the nose is small; the ears are large and long. Eyes are shown schematically and perpendicular to the head. The horse's mane is thick and decorated with diagonal serifs on three separated flat rollers. The body of the creature is almost completely filled with diagonal serifs, which have been erased in places. The front right leg and the upper half of the wing are broken. This legendary polymorphic creature is called a hippocampus

Fig. 1. Map of Bactria: location of sites where stone disks were found

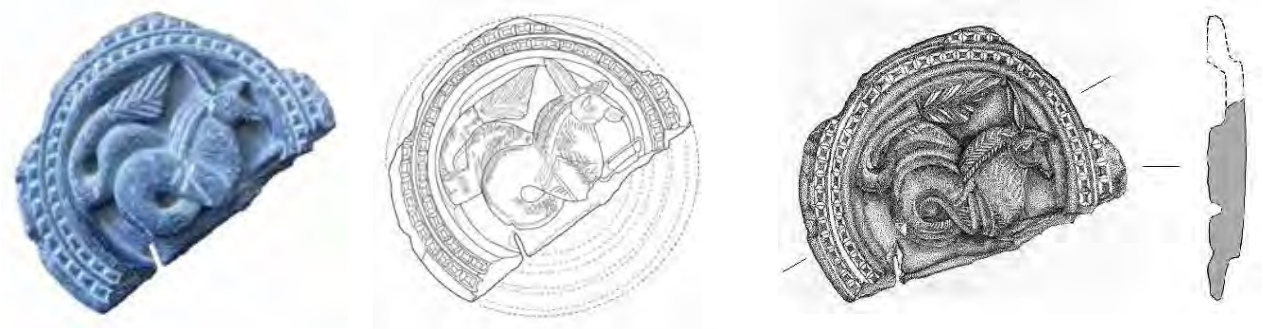

Fig. 2a. New toilet tray from the 2015-2016 Dalvarzintepa excavations

in the scientific literature.

In Greek mythology, the hippocampus is a sea horse with a fish tail. The hippocampus is also considered the king of fish and is equated to whales. They were ridden by Nereids – sea goddesses in the form of mermaids. The image of the hippocampus is characteristic of Central Asia, especially for the Kushan period. It is represented here as a snake horse or dragon horse. Also, dragon or hybrid creatures similar to it were some of the favorite motifs of Kushan masters in the visual arts (Belenitsky, Meshkeris, 1986).

Earlier at Dalvarzintepa, archaeological excavations also revealed finds with an image similar to the hippocampus. One of them was found in the southern part of the fortress, not far from the defensive wall, the so-called *"mahalla"* (block or section, where many houses were located) of the ceramists. Unlike the new find, this toilet disk is carved from marble-like limestone (Fig. 2b). However, the technique for creating both items is identical, as described above, utilizing hand thread with a hand drill with polishing. Here, the disk is divided into two parts by a horizontal strip. It is assumed that the lower half is designed for a powder box. The upper half is filled with a composition consisting of a hippocampus and a rider sitting on it. They are both depicted schematically and roughly. This is due to lack of space or the fact that the master didn't take into account the size and proportions of images on a limited plane. It is observed that the head and front half of the body of the animal is larger than its hind half. The front legs are also longer than the hind legs. The tail is distant from the animal and appears to bend upward along the edge of the tank. The image of a horseman in the form of a man is very sketchy: the nose is large, the neck is almost absent. A helmet is visible on the head. The man is depicted as if he were dividing the animal into two parts. Researchers of the find, comparing it with samples from the neighboring historical and cultural region of Gandhara, came to the conclusion that the item was made in Bactria and dates back to the beginning of our era (Pugachenkova, Rtveladze et al., 1978).

Another find, also found at Dalvarzintepa (house of the nobility - Dt-5), gives an image of the hippocampus (Fig. 2c). This is a seal made of rectangular stone. Its surface is decorated with a rectangular hinge and on the center depicted a schematic hippocampus. This find dates from the 1st to 2nd centuries AD (Antiquities of Southern Uzbekistan, 1991).

Analogical finds – toilet trays from other Bactrian sites (modern Tajikistan)

The widespread use of toilet disks in Bactria is confirmed by finds from Tajikistan (a reminder that part of Tajikistan was included in one historical and cultural region). One of them is known from the Ushtur-Mulla monument in the Kobadian Valley. The find was made of a greenish-black serpentine which was badly damaged. Its lower surface is flat, and a bas-relief depicting animals is carved on the upper half of the circular disk. The composition consists of a herbivore, apparently a Bukhara deer *(Cervus elaphus*), and a predator attacking it (Fig. 3a). Here, the scene of "torment" was executed masterfully: a round-modeled smooth deer, only slightly animated with a turn of the head, and a predator with the sharp bend of a powerful neck, bared teeth and even clumsily-looking but tensely elongated paws, creating a scene of struggle between two principles – good and evil (Litvinsky, 1954).
In the 1980s, the same cosmetic item was discovered in the "Unknown" settlement in the same oasis of Kobadian during archaeological excavations (Fig. 3b). The round disk is made of gray steatite stone (diameter: 13 cm). In the inner circle there is a T-shaped crossbar that divides this circle into two parts: the lower one is smooth and the upper one is filled with the image of a monster. On the upper half, an unusual creature with the head of a crocodile, the neck of a horse, and the body and tail of a fish with scales is depicted. The back of the disk is covered with an engraved eight petal rosette (Litvinsky, Sedov, 1983).

Fig. 2b. Toilet tray from Dalvarzintepa

Fig. 2c. Stone seal from Dalvarzintepa

Fig. 3 a,b,c. Analogical finds from Tajikistan

A sample of the Dalvarzintepa disk is known from the excavations of Yavan in southern Tajikistan (Fig. 3c). The cultural layer in which the disk was found (diameter: 9.3 cm) dates from the 3rd to 4th centuries AD. The small stone disk consists of a rim decorated with carved ornaments in the form of a triangle and a circular tank. On the front surface is a relief image of a hippocampus galloping to the right, on the back of which is a rider. The front of the monster is a bridled horse with legs elongated in a jump, the back of it looks like a tail wrapped in a ring and raised up. The bearded big-headed rider holds the reins in his hands, with his leg positioned toe down – there are no stirrups. According to researchers, the image of a dragon horse is associated with mythological worship by the ancient peoples of Central Asia, usually found in Bactria (Yurkevich, 1965).

Analogical finds – toilet trays from Gandhara

In Greek mythology, this kind of mythical image is well known and widespread in the historical and cultural region of Gandhara (Marchall, 1951). For example, one of the Gandhara specimens from Sirkap (Taxila) represents a toilet disk made of gray slate (4 a, b, c). A bas-relief of a hippocampus and a female figure sitting on it is freely carved on the saucer (Alexander Der Grosse et al, 2010). The Sirkap powder box differs from the Dalvarzintepa sample by the presence of the female figure. Researchers associate visual motifs from a number of disks with samples of Greek art, and the content of mythical subjects as everyday objects (Pugachenkova, 1982). In Gandhara, where they penetrated deeply, the Hellenistic traditions don't repeat each other according to the same plots. On one of them, Triton sits on a throne decorated with lotus flowers, and on the other, a ketos sits astride a *makara* (a sea-creature in Hindu culture) or on a "jointed sea worm" (Gandhara and Silk Road Arts, 2000).

One of the most famous researchers of this subject, H. Francfort, who developed a systematic classification of Gandhara's toilet disks, divided them into three groups. According to him, all the samples that reflect classical themes in their pure form, whether a mythological theme, a festive scene or a separate mythological figure, belong to the first "Hellenic" group. The most common is the Nereid dish featuring horses or sea creatures. Those of the second group were "Parthianized," of which only those with Nereids were distorted; as a result of the penetration of Indo-Parthians into the territory of Gandhara, they changed both iconographical and stylistically. He considers the samples of the "Indo-Parthian" group, where male and female figures are depicted, to be simple and includes them in the last group. According to him, the appearance of powder boxes in Gandhara is due to the influence of Hellenistic traditions. According to it, the Gandhara samples belong to the 1st to 2nd centuries BC, not Kushan times. It is noteworthy that during this period he also found these in other remote areas of Gandhara, especially in Jhukar (Sind province) and in Tajikistan (Francfort, 1979).

However, another researcher of Kushan art, Rahmon Dar, says that they are also found in the early Kushan period. According to him, the technique of these toilet disks in Gandhara was brought by Greeks from Bactria. However,

Fig. 4 a,b,c. Toilet trays from Taxila, Gandhara

he suggests that these disks are not only powder boxes with jewelry, but also associated with Dionysus or the cult of the Greek religion (Dar, 1979).

Among the opinions of researchers who have studied toilet disks, the opinion of Professor K. Tanabe stands out. He links almost all the objects of the toilet disks, which reflect plots with Nereids, Dionysus or feast scenes related to the Hellenistic heritage of Buddhism. According to him, the powder boxes belonged to Buddhists and were used as a new symbol of their beliefs, which they considered their main purpose, using the treasures of the Greco-Roman iconographic dictionary (Tanabe, 2002).

Luo Mizuo, in examining the period and images of toilet disks, says that until now, it has not yet been scientifically proven that they were related to cosmetics. According to him, these objects have certain mythological and symbolic meaning and are associated with Indian, or more Iranian and Scythian traditions. In general, the researcher attributes the bulk of the disks to the first and second half of the 2nd century AD, that is, the period between the reign of Gondofor and Kanishka (Muzio, 2011).

Claude Rapin, based on an analysis of powder boxes, comes to the basic assumption that from the Hellenistic era to the Kushan period, Central Asia was a crossroad between the West and Gandhara as the main trade route and the road of "influences." Also, according to him, powder boxes with the image of a hippocampus belong to the group dominated by Scythian or Indian elements (Rapin). (Fig. 5 a,b,c)

H. Falk says, "That means they are containers for liquids, usually wine or water, to be spilled on the ground in honor of ancestors or divinities whose benevolent capacities are invoked and whose maleficent powers are hoped to be curbed. The occasions for using them are similar to those in the West: libations begin sacrifices, marriages, burials, and symposia with their strong accent on alcoholic drinks. They are also important in funeral rites, lending moments of resurrection and further life to the deceased. The places in Gandhara where trays that might have been true libation trays were found, and obviously also were manufactured, are few and stretch from Taxila to Swat, with Akra in Bannu being another, but relatively minor, center. Outside this core area we find mostly exported trays, but some rare pieces in the East and West are local productions that imitate the Gandharan prototype. Their rarity shows that people or an idea from Gandhara travelled, without finding long-term acceptance" (Falk, 2010).

Conclusion

Returning to the sample from Dalvarzintepa, we can say that the toilet disk was made here in Northern Bactria. This is confirmed not only by the previous find, but also by other finds made of black steatite stone, for example, a lamp. In addition, the new toilet disk differs from Gandhara designs in terms of stylistic features and design. If in the scientific literature these stone disks are divided into such groups as "Hellenistic", "Parthian" and "Indo-Parthian", then the early and new disk from Dalvarzintepa, possibly samples from Tajikistan, can be included in the new "Bactrian" group. It can be assumed that the new model, based on the technique of execution, the iconography of the hippocampus and similarities with the Gandhara ones, can also be attributed to the early Kushan period.

An increase in the number of such items in Bactria makes it possible to say that such items as powder box were widely used in this territory. It should be noted that these unique finds from Dalverzintepa testify to the development of ancient religious tolerance, urban culture, visual arts, crafts, trade and international relations. This indicates that Dalvarzintepa was one of the centers of the largest political, social and cultural city of Bactria. Such unique finds found at archaeological sites, in turn, serve as important factual material for illuminating the country's ancient history, culture and art.

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Fig. 5 a,b,c. Toilet trays from Gandhara.

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Restoration Work of The Ba Mu Temple Gate

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I. Background of the relic:

In the early 20th century, a complex comprising two temples named Cam Ha and Hai Binh was evaluated as one of the typical and most important architectural works of Hoi An town, built by the Minh Huong community in Hoi An. According to historical documents, the complex was first built in 1626 at the boundary of Cam Pho commune and Thanh Ha commune. After that, it was relocated to its current location and rebuilt on a grand scale, and the facade which remains today dates from that reconstruction. By that time, it actually comprised two separate sanctuaries, each with its own entrance. The date of the relocation has not yet been determined. In 1930, the École Française d'Extrême-Orient (*French School of the Far East*) recognized it as a unique architectural work, and ranked it as one of the most beautiful architectural buildings of Quang Nam province, along with two other monuments in Hoi An, which were the Japanese Bridge and Trieu Chau (*Chaozhou*) Assembly Hall. Local people used to call this complex Ba Mu temple. The most recent restoration of Ba Mu temple was in 1922.

Due to the transformation of urbanization during the French colonial period, and the Resistance War against America, the relic was ruined and subsequently abandoned by the Minh Hương community, and only the gate remained. The Buddhist Association later acquired the land and built a cultural center and school over its ruins. Over time, due to various factors, degradation of the relic was getting worse. Nowadays, its location is in the core zone of Hoi An Ancient Town, a World Cultural Heritage Site.

II. Condition of the relic before restoration:

In the early 1970s, due to the war, the inhabitants of the areas surrounding Hoi An came here to live and some people took the land in front of the gate to build houses to serve as residences. The gate gradually became a wall of people's houses, and many auxiliary works such as kitchens, toilets, and drainage ditches, as well as activities such as poultry breeding, were also built and established there, and thus impacted the relic.

In addition, many types of plants such as Ficus benjamina (ficus trees), bodhi trees, and moss grew and spread over the roofs of the relic. The roots of these plants became deeply embedded in the walls, which made cracks in the walls and damaged the roofs. This kept the humidity high, and along with the strong vibrations due to the wind and rain, caused the relic to degrade more and more. According to the assessment, this was the main cause of the serious damage to the relic.

[1] Cam Ha temple was dedicated to the Chinese God of medicine - Bảo Sanh Đại Đế 保生大帝 (Bǎoshēng Dàdì) and the 36 Generals - Tam Thập Lục Tướng 三十六将 or "Heavenly Spirits". Hai Binh temple was dedicated to Thiên Hậu Thánh Mẫu and the 12 Bà Mụ or midwife deities, whose function was to assist newborns and teach them basic skills.

The yin-yang roofs at the two main entrances were completely damaged. The majority of the wooden frames had rotted, and some components had collapsed. The yin-yang tiles were also damp, mossy and had lost their adhesive, causing roof sliding. The decorative patterns had also peeled, with seriously fading. Some positions were purposefully used to serve daily activities, and many detailed components had fallen and had been scattered around the relic or lost.

III. Restoration work of the Ba Mu temple gate:

To save the relic, since 2000, the Hoi An Center for Cultural Heritage Management and Preservation has cooperated with a design consulting company to prepare drawings, proposing a master plan for restoration and renovation. By 2007, the relic restoration project had been established. In 2009, the project was approved by Quang Nam People's Committee with the investment content of three items divided into three phases, including: site clearance, relic restoration and landscape renovation.

- First, the government organized clearance compensation, and relocated households living in front of the relic to other places. After that, we dismantled the elements which were built by the people to serve their daily lives. Although those masonry works had no value, the dismantling was done with great care to minimize the impact on the original elements of the relic.

- In January 2015, a scaffolding system combining working floors across the entire relic was built to assist the functions of survey, study and construction during the restoration process. Because the surrounding grounds were rugged and the gate has a zigzag plan, it was recommended to use bamboo scaffolding to facilitate construction and easy access to every corner of the relic. On every 1.6 m of staging height, wooden panels were set to form a working floor which served the functions of construction and survey.

- Carried out marking of decorative components and architectural details of the whole project, whether they would be dismantled or not. Taking pictures, measuring and stamping the architectural details, structures and decorative patterns.

- Carried out trimming of foliage and branches, and peeling off the trunks and roots which were deeply embedded in the relic structure. This work was done entirely by hand with simple tools such as knives, chisels, axes, and hand saws to minimize the impact on the damaged parts of the relic during restoration.

- Large blocks of walls and masonry were broken, so the embedded trees were carefully removed, kept in the

same shape (as far as possible), cleaned, reinforced and reattached, and patched back to the original position. This work was carried out as soon as the component was dismantled and sanitized to minimize any deviation from the original. The reinforcing and attaching process mainly used traditional lime mortar inserted into bricks and roof tiles. Each recovered masonry block was carefully considered after studying the existing symmetric components. Elements which had no basis for comparison were done very carefully to obtain the most appropriate results.

- Dissection of degenerated and flaked lime mortar walls which were no longer able to be attached to the masonry blocks, and rendering back. The checking of flaked parts was carried out carefully by knocking on the surfaces with wooden hammers. Only if it was found necessary to repair, we took out the flaked parts and rendered it with lime mortar. In addition, we tried to keep the largest portions which ensured linkability between lime mortar and the masonry block.

- Restoring the roofs: wooden frames and old tiles which still have good quality were reused, especially roof tiles with decorative patterns, which were marked and re-installed according to their original position. Replacement roof tiles are not available on the market. They must be ordered especially for restoration of this relic. They were hand-made using traditional techniques by skilled and experienced workers in Thanh Ha pottery village, and charcoal fired. The production of patterned roof tiles is complicated and must be carried out with many steps, including the processing of wooden patterned moulds, detailed pattern casting, making the tile curve bodies and attaching them together.

- The prefabricated or directly covered decoration components were made elaborately and meticulously. Moreover, every original detail was well preserved; the details that had to be removed due to the breakage of the masonry were marked, carefully preserved and re-installed in their original position.

- Decorative patterns which embellished ceramic pieces, especially those on the roof, were stereotyped, dimensioned, and carefully shaped when moldings and coverings were processed.

- Finally, carried out the finishing and painting of the relic. In fact, this work was done immediately at each position after the repair was completed, and then its original color and decoration patterns were determined.

The different types of lime mortar were mixed according to traditional methods with materials such as lime shells, charcoal powder, paper powder, and additives made from cactus and buffalo skin. Determination of the composition and proportion of raw materials was directly carried out by experienced workers. Finishing mortar in particular was mixed with pigments. This was also done for the final colored plastering layer instead of common whitewashing. This plastering layer also creates gloss to help waterproof the wall.

After restoring the relic, we embellished the surrounding landscape by measure such as: building a lake, adding flower tubs, planting trees and grass, and adding a yard, walkways, lighting and public toilets. All work was completed in November 2018. Today, this relic has become an interesting place to visit in Hoi An Ancient Town, and it attracts many tourists.

1. Houses were built in front of the relic.

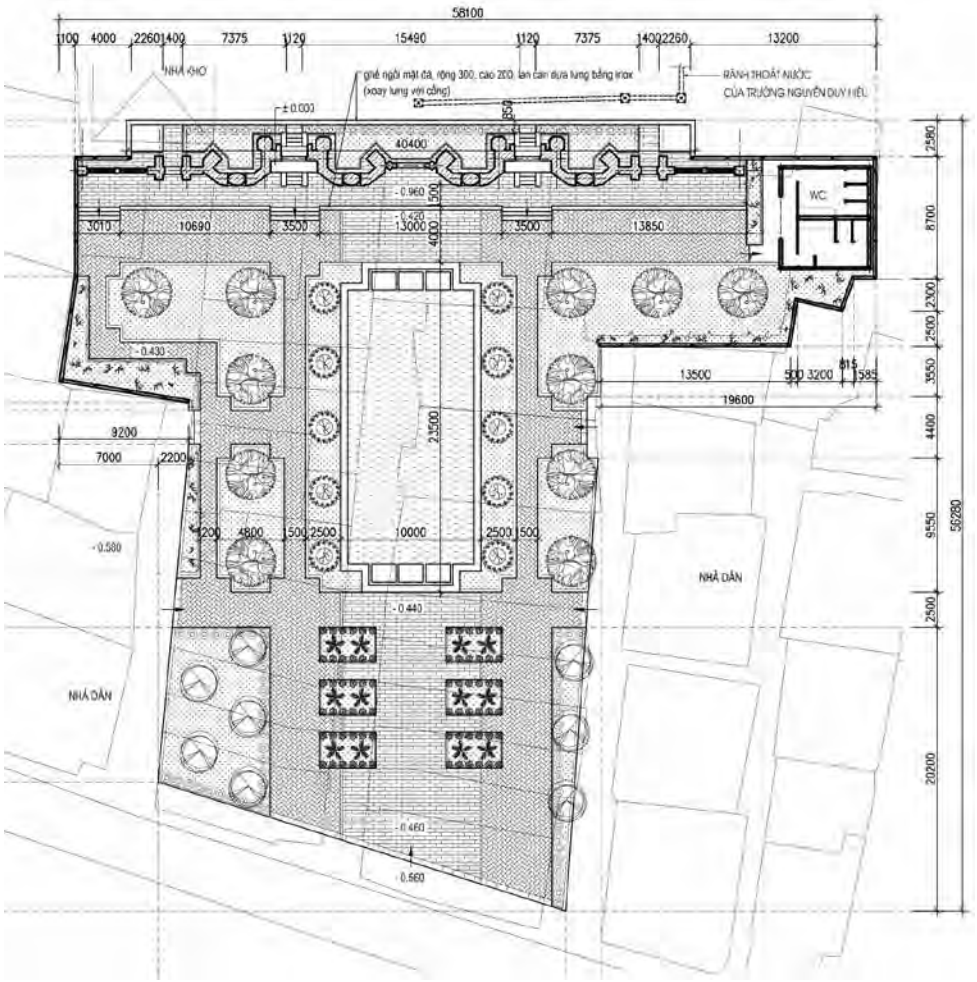
2. The gate gradually became a wall of people's houses.

3. Trees grew and spread over the roofs of the relic.

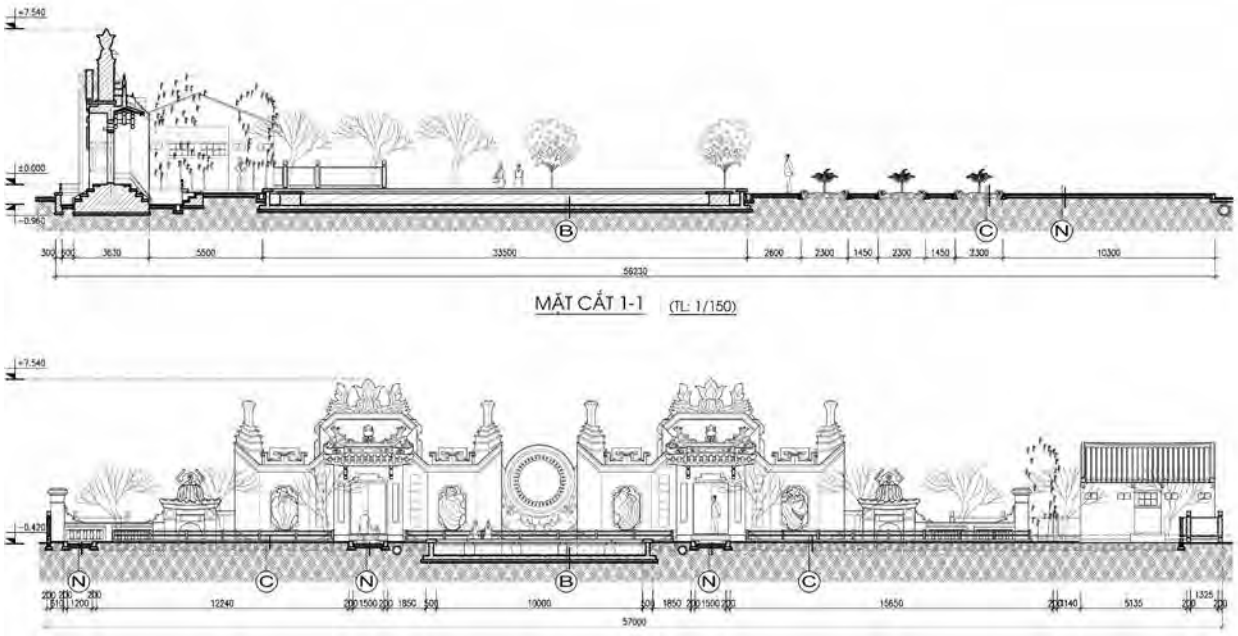
4. Tree roots destroyed the relic.

5. Some components had fallen off the wall.

6. The majority of wooden frames had rotted.



7. Site master plan



8. Front elevation and cross section

9. Dismantled houses which had been built in front of the relic

10. Dismantled elements which had impacted the relic

11. Scaffolding

12. Documented wooden component

13. Trunks and roots being peeled off

14. Cleaned and reinforced broken elements

15. Attached, patched broken elements being placed back in their original position

16. Recovered masonry block with bricks, roof tiles and lime mortar

17. Flaked lime mortar walls were taken out.

18. Wall rendered with lime mortar

19. Restored roof

20. Decorative patterns re-installed in their original positions

21. Details of repainted decoration

22. Embellished decorative pattern with ceramic piece

23. Wooden patterned molds to make roof tiles

24. Making roof tiles

25. Experienced worker mixing traditional lime mortar

26. The Ba Mu temple today

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