

Training Course on Cultural Heritage Protection
in the Asia-Pacific Region 2010

**Research, Analysis and Preservation of
Archaeological Sites and Remains**

7 September - 7 October, 2010, Nara, Japan



Cultural Heritage Protection Cooperation Office,
Asia-Pacific Cultural Centre for UNESCO (ACCU)

Agency for Cultural Affairs, Japan

National Institutes for Cultural Heritage,
National Research Institute for Cultural Properties, Tokyo
Nara National Research Institute for Cultural Properties

International Centre for the Study of the Preservation
and Restoration of Cultural Property (ICCROM)

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Edited and Published by
Cultural Heritage Protection Cooperation Office,
Asia - Pacific Cultural Centre for UNESCO (ACCU)

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Printed by Meishinsha

Cultural Heritage Protection Cooperation Office,
Asia - Pacific Cultural Centre for UNESCO (ACCU) 2011



The opening ceremony at the Kasugano-so Hotel with guests and ACCU staff



Mr Morikawa explained practical procedures of measured drawing of earthenware.



On-site lecture at the Dazaifu site by Mr Akashi



The closing ceremony at the Kasugano-so Hotel

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Preface

The Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO (ACCU) was established in August 1999 with the purpose of serving as a domestic centre for promoting cooperation in cultural heritage protection in the Asia-Pacific region. Subsequent to its inception, our office has been implementing a variety of programmes to help promote cultural heritage protection activities, in cooperation with Agency for Cultural Affairs, Japan (*Bunkacho*); the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM); National Research Institute for Cultural Properties, Tokyo and Nara; the Nara Prefectural Government; the Nara Municipal Government; universities, and museums.

The ACCU Nara's activities include, training programmes for the human resources development, international conferences and symposia, the training of young leaders in cultural heritage protection, updating website for the dissemination of information relating to cultural heritage protection, and the world heritage lectures in high schools. In addition to those programme, ACCU Nara has begun offering "the Local Training Workshop" since 2007, which dispatches a group of lecturers from Japan and implements the practical training on cultural heritage protection on sites. At the same time, we have also set up the system of "International Correspondents" for the purpose of promoting information exchange and networking with the countries in the Asia-Pacific region, and appointed correspondents from participants in the past ACCU Nara training programmes, who periodically send latest news on cultural heritage protection in their country. This system is also useful for us to keep in touch with them and to know their activities in each country.

In particular, the training courses on cultural heritage protection in the Asia-Pacific region have comprised a significant part of our activities for heritage protection, with two themes in alternate years: "Preservation and Restoration of Wooden Structures" and "Research, Analysis, and Preservation of Archaeological Sites and Remains." This was the eleventh training course on "archaeological sites and remains" and sixteen participants from across the Asia-Pacific region gathered in Nara to join the course in high spirits.

In the Nara region where the capital was located 1300 years ago, there survives a large number of ancient structures and archaeological remains which are unique in the world; there are ample human resources working on a daily basis to carry out

conservation; and the philosophy of restoration has been accumulated through many years' experience and is widely accepted by the local community. So, ACCU Nara has chosen "Nara" as the training venue because we can take full advantage of its environment.

I believe the participants were able to learn not only the techniques and knowledge relating to conservation and restoration of archaeological remains but also the important role of local community by visiting the cultural heritage on-site: the way how local people cared for the cultural heritage; their views and willingness to protect heritage and hand it down to posterity; and their daily society-wide efforts. I am sure the participants understood the need and importance of respecting the views and initiative of the local community as well as joining hands with them in the conservation activities.

Finally, I would like to express my profound appreciation to the distinguished lecturers who offered their expertise in clear terms and to the organisations which provided us with generous support necessary for implementation of the training programmes. I would also like to extend my appreciation to sixteen participants, who actively took part in the programme and helped each other in a friendly atmosphere to acquire latest knowledge and techniques in a far foreign country, Japan. Success of this training depends on their future efforts in the field of heritage protection in each country.

NISHIMURA Yasushi

Director

*The Cultural Heritage Protection Cooperation Office,
Asia-Pacific Cultural Centre for UNESCO (ACCU)*

Introduction

1. General Information
2. Programme Schedule

1. General Information

Training Course on Cultural Heritage Protection in the Asia - Pacific Region 2010 - Research, Analysis and Preservation of Archaeological Sites and Remains- (7 September – 7 October 2010, Nara, Japan)

1. Organisers

This course is jointly organised by Bunkacho (Agency for Cultural Affairs in Japan); the Asia-Pacific Cultural Centre for UNESCO (ACCU); the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM); and the National Research Institute for Cultural Properties [Tokyo and Nara], in cooperation with Japan Consortium for International Cooperation in Cultural Heritage; the Ministry of Foreign Affairs of Japan; the Japanese National Commission for UNESCO; Nara Prefectural Government; and Nara Municipal Government.

2. Background

In Asia and the Pacific region, there are various forms of cultural heritage which are of great value from a global point of view. Proper investigation, analysis, preservation and development of these sites and remains are required of heritage professionals, in order to ensure that this important cultural heritage is safeguarded for future generations. ACCU Nara in partnership with ICCROM and Bunkacho has been organising training courses since 2000 on this topic with a view to building the capacities of professionals who have been working on cultural heritage protection in the region. This training course aims to provide participants with the latest methodologies and technologies for investigation, conservation and management of archaeological sites.

3. Dates and Venue

Course dates: From 7 September (Tuesday) to 7 October (Thursday) 2010

Venue: Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO [Nara Prefectural Government “Horen” Office, 757 Horen-cho, Nara, Japan]

4. Objectives of the Training Course

The objectives of the training course are:

- to provide participants with knowledge of principles and methodologies for protection of archaeological sites;
- to provide participants with knowledge of the principles, methodologies and techniques concerning management and utilisation of archaeological sites;
- to provide participants with knowledge and skills related techniques of recording and analytical methods for archaeological remains;
- to provide participants with an opportunity to establish the network with colleagues from the region and share experiences.

5. Training Curriculum

● Lectures

- Global Trends in Conservation of Archaeological Sites
- The Cultural Property Protection System in Japan
- Conservation and Utilisation of Cultural Heritage Resources in Japan
- Introduction to Archaeological Prospection
- Introduction to Environmental Archaeology
- Introduction to Scientific Dating Methods
- Introduction to Dendrochronology
- Introduction to Conservation Science

● Practical Training and On-site Lectures

- Workshop on Recording of Archaeological Features and Artefacts
- Workshop on Conservation Treatment of Artefacts
- Study Tour on Preservation, Development and Utilisation of Archaeological Sites

● Presentations and Discussion

- Presentations by participants on the current status of archaeological conservation in each country, and exchange of views
- Discussion of future issues on the conservation of cultural heritage
- Recapitulation of the training sessions

6. Participants in the Training Course

● Application Procedure

The training course is offered to participants from the following 37 signatory countries of the UNESCO World Heritage Convention (see below). The application form should arrive at ACCU Nara no later than 20 June 2010 along with the endorsement of the UNESCO National Commission or UNESCO Liaison Office in the country concerned or the endorsement of the member of Japan Consortium for International Cooperation in Cultural Heritage. The documents necessary for application are the following.

(1) Application Form (Form 1)

Please attach a copy of the passport, if an applicant has a valid passport.

(2) Report Relating to the Applicant's Achievements in Archaeological Heritage Conservation.

This achievement report should be written by the applicant and should be a brief summary of present and previous work related to the theme of archaeological heritage conservation. This report should be no longer than 5 – 7 pages and will be weighted heavily in selection of the participants.

(3) Letter of Recommendation by NATCOM or by the member of Japan Consortium for International Cooperation in Cultural Heritage

(4) Letter of Recommendation by the head of the organisation to which the applicant belongs (Annex 1)

(5) Certification for English Proficiency (if obtained)

Completed applications should be sent to the secretariat of the ACCU Nara Office at the address below by post or/and e-mail. Only complete application with all necessary documents will be considered.

The following are the 37 signatories of the World Heritage Convention from Asia and the Pacific: Afghanistan, Australia, Bangladesh, Bhutan, Cambodia, China, Fiji, India, Indonesia, Iran, Kazakhstan, Kiribati, Kyrgyz, Lao P.D.R., Malaysia, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Palau, Papua New Guinea, Philippines, Rep. of Korea, Samoa, Solomon Islands, Sri Lanka, Tajikistan, Thailand, Tonga, Turkmenistan, Uzbekistan, Vanuatu, and Vietnam.

● **Qualification Requirements**

Applicants should be:

- 1) those who are professionals, 45 years old or younger, who are engaged in the conservation, preservation, restoration or management of archaeological sites and who can make effective use of the results of the training course upon returning to his or her home country;
- 2) those who have a good command of English, the working language for all lectures, so that they can deliver presentations and write reports from the training sessions (ACCU Nara Office and ICCROM shall be allowed to utilise all contents of presentations and reports, including drawings and photographs, for future publication and cultural heritage protection programmes);
- 3) those who can attend the entire training programme;
- 4) those who submit all of the required documents (listed above) within the deadlines outlined;
- 5) those who will most likely continue exchanging information and interacting with ACCU after returning to their home countries;
- 6) those who were not previous participants in training courses organised by ACCU Nara Office (however those who have participated in International Youth Exchange Programme and International Education Exchange Programme can apply for this programme).

7. Notification of Screening Results

After consulting with other organisers, ACCU Nara will select 16 people (one participant per nation, in principle) from among all applicants around the end of July. Successful applications will be informed of the results along with each National Commission for UNESCO and the Japan Consortium for International Cooperation in Cultural Heritage.

8. Certificate of Completion

Each participant will be awarded a certificate upon completion of the course.

9. Language of the Training Session

English will be the working language throughout the course.

10. Expenses

Expenses during the Training Course shall be borne by ACCU Nara, as follows:

(1) Travelling expenses:

Each of the participants (except those from Australia, Republic of Korea, and New Zealand) shall be provided with an economy class return air ticket from the nearest international airport from their residence to Kansai International Airport, and transportation fees between Kansai International Airport and Nara.

(2) Living expenses:

Participants shall be provided the basic living expenses incurred during the training course from 6 September (Monday) to 8 October (Friday) 2010. Arrangements for accommodations (a room for single occupancy) will be made by ACCU Nara.

11. Secretariat

Cultural Heritage Protection Cooperation Office,
Asia-Pacific Cultural Centre for UNESCO (ACCU Nara)
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2. Programme Schedule

Month	Date	Morning (9:30-12:30) (Lecturer / Venue)	Afternoon (13:30-16:30) (Lecturer / Venue)
September	7 Tue.	Opening Ceremony (Kasugano-so Hotel)	Orientation Session (ACCU Nara)
	8 Wed.	Global Trends in Conservation of Archaeological Sites (Gamini WIJESURIYA / ACCU Nara)	
	9 Thu.	Presentation and Discussion: Country Reports by Participants I (INABA Nobuko & WIJESURIYA / ACCU Nara)	
	10 Fri.	Presentation and Discussion: Country Reports by Participants II (INABA Nobuko & WIJESURIYA / ACCU Nara)	
	11 Sat.		
	12 Sun.		
	13 Mon.	The Cultural Property Protection System in Japan (SUZUKI Chihei / ACCU Nara)	Conservation and Utilisation of Cultural Heritage Resources (Cases in Japan) (SUZUKI / ACCU Nara)
	14 Tue.	Maintenance and Management of Archaeological Sites in Practice I: Nara Palace Site (SHIMADA Toshio & ISHIMURA Tomo / NNRICP)	
	15 Wed.	Lecture and Workshop: Documentation of Archaeological Artefacts (MORIKAWA Minoru, KUNITAKE Sadakatsu and SHIBA Kojiro / NNRICP)	
	16 Thu.		
	17 Fri.		
	18 Sat.		
	19 Sun.		
	20 Mon.		
	21 Tue.	Introduction to Archaeological Prospection of Sites (KANEDA Akihiro / NNRICP)	Introduction to Environmental Archaeology (YAMAZAKI Takeshi / NNRICP)
	22 Wed.	Lecture and Workshop: Photographic Documentation of Sites and Remains (NAKAMURA Ichiro / NNRICP)	
	23 Thu.	On-site Lecture: Utilisation and Management of Sites in Practice (KANEKAE Ichiro / National Museum of Ethnology; Haniwa Factory Park at Shin-ike kiln site)	
	24 Fri.	Maintenance and Management of Archaeological Sites in Practice II: Imperial Palace Sites at Asuka and Fujiwara (SUGIYAMA Hiroshi / NNRICP)	
	25 Sat.		
	26 Sun.		
	27 Mon.	Lecture and Workshop: Conservation Science of Archaeological Sites and Remains (KOHDZUMA Yohsei / NNRICP)	
	28 Tue.	Conservation Science of Archaeological Sites and Remains (Wakiya Soichiro / KOHDZUMA Yohsei / NNRICP)	Introduction to Dendrochronology (OKOCHI Takayuki / NNRICP)
	29 Wed.	A Study Tour: Maintenance and Utilisation of Sites in Practice (SHICHIDA Tada-aki / Yoshinogari Site, Saga Pref.)	
	30 Thu.	A Study Tour: Maintenance and Utilisation of Sites in Practice (AKASHI Yoshihiko and IMAZU Setsuo / Dazaifu Site, Fukuoka Pref.)	
October	1 Fri.	A Study Tour: Maintenance and Utilisation of Sites in Practice (YOSHITAKE Manabu / Korokan Site and Fukuoka-jo Castle, Fukuoka City)	
	2 Sat.		
	3 Sun.		
	4 Mon.	Lecture and Discussion: Future Issues on the Preservation of Sites and Remains I (Risk Management) (Montira UNAKUL / ACCU Nara)	
	5 Tue.	Lecture and Discussion: Future Issues on the Preservation of Sites and Remains II (Utilisation for the Public) (Montira UNAKUL / ACCU Nara)	
	6 Wed.	Writing Final Reports	
	7 Thu.	Submission of Final Reports / Closing Ceremony	

NNRICP: Nara National Institute for Cultural Properties

ACCU Nara: Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO

Proceedings

1. Opening Ceremony
2. Summary of Training Course

1. Opening Ceremony

The opening ceremony of the 2010 training course was held on 7 September 2010 at the Kasugano-so reception hall in Nara City, with sixteen course participants and honourable guests from Agency for Cultural Affairs, Japan (*Bunkacho*), Nara National Research Institute for Cultural Properties (NNRICP), Nara Prefectural Government and Nara Municipal Government.

The opening addresses were given by Mr SHIMAZU Masakazu, Secretary General, Asia-Pacific Cultural Centre for UNESCO (ACCU); Mr NISHIMURA Yasushi, Director, ACCU Nara Office; Mr MINAMI Shinpei, Head, Office for International Cooperation on Cultural Properties, Cultural Properties Department, *Bunkacho*; Mr Gamini WIJESURIYA, Project Manager, ICCROM; Mr NAMBA Yozo, Head, Planning & Coordination Section, Nara National Research Institute for Cultural Properties; Mr KOIDE Tsuneki, Deputy Director, Cultural Affairs Division, Nara Prefectural Government; and Mr NAKAMURO Taketoshi, Superintendent, Nara Municipal Board of Education. In the above mentioned speeches, organisers and guests extended warm greetings to all participants and stressed the importance of mutual understanding and international network in the field of cultural heritage protection and wished their stay in Nara will be fruitful and enjoyable. Mr NISHIMURA hoped that all participants take this opportunity to exchange information and views on issues of cultural heritage protection as well as to broaden their knowledge of Japan during their stay for one month. At the end of the ceremony, the participants introduced themselves and a group photo was taken with staff and guests.

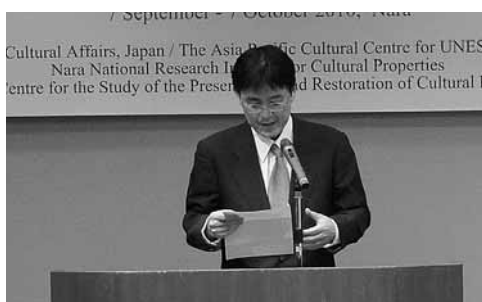
After the ceremony, the participants proceeded to the Nara Prefectural Office, where they were welcomed by the Deputy Governor of Nara Prefecture, Mr KUBOTA Osamu. He greeted them and gave brief overview of Nara Prefecture, and the participants also asked him about the prefecture. Then, they were ushered to the roof floor of the government



Mr Shimazu from ACCU



Mr Nishimura, Director of ACCU Nara office



Mr Minami from Agency for Cultural Affairs, Japan



Mr Wijesuriya from ICCROM



Mr Namba from NNRICP



Mr Koide from Nara Prefectural Gov.



Mr Nakamuro from Nara Municipal Gov.

building, where many historical monuments designated World Heritage can be observed with fine views. In the afternoon, an introduction to the training course was given regarding the course theme, objectives, logistics, and requirements. Following this, presentation about daily life in Japan for visitors was made, followed by an open question period.



Meeting with Deputy Governor of Nara Prefecture, Mr Kubota



Meeting with Deputy Governor of Nara Prefecture, Mr Kubota

2. Summary of Training Course

Various experts delivered a series of lectures during this Training Course. The following is a complete list of the lectures with a brief description of their contents.

■ Global Trends in Conservation of Archaeological Sites (8 Sept.) Gamini WIJESURIYA (ICCRM)

The lecture began with a brief introduction of ICCROM: Its organisation, member states, mandates, and activities in the field of cultural heritage conservation. Then, Mr Wijesuriya asked the fundamental question, “What is heritage?” “What is preservation?” and “Why is it done?” to facilitate the discussion in the group and he was willing to have any questions as they arise.



Mr Wijesuriya

- Conservational Conservation Approach (CCA) and Authorised Heritage Discourse (AHD) with specific case examples of restoration in Sri Lanka, Mexico and Zimbabwe
- Some dissenting views against CCA and AHD were introduced by considering diversity, continuity and community.
- Developments in heritage management thinking from the traditional one to current world trends
- Three types of approaches to conservation: Conventional, value-based and living heritage approaches



Lecture by Mr Wijesuriya

■ Presentation and Discussion (9 - 10 Oct.)

INABA Nobuko (Tsukuba University) and Gamini WIJESURIYA (ICCRM)

Each participant made a presentation on the present situation and needs for cultural heritage protection in their respective speciality and shared their experiences with colleagues. Both common and unique challenges in their countries were raised by the presentation. There were especially many questions about the preservation of Myanmar cave painting in the class. Then, Prof. Inaba lectured on Japanese laws and regulations related to cultural properties protection with introducing Japanese cases and Japanese architecture.



Mr Wijesuriya and Prof. Inaba



Presentation by the participant

■ **The Cultural Property Protection System in Japan / Conservation and Utilisation of Cultural Heritage Resources (Cases in Japan)** (13 Sept.) SUZUKI Chihei (Agency for Cultural Affairs, Japan)

- Introduction to various cultural properties in Japan: tangible, intangible, monuments, cultural landscapes and groups of traditional buildings
- History of the law for the cultural properties; the system and measures for protection
- Case examples of preservation and utilisation
- An overview of fourteen World Heritage sites in Japan
- Case examples of cultural landscapes in Japan; rice terraces, a lakeside district, waterfront landscapes, irrigation canals, pottery villages, rural landscapes, etc.
- The protection system of cultural landscapes in Japan



Lecture by Mr Suzuki

■ **Maintenance and Management of Archaeological Sites in Practice: Nara Palace Site** (14 Sep.) SIMADA Toshio & ISHIMURA Tomo (NNRICP)

- The lecture on an outline of Nara Palace Site and the fundamental plan 1978 and its revision in basic concept: guidelines for conservation and management; and practical challenges on maintenance and utilisation
- Mr Shimada underlined that the reconstructed building was a modern architecture only showing one possibility; the scale of podium and the position of pillars were based on the supposition.
- A question was raised on how many reasonable evidences of unearthed artefacts from Daigokuden sites to enable the reconstruction.
- The basic principle was not to damage underground sites.
- Three display method in the site
 - flat display (two-dimensional)
 - partial-three dimensional display for wells, ditches and ponds
 - reconstruction (three-dimensional)
- It is needed to re-establish clear-planning for site management: To whom, what to show; and how we

can use; active public utilisation.

With the information imparted during the morning lecture, participants toured the site while hearing an elaborate explanation; Amidst the bustle of the 1300th Anniversary celebrated at the site, they observed the reconstructed First Imperial Audience Hall (*dai-ichiji daigokuden*), the Second Imperial Audience Hall site (*dai-ichiji daigokuden ato*), Archaeological Features Exhibition Hall, various displays for public utilisation, and reconstructed Eastern Palace Garden.



The reconstructed Former Imperial Audience Hall
(*dai-ichiji daigokuden*)



The well of the Imperial Domicile

■ Lecture and Workshop: Documentation of Archaeological Artefacts (15-17 Sep.)

MORIKAWA Minoru, KUNITAKE Sadakatsu and SHIBA Kojiro (NNRICP)

[Earthenware]

- Lecture session:

General information on earthenware: its history, types, how to distinguish, and firing

How to draw measured drawings / How to observe earthenware / Reminders for handling earthenware

Tools for measured drawings of earthenware: a triangle, a straight edge ruler, a divider, mako (contour gauge), and callipers



Lecture by Mr Morikawa

- Workshop:

Participants were divided into four groups and each lecturer helped the group in drawing. Some of them appeared to have difficulty grasping the idea of drawing a cross section on the paper.

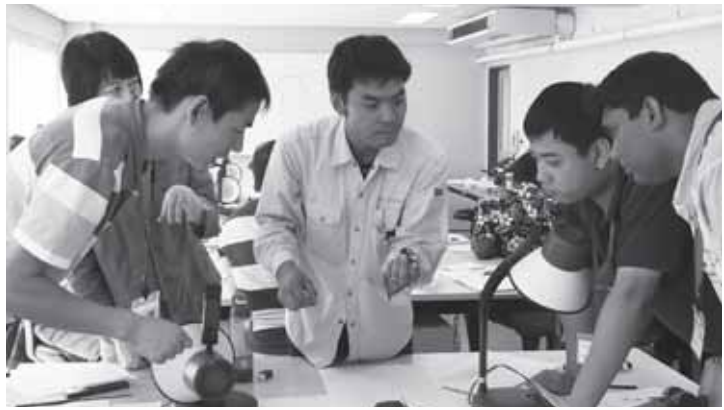
Measured drawing of ancient earthenware:

- *sueki*: blue gray form of high-fired pottery
- *hajiki*: plain, unglazed and reddish-brown earthenware

[Stone objects]

After the lecture on a method and procedure for stone artefacts drawing, participants began to practice measured drawings: The process was divided into seven steps while the program was paced to match everyone's speed and at each stage, their progress was monitored before proceeding to the next level. Everyone remained focused during the work and they exchanged stone tools with one another to practice again when the drawing work was pretty much completed.

Under the guidance of lecturers, they also toured the research sections at NNRICP to observe how unearthed artefacts including earthenware, roof tiles, wooden objects, metal objects, stone tools, and *mokkan* wooden tablets were stored at the Artefacts Organising Room.



A hands-on session of measured drawing of artefacts using set squares, rulers etc.

■ Introduction to Archaeological Prospection of Sites (21 Sep.) KANEDA Akihiro (NNRICP)

At first, Mr Nishimura introduced the role of archaeological prospection besides excavation; a method of obtaining information without physically altering the site. Then Mr Kaneda lectured in detail; principles, methods/techniques and equipment.

- It is important to recognise that both excavation and archaeological prospection have merits and demerits.
- A lecture on prospection methods: topography determination by aerial photographs; ground penetrating radar (GPR) prospection; electric prospection; magnetic prospection; electromagnetic prospection, etc.
- Actual procedures for implementation of prospection; establishment of prospection zones and survey lines, and preparation such as land clearing, ground surface observation and ensuring safety
- Introduction of tools and equipment: participants tried to use GPR equipment with keen interests



Lecture by Mr Kaneda

■ Introduction to Environmental Archaeology (21 Sep.) YAMAZAKI Takeshi (NNRICP)

The lecture began with the question, “What is environmental archaeology?”, and participants seemed to be highly interested in the subject and listened diligently. After the lecture, they proceeded to the specimen preparation/storage room and observed various animal bone specimens.

- The role of NNRICP in the field of environmental archaeology
- What an actual excavation is alike; important on-site cautions; various methods of analysing unearthed artefacts
- Importance of multifaceted analysis; such as pollen analysis, plant opal or seeds analysis should be combined to obtain complementary and consistent research results by cross-checking
- Introduction of soil sieving methods for sample preparation: dry sieving, wet sieving and flotation
- Preparation of extant animal bone specimens and identification of animal remains: shells, animal bones fragments, teeth, horns, etc.



Lecture by Mr Yamazaki

■ Lecture and Workshop: Photographic Documentation of Sites and Remains (22 Sep.)

NAKAMURA Ichiro (NNRICP)

Throughout the lecture there were many questions, indicating the high level of interest. Questions touched upon the models of cameras and editing software used in the institute; methods of photography most suited for publications; how to take photographs with people in them; and how to colour black and white photos.

- Significance and the purpose of taking photographs of cultural properties
- Cameras used for photographing cultural properties: a 35 mm single-lens reflex camera; a medium size camera; a large camera; a digital single-lens reflex camera
- Mechanism by which a photograph is taken: film, focus, exposure, diaphragm and shutter speed
- Lighting for photography; main light irradiation direction

After the lecture, participants worked in pairs to take twenty photographs and learned how to handle the camera. Then they visited the laboratory where film was digitised.



Lecture by Mr Nakamura

■ On-site Lecture: Utilisation and Management of Archaeological Sites in Practice (23 Sep.) KANEGAE Ichiro (Takatsuki City Board of Education)

After visiting the National Museum of Ethnology and observed on their own, free to focus on displays from their own country or whatever interests them, participants moved to Shin-Ike Haniwa Production Site and visited the kiln site and restored housing. They were curious about haniwa production methods and its usage and there were also questions on durability issues with the outdoor displays.



National Museum of Ethnology

Lecture by Mr Kanegae on site

Imashirozuka Burial Mound:

- Future plans to open the site as a park to the general public
- Supplemental information on haniwa: Haniwa was made by placing the clay directly on the floor and shaping with the hands and spatula instead of on a potter's wheel.

Takatsuki Research Center for Archaeological Operation:

- A lecture on management plans for Tsugeyama Burial Mound
- Observation of the earthenware and *haniwa* unearthed from the burial mound



Imashirozuka Burial Mound



Takatsuki-shi Research Center for Archaeological Operation



■ Maintenance and Management of Archaeological Sites in Practice: Imperial Palace Sites at Asuka and Fujiwara (24 Sep.) SUGIYAMA Hiroshi (NNRICP)

Under the guidance of Mr Sugiyama, participants toured the Asuka-Fujiwara region, an ancient capital from the end of the sixth century to the beginning of the eighth. During the walk, they expressed interests in many things, including *Lycoris radiata* flowers, rice paddies, the temple gates, and especially the excavation site at Fujiwara Palace Site. Many questions were asked about excavation techniques and site management using planting flowers and trees. The on-site display (replica) was employed to give them an idea of the size of the Kitora Burial Mound.

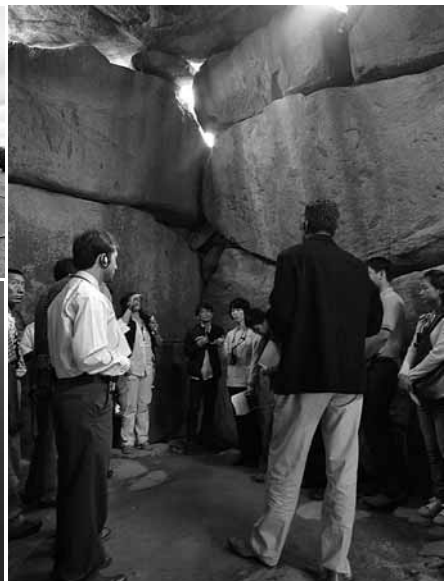
- Ishibutai Burial Mound
- Asuka Historical Museum
- Asukadera Temple
- Sakafuneishi Archaeological Site



Asukadera Temple



Ishibutai Burial Mound
Asuka Historical Museum



Lecture by Mr Sugiyama on site

- Kawaradera Temple
- Fujiwara Palace Site



Lecture by Mr Sugiyama



Fujiwara Palece Excavation Site



Sakafuneishi Archaeological Site

■ **Lecture and Workshop: Conservation Science of Archaeological Sites and Remains** (27 Sep.) KOHDZUMA Yohsei (NNRICP)

The session began with an introductory lecture on deterioration of cultural heritage with case examples, their conservation methods and specific techniques for restoration. During the session, many questions were asked on conservation treatment such as a kind of paper used for conservation of unearthed artefacts, the durability time limit of acrylic resin used for reinforcement, and chemical treatment against the eroding effect of plants on stone tablets, etc.

- Regular monitoring is critical.
- The natural environment should be taken into account for restoration.
- Hands-on session with urethane resin, used when lifting up fragile artifacts in outdoor settings
- Introduction of equipment and machinery for archaeological site survey
 - Schmidt hammer: for measuring strength of hard rock
 - Equotip (Equotip Piccolo): for measuring strength of soft rock
 - Percussion stick: for determining difference in density and composition of rock
 - Needle penetrometer: measuring strength of rock by pushing a needle into rock



Lecture by Mr Kohdzuma



■ **Conservation Science of Archaeological Sites and Remains** (28 Sep.) WAKIYA Soichiro (NNRICP)

- The mechanism of erosion due to water in soil strata; the giant stone heads of moai in Easter Island were used as a case example.
- Experiment of sandstone which has been subjected to reinforcement and water-repellency treatment; Water-repellency treatment is only applied to the top, and is therefore not effective against erosion due to groundwater.
- Analysis of the impact of exposed displays on archaeological sites
- Tour of research facilities at NNRICP: Everyone seemed to be interested in equipment and asked how to use machinery
 - Freeze dryer for waterlogged organic archaeological artefacts
 - High energy X-ray CT scanner for cultural properties
 - Gas chromatography equipment etc.



Lecture by Mr Wakiya

■ **Introduction to Dendrochronology** (28 Sep.) OKOCHI Takayuki (NNRICP)

- General outlines of dendrochronology (tree ring dating)
 - Relationship between dendrochronology and archaeology, climatology, and hydrology
 - The work of Andrew Ellicott Douglass, the founder of dendrochronology
 - What is skeleton plotting? / How to make a skeleton plot? / The tree ring widths are measured visually and plotted like a bar graph, with the narrow rings shown long and the wider rings short.
- Dendrochronology research in Japan
 - Tree ring dating using digital images
 - The process of rendering tree rings into data, and tree ring dating of cultural properties
- Case study examples
 - Tree ring dating of the wooden well of Saidaiji Temple: Data from dendrochronological analysis, Nihon Shoki chronicles, and mokkan wood strips found from the well were collated to reveal the history of the well.
 - Data obtained from tree ring dating analysis were used to determine the year in which Horyuji

Temple was built.

- Application of micro-focus X-ray CT in the study of art history



Lecture by Mr Okochi

■ **A Study Tour (1): Maintenance and Utilisation of Sites in Practice (29 Sep.) SHICHIDA Tada-aki (Saga Prefectural Board of Education)**

After having video presentation of Yoshinogari site in the lecture hall supplemented with detailed explanations, participants toured the Yoshinogari Historical Park with Mr Shichida to survey how the site, the largest ancient moat-enclosed settlement in Japan, was managed and utilised for the public. They looked around to learn the practical techniques for restoring structural remains and showed special interest in the restored buildings of the site and the lifestyle of the people during Yayoi period.

- Northern Burial Mound: the role of burial jars in that period
- Northern Inner Enclosure: the center for ceremonies and rituals
- Southern Inner Enclosure: the watchtowers and entrances with explanation of lifestyle and residential districts in the Yayoi period
- Exhibition Hall: the display of unearthed artefacts from the sites such as burial jars in various shapes, wooden artefacts, metal objects and mirrors



Yoshinogari Historical Park



Lecture by Mr Shichida on site

■ **A Study Tour (2): Maintenance and Utilisation of Sites in Practice** (30 Sep.) AKASHI Yoshihiko / IMAZU Setsuo (Kyushu National Museum)

- A presentation on an outline of Kyushu National Museum: its role, exhibition principles, the layout and structure of the buildings and artefacts displayed in exhibition halls.
- A facility tour of the museum: the repository of a collection, laboratories for conservation treatment of cultural properties and latest facilities such as X-ray CT scanning equipment.
- At the Mizuki site, they were also given lectures on historical background of the site and archaeological remains: Mizuki consisted of moats and earthworks as a fortification in 7th century to defend the county from the invasion of China and Korea.
- Lectures on the brief history of Dazaifu and architectural remains unearthed at the site at the site of Dazaifu Governmental Office.
- Observation of the castle gate cornerstone, earthwork and warehouse at Onono castle



■ **A Study Tour (3): Maintenance and Utilisation of Sites in Practice** (1 Oct.) YOSHITAKE Manabu (Fukuoka Municipal Board of Education)

Participants visited and observed Korokan (National Historic Site), which was the ancient guest house from the 7th to the 11th century and also a window for international exchange with Tang China and Shilla Korea. The group then toured the second floor of the Fukuokajo castle gate to see carbonised members during the fire which destroyed the castle gate.

- The conservation history of Korokan site from its discovery to the process of excavation, conservation and restoration; the positional relationship with Dazaifu; and unearthed ceramic ware
- The prominent characteristic of Korokan site is the discovery of a high number of ceramic ware for daily use and most questions had to do with the usage of ceramic ware and glazes.
- Observation of Shimonohashi Otemon gate of Fukuokajo castle site (national historic site), which suffered serious damage from fire ten years ago and was restored by dismantlement.



■ Future Issues on the Preservation of Sites and Remains I (Risk Management) (4 Oct.)

Montira UNAKUL (UNESCO Bangkok)

The lecture on Heritage at Risk:

- Case examples of heritage at risk in the Asia region
- What is heritage value?
- What is the qualification for being listed on the World Heritage List? [Most questions were about authenticity issues.]
- Main risk factors to heritage: Hazards (external threat) and vulnerability (inherent weakness)
- How do we reduce risks at heritage sites?

After equipped with knowledge on risk management principles, participants were assigned to four groups and discussed how to reduce risks at heritage sites. Each group selected an abandoned village site in Fiji, Mohenjo-Daro in Pakistan, Borobudur in Indonesia and Taj Mahal in India respectively as a topic of discussion and presented effective strategies for risk management concluded in the group.



■ Future Issues on the Preservation of Sites and Remains II (Utilisation for the Public) (5 Oct.)

Montira UNAKUL (UNESCO Bangkok)

- Measuring various impacts: society, culture, economy, tourism etc.
- Visitor management; actions to minimise the impact of tourists
- Seven key principles for heritage interpretation
 - access and understanding
 - soundness of information sources
 - attention to setting and context
 - preservation and authenticity
 - planning for sustainability
 - concern for inclusiveness
 - importance of research, evaluation and training
- Forms of interpretation methods of site: printed information, signage, exhibits, narrated visual presentations, videotape presentation, websites, film, guide etc.
- Discussion in the same four groups on the interpretation of Heijo Palace site which celebrated 1300th anniversary, followed by presentation.

Under the three themes (risk management, heritage interpretation, and visitor management) participants wrote notes on memo pads regarding challenges and good practices in their own countries, and posted them on the white board for presentation. Issues and current status on themes became apparent.



■ Writing Final Report (6 Oct.)

The participants wrote final reports of the training course.

■ Closing Ceremony (7 Oct.)

The closing ceremony was held at Kasugano-so Hotel in the afternoon. Mr Nishimura, Director of ACCU Nara, made the closing address and wished their newly acquired knowledge and techniques from the training programme would bear fruit in the field of cultural heritage protection. Mr NAMBA Yozo from NNRICP also made a speech and congratulated the successful completion of the training programme and wished to cooperate for the sake of cultural heritage protection and research activities together in the future even after they went back into their own countries. Then, Mr Nishimura awarded

a certificate of completion to each participant with words of appreciation of their efforts. Mr Bhuvan Vikrama from India and Ms Mary Grace D. Barretto-Tesoro made speeches and expressed their acknowledgements and heart-felt gratitude for the organisers and lectures on behalf of all participants by looking back one month training in Japan.



The closing address by Mr Nishimura



The closing address by Mr Namba



Ms Mary G. L. D. Barretto-Tesoro
from Philippines



Mr Bhuvan Vikrama
from India



Awarding a certificate of completion

Country Reports by Participants

Bhutan

Tshering Namgyal

Deputy Executive Engineer / Project Manager

Division for Conservation of Architectural Heritage Sites

Department of Culture, Ministry of Home and Cultural Affairs

Problems and Needs for Cultural Heritage Protection and Restoration in Bhutan

Introduction

Although archaeological exploration of Bhutan has been limited, evidence of civilization in the region dates back to at least 2000 B.C. Aboriginal Bhutanese, known as Monpa, are believed to have migrated from Tibet. The traditional name of the country since the seventeenth century has been Drukyul, meaning Land of the Drukpa (Dragon People) and also being a reference to the dominant branch of Tibetan Buddhism that is still practiced in the Himalayan kingdom.

The earliest transcribed event in Bhutan was the passage of the Buddhist saint Padmasambhava (also called Guru Rinpoche) in the eighth century. Bhutan's early history is unclear, because most of the records were destroyed after fire ravaged Punakha, the ancient capital in 1827. By the tenth century, Bhutan's political development was heavily influenced by its religious history. Various subsects of Buddhism emerged which were patronized by Mongol and Tibetan overlords. After the decline of the Mongols in the fourteenth century, these subsects vied with each other for supremacy in the political and religious landscape, eventually leading to the ascendancy of the Drukpa subsect by the sixteenth century.

For centuries, Bhutan was made up of feuding regions until it was unified under King Ugyen Wangchuck in 1907. The British exerted some control over Bhutan's affairs, but never colonized the country. Until the 1960s, Bhutan was largely isolated from the rest of the world, and its people carried on a tranquil, traditional way of life based on farming and trading, which had remained intact for centuries. After China invaded Tibet, however, Bhutan strengthened its ties and contacts with India in an effort to avoid Tibet's fate. New roads and other connections to India began to end its isolation. In the 1960s, Bhutan also undertook social modernization, abolishing slavery and the caste system, emancipating women, and enacting land reform. In 1985, Bhutan made its first diplomatic links with non-Asian countries.

Bhutan, the hermit kingdom, the land of the thunder dragon, has been and still is one of the most reclusive countries in the world. Until a few decades ago, its geography made the country inaccessible. After the abdication of the last Druk Desi (a civil administrative leader) in 1904, the establishment of the monarchy in 1907 replaced the Buddhist clergy with the king, who was invested with full authority,

both religious and secular. The third king began major political, social and economic reforms, which were continued by the fourth king. The fourth king appears to have been a rare example of an enlightened, benevolent monarch who ceded responsibility to the parliament, abdicated in favor of his son, insisted on the drafting of a constitution, discussed political affairs inside and outside of the country, proposed the unprecedented formation of political parties, and decided to hold the first free elections in 2008. He even wrote Bhutan's novel contribution to economics, the concept of "Gross National Happiness," into the new constitution. All in all, Bhutan presents itself as a very unusual state in transformation, since the transformation is not the outcome of an internal uprising, a breakdown of the old order, war or international pressure, but rather stems from the realization that the country has to adapt to the demands of modernity.

We have over two thousand temples and monasteries scattered in every corner of the country. There is not a single village without a temple. The monastery is the focal point of religious and cultural activities in the Bhutanese village, where people gather for annual religious festivals and for public meetings. On the average, each of Bhutan's twenty provinces has around a hundred monasteries. Most of the monasteries in the village belong to the local community while the rest normally belong to the government.

The majority of the monasteries date back to the seventeenth and eighteenth centuries, but many have their roots as far back as the seventh and eighth centuries. The Semtokha Dzong, built in 1629, is the oldest dzong (monastery-fortress) in the country. As the first dzong built by the Zhabdrung Ngawang Namgyal, who established the dual system of administrative and religious rule, the Semtokha Dzong was a symbolic establishment of the political and religious authority of the Zhabdrung in Bhutan in the early seventeenth century. Two Portuguese Jesuit priests, the first known European travelers to Bhutan, visited the Semtokha Dzong during its construction on their way to Tibet in 1629.

Both in form and design, as monastery architecture, the dzong is one of the most elegant and harmonious examples of fortress building in the world. Though massive, Bhutanese dzong architecture is not heavy, having both form and elegance and a rare blending of harmony and proportion.

Protection and restoration activity in Bhutan usually involves architectural or engineering heritage assets such as dzongs and other heritage buildings. Bhutan has a number of different forms of protection for buildings and structures, including ancient monuments. Dzongs and other structures are protected by the Division for Conservation of Architectural Heritage Sites of the Department of Culture. Successful heritage management for a building generally requires that it continue to be used, as unused buildings are likely to deteriorate quickly. If the purpose for which the building was originally constructed is no longer viable, then other uses, often requiring sympathetic modification, must be found.

Heritage sites such as the Trongsa Dzong, or its watchtower Ta Dzong, can best be understood, and are most easily accessed and experienced, by the public when they are in operational condition.

Moreover, the heritage skills associated with such heritage assets, such as visiting a Gonkhang (sacred chapel), can only be maintained if the temple is used. Restoration to a working, if not pristine condition, and creation of exact working replicas are therefore part of the practice of heritage management.

Problems in Cultural Heritage Protection

For Bhutanese cultural heritage, agents of deterioration include physical, chemical and biological factors, which require environmental monitoring and control of temperature, relative humidity, light, atmospheric pollutants, and so forth. But there are problems in the preservation of wooden, rammed mud, and stone architectural heritage structures besides such physical factors or natural calamities. We also face problems from the end users, as the conservation of cultural heritage has always been part of the people's life, even though the idea of conservation has been introduced in Bhutan as a new and modern concept. Bhutanese people practiced the preservation and restoration of their cultural heritage over many centuries, and as a result we see the great dzongs, monasteries and monuments standing today.

But popularly held attitudes are a problem all over the globe for the conservation and protection of historic monuments as edifices of living culture, and they contribute to making it an uphill task for conservation workers in our country as well. It is common experience for architects, engineers, and managers, given the task of implementing conservation projects, to meet with negative reactions and substantial interference, starting from the top decision makers on down to the general public and end users of heritage sites. The general public and end users (who are monks in case of Ta Dzong in Trongsa) always prefer newly constructed buildings to more dingy, older conserved structures, as places for living. The Royal Government of Bhutan always emphasizes the importance of balance between economic growth and preservation of the country's rich ancient cultural and spiritual heritage, but the problem is that policy makers and the clergy need to be educated more fully on the value of conservation and restoration.

I would like to cite an example from my experience in Trongsa Dzong and Ta Dzong renovation projects. The people from the community and the monks always insist on new timber components being used, rather than having the old ones restored and reused. End users always ask why, when funds are available, all components are not being replaced with new materials, as funds may not be available in the future so there may not be another opportunity to do so. It is like saying "old is gold, but new is better." This is just one problem we face along with hundreds of others while carrying out the protection and restoration of ancient monuments in our country. Additional problems involve, for example, Buddhist beliefs and practices which contradict with the ethics of modern conservation.

We often end up having to explain definitions of restoration and conservation to the clients. The following concrete definitions have to be understood before we begin with the work. Restoration is a

process of carrying on alterations and repairs to a building with the intention of restoring it to its original form, often involving reinstatement of missing or badly damaged parts, so it usually includes replication, meaning a new work in an old style. While often necessary after a disaster, it is generally regarded as more drastic than conservation, which suggests retention, repair, and maintenance. Let me quote an example from the European point of view. It says “Although architects such as Boito urged that ‘restoration’ should be less comprehensive and destructive, many churches were altered to make them conform to what was regarded as their ‘original’ state: this often involved the removal of Baroque and other accretions (even whole façades) and their replacement with conjectural designs.”

A further problem we face at heritage sites or conservation projects in Bhutan is that most of our heritage sites are living monuments, with the exception of some ruins. Clergy, and caretaker residents who reside in these heritage buildings, undeniably pose many threats to these structures. Another factor is due to usage of the structures, as there is much wear and tear from an increasing population of resident monks and visitors. Also, almost all of the dzongs, monasteries, temples and other heritage buildings are made of stone, rammed mud, and wood, etc., and have poor qualities of water resistance. The management of water, sewage, waste, and fire is generally very poor and constitutes a major issue and pertinent challenge to all our heritage buildings.

Needs for Cultural Heritage Protection

Bhutan has numerous ways of identifying and protecting important heritage places. Decisions about managing heritage places are carried out under relevant laws at all levels of government. The Division for Conservation of Architectural Heritage Sites, of the Department of Culture, is responsible for administering the key national heritage law.

In the course of working as an engineer and Project Manager at Trongsa Dzong and Ta Dzong for over a decade, I have come to understand that instead of preaching dos and don'ts of conservation to the people and end users, it would be better at the initial stage of every project if we undertake to make them aware of how to take care of such structures, which will eventually help in prolonging the life of these structures in our country.

There is a great need for a law, which could be titled the “Immovable Cultural Heritage Protection Act,” which would take care of all cultural heritage in the country. UNESCO has such an international act in place, but we do not have a similar national act, which should coordinate with the international one. The following are the some of the requirements for our country:

a) National Heritage Laws. We need to compile a national heritage list, which will record the places of outstanding heritage value of our nation, including important monuments which are in ruins. These places are to be protected under the Bhutan Government's national heritage laws.

b) Managing National Heritage Sites. The way in which a national heritage site is managed can impact the value as heritage of that place. The Division for Conservation of Architectural Heritage Sites has expertise and tools available to assist site managers, to ensure that this value is protected and preserved for future generations. We need to work together for managing national heritage sites and need to create user-friendly documents, which will explain the management process for places included on the national heritage list. We should have proper guidelines, which will be referred to when necessary.

c) Caring for National Heritage Sites. National heritage sites are owned and managed under a range of tenures and arrangements. For example some places are privately owned while a statutory authority manages others. We need to create a proper system of care for national heritage sites in Bhutan.

d) Applying National Heritage Management Principles. Owners, managers and decision makers should understand the heritage value of the sites listed, and observe the national heritage management principles when preparing and implementing management plans and programs.

e) Developing Management Plans. A management plan helps to guide daily management issues, and assist in the decision-making and approval processes. It is recommended that all national heritage sites develop a management plan. All relevant staff and those involved in the management of the place should be trained in the use and implementation of the management plan.

f) Making a Referral. Persons having responsibility for a proposed action need to make an assessment to decide whether or not the proposed action is likely to have a significant adverse impact on the national heritage value of the place. If so, that action should be referred to higher authorities for a decision. Since Bhutan is a developing country, we need to have such a referral system in place.

g) Finding Assistance. A heritage professional can assist in the preparation of a management plan and the assessment of potential impact of proposed actions on heritage value. Informal advice can also be sought from the Division for Conservation of Architectural Heritage Sites, Department of Culture, Ministry of Home and Cultural Affairs, of the Royal Government of Bhutan.

Conclusion

In conclusion I would like to emphasize the need for a continued focus on the problems and needs for cultural heritage protection and restoration activities in Bhutan. These problems and needs include survey and documentation, interventions, legal protections, and a continuous process of monitoring and maintenance of the cultural heritage in Bhutan.

Cambodia

PHOEUNG Dara

Technical Officer / Archaeologist, Office of Archaeology in Angkor Park

Department of Conservation of Monuments in Angkor Park and Preventive Archaeology

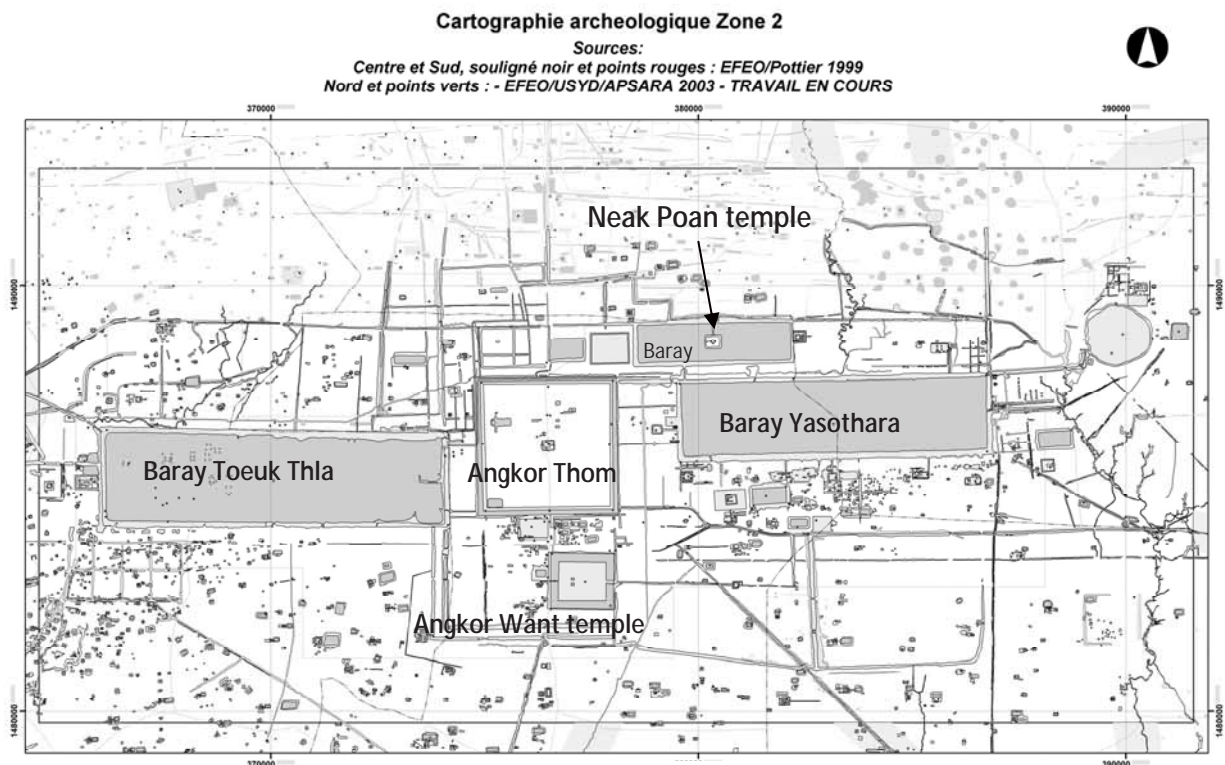
APSARA Authority

Neak Poan Temple and Archaeological Research

I. Neak Poan temple

1. Location

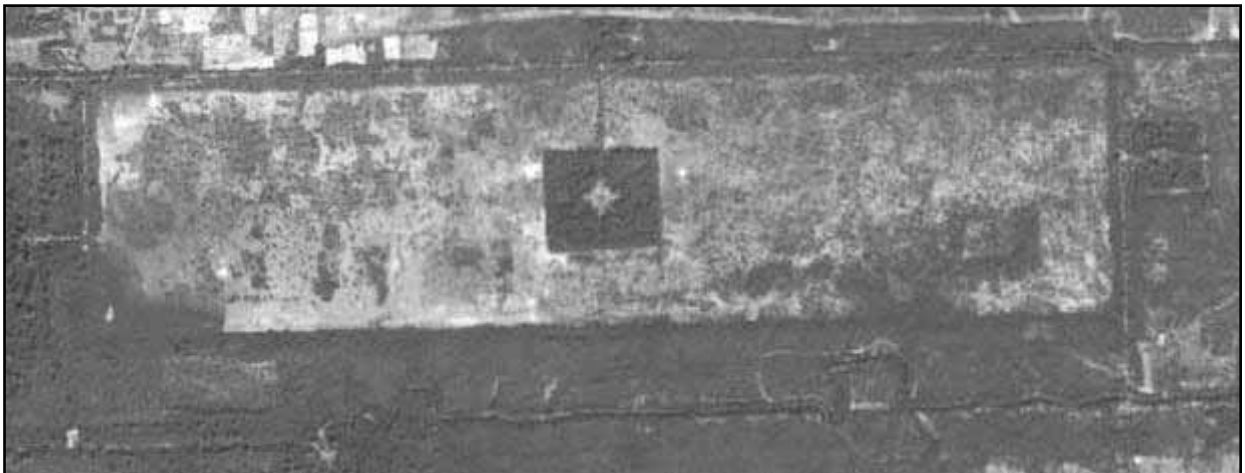
The Neak Poan temple is located in the northeast part of the Angkor area, in Nokor Thom district, Siem Reap province (Fig. 1). It is 2.5 km due east of Preah Khan temple and 2 km west of Ta Som temple, and its entrance is from the road running east-west between these two monuments. The path leads south from that road for 300 m to Neak Poan temple. Neak Poan temple is in the outermost Zone 1 at Angkor, which contains the most significant archaeological sites in the country and therefore deserves the highest level of protection. This temple is one of 91 temples inscribed on the World Heritage List in 1992.



1. Map of Angkor Zone

2. History

Neak Poan temple (Fig. 3) is one of the temples built by King Jayavarman VII (1125–1215) in the late twelfth century, and is dedicated to the Bodhisattva Avalokitesvara of Mahayana Buddhism (Fig. 8). This unusual small monument (pronounced ‘Pouan,’ which designates a cruciform arrangement of ponds with a sanctuary tower on a circular island in the middle) is a highly symbolic structure sitting in the middle of the Jayatataka Baray, or reservoir (3,500 m by 900 m), on what was formerly an island (Fig. 2); it may represent the sacred Himalayan lake of Anavatapta. This lake was famous for its miraculous healing properties and as the source of four great bodies of water issuing through the mouths of a lion, an elephant, a horse and a man. However, this Buddhist symbolism only came later, during a period of rebuilding, and it was originally a royal Hindu site, named in an inscription of Preah Khan temple as Rajyasri (Fortune of the Kingdom). At the end of the thirteenth century, the Chinese envoy Zhou Daguan gave a number of other aspects of this monument: “The northern lake lies one and a quarter miles to the north of the walled city. At its centre stands a square tower of gold with several dozen stone rooms. If you are looking for gold lions, bronze elephants, bronze oxen, bronze horses, here is where you will find them.”



2. Aerial photo of Jayatataka Baray and Neak Poan temple



3. Baray and Neak Poan temple, 1940



4. Neak Poan temple, 2009

Some historians believe that Neak Poan temple indeed represents Anavatapta, the mythical lake in the Himalayas whose waters are thought to cure all illness. Neak Poan temple was originally designed for medical purposes, as it is one of the many hospitals that Jayavarman VII built. It is based on the ancient Hindu belief of balance. Four connected pools represent Water, Earth, Fire and Wind. People believed that going into these pools would balance these elements in the bather, thus curing disease. In the middle of the four healing ponds is the central water source. There is a statue of Balaha (Avalokitesvara Bodhisattva transformed into a horse, Fig. 7), as a symbol for preventing drowning.



5. Neak Poan temple, 2009



6. One of the four small chapels



7. The horse, Balaha



8. Bodhisattva Avalokitesvara statue on the north

3. Architectural plan

The artificial island, on which Neak Poan temple and its surrounding ponds are located, symbolically marks the center of Jayatataka Baray, which is associated with Preah Khan temple. The investigation carried out for the monumental part of this island was based on observations made by Henri Marchal (Figs. 9-10) and Maurice Glaize (Fig. 11) during the clearance and conservation. This unit includes a small Prasat (temple) dominating a circular base enclosed by the two entwined nagas giving the current name to complex. This symbolic small island is surrounded by square platforms with banks of sandstone steps at each cardinal point and chapels, opening on a platform of smaller dimensions. This unit is supplemented by four other laterite chapels that cannot be measured for reason of the nature of their materials.

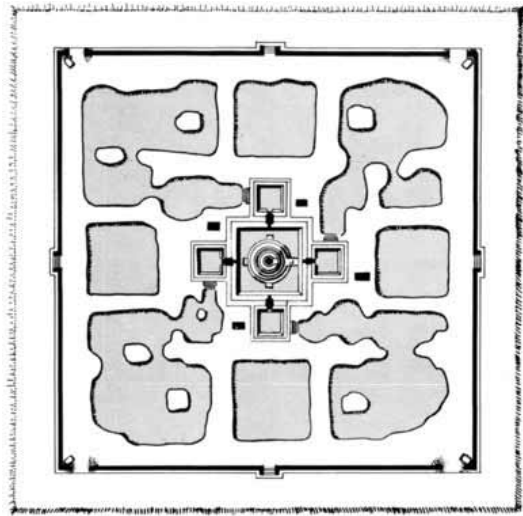


Fig. 3. — Plan d'ensemble de Neak Poan, d'après le relevé de H. Marchal.

9. Neak Poan as observed by H. Marchal

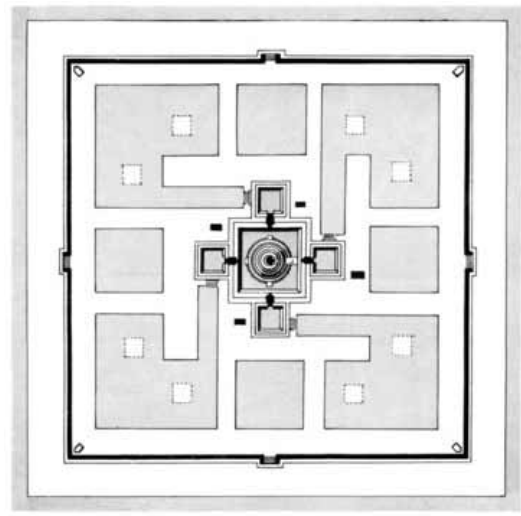
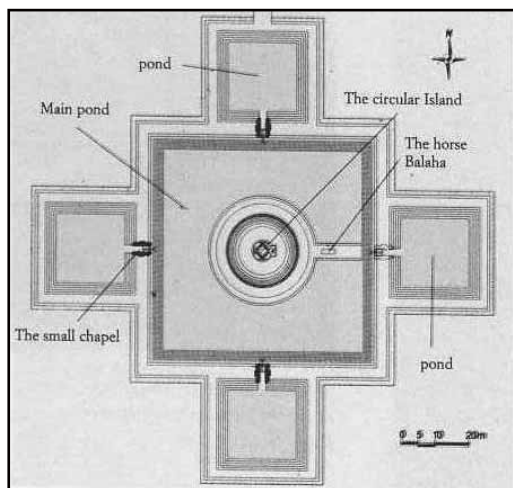


Fig. 4. — Plan d'ensemble de Neak Poan, tentative de restitution.

10. Neak Poan, tentative reconstruction

The architectural history of this monument can be divided into two stages. The central sanctuary, in the first stage, lacked its current corner motifs and false doors. The platform supporting this first version of the central Prasat, already circular but less prominent, was perhaps surrounded by the principal basins. It is during the second period of construction that the secondary basins with their chapels were constructed.



11. Plan of Neak Poan temple



12. One of the four small ponds

The architectural decoration of the central sanctuary enables us to place the original stage of this monument at the beginning of the first half of the Bayon temple style, when only the major part of Ta Prohm temple and center of Preah Khan temple were present.

Like the West Baray and East Baray, each with of which has its Mebon, the baray of Preah Khan was designed with an island temple in its middle. Although the Jayatataka Baray is now dry, the island was of substantial size, at 300 m square. At its centre is the main pond, 70 m square, with four smaller ponds, each 25 m square, joined to it at the cardinal points. In the centre of the main pond, a tiny circular island 14 m in diameter supports a sanctuary tower. Surrounding these parts of the complex were perhaps other ponds, now dry.

4. Symbolism

Dedicated to the Mahayana Bodhisattva Avalokitesvara, the form of Neak Poan temple is modeled on the famous site of Anavatapta in Buddhist cosmology. Healing waters flowed out from the lake in the cardinal directions, through fountainheads in the forms of a lion, an elephant, a horse and a human, the same four creatures found upon the drum of the famous Sarnath lion capital. At the center of Neak Poan is a square pond, and in its middle is small, circular stone tower, on a round stepped plinth, in turn encircled by two nagas, their raised heads facing east and their entwined tails to the west. The whole is surrounded by four smaller ponds, connected by water spouts, which are in the heads of a horse (Fig. 15), an elephant (Fig. 14), a lion (Fig. 16), and a human (Fig. 13). The latter head may be another instance of Jayavarman using his own features, a practice already much in evidence throughout Angkor.



13. Human



14. Elephant



15. Horse



16. Lion

It would appear that a Buddhist priest, standing on the steps that enter the central pond, poured sacred water by hand into a spout, which then flowed out through the carved heads and down upon the worshippers, who stood below, inside small chapels, not visible to the priest. The devotees stood upon or sat on pairs of carved, stone feet, directly beneath the heads, to receive the sanctified and healing wasters.

5. Ritual of the Treatments

The ancient temples that have survived until now are parts of functioning religious temples, and their religious meanings are of great significance. We can generally say that a Prasat, or temple, is viewed as a settlement of the gods. So people built various temples for their villages and cities in order to

conduct festivals in front of the gods. Another reason is that human beings cannot meet the gods in heaven for prayer, so humans made sculptures of the gods and built the temples close by, so they could offer prayers.

The Neak Poan temple has a different architectural plan from other temples. It is of interest not only to historians of architecture, but to tourists and villagers as well. The structural plan of the Neak Poan temple is a central tower surrounded by water in rainy season, with medicinal trees.

In Preah Khan temple's inscription (census number k. 908), describes Neak Poan temple in the forty-first phrase as follows: "There exists one flamboyant glamorous and outstanding islet rising in the middle of a big pond surrounded with other small ponds where all sin, vice, blemishes, are cleansed and washed away." Researchers have always interpreted this inscription as meaning that Neak Poan was a place for curing all kinds of sickness. The water emerge from the four gargoyles carved in the form of a human head on the eastern pediment, a lion's head on the southern pediment, a horse's head on the western pediment and an elephant's head on the northern pediment. In line with Indian myth, the archaeological scholars considered the water spurting out of the gargoyles as symbolizing the waters of the four major rivers flowing from the Himalayas. These four rivers were seen as originating in paradise, and amongst them is the famous Ganges river. Even in the present day, people of India come to this river to bathe, and to clean away sin and vice.



17. People praying to Avalokitesvara



18. People treating disease?



19. People praying at the central tower



20. Items used for prayer

The temple was also constructed in accordance with a myth which today only a few people know. This epic describes a group of merchants who suffered an accidental shipwreck, and were cheated by a group of female giants on an island. All of the merchants were saved by Avalokitesvara in the form of a horse. It should be emphasized that Avalokitesvara is a major deity in Mahayana Buddhism. Avalokitesvara has the duty to save and assist human beings (Figs. 17-18). Sculptors portrayed this Mahayana Buddhist theme on the platforms of chapels at Jayavarman VII's hospital. This implies that treatment of diseases was important at that time. Besides Avalokitesvara, there is another Mahayana deity, Bhaisaya Guru, who is a Buddha of medicine.

Up to the present day, local residents have never known the Mahayana Buddhist myth pertaining to Neak Poan. But there is belief that the temple is effective in the treatment of disease (Figs. 19-20). For example, we see four small laterite shrines built separately in each of the cardinal directions. They are now almost covered completely with soil. These four shrines were called Prasat Hora, meaning "fortune teller shrines." Local people came to the shrines to pray and to have the causes of their diseases, thought to lie in an imbalance among four basic elements, divined from their symptoms. The local residents also believe that herbs growing in the temple have effective medicinal qualities. It is a phenomenon that all kinds of medicinal herbs in the Angkor area grow in the middle of ponds. For instance, local villagers can find oil vine everywhere in Angkor, but they prefer to pick oil vine at the Neak Poan temple rather than anywhere else, because they think the vine from Neak Poan is more effective than that from other places. We also have many other medicinal plants (Khmer words for medicinal herbs): *voeur preng*, *eisei psom thnam*, *treal sva*, *tro yeung*, *kchas*, *voeur kuy*, *popel khe*, *kagn cheu baydach*, *svay kokit*, *prah dongkap*, *angkrong*, *sang kheur*, *treak*, *roveang*, *andat trokout*, *trolom pe*, *chheu pleung*, *pong ro*, *chom bork*, *voeur meas*, *por preus*, *am pous*, *makak prei*, *angree dark*, *kro boa*, *khnol prei*, *chrei kram*, *sro mor*, *kantout prei*, *ktom*, *kom phneang*, *agn chagn*, *khleung kong*, *ang kol*, *khchet*, *krolagn*, *prah komchat*. All these names come from local people.

6. Iconography

The iconography of Neak Poan also reflects its Buddhist history. The circular island in the middle is encircled at its base by two nagas, their heads on its East side and their tails entwined on the west.



21. Heads of two nagas in front of the temple



22. Tails of two nagas entwined behind the temple

They seem to represent the naga kings Nanda and Upananda (Figs. 21-22), linked in Hindu mythology with lake Anavatapta, and give the monument its modern name, which means “entwined serpents.” The top of the circular steps that form the temple’s platform is ringed with lotus leaves. Another set, inverted, forms the base of the tower.



23. East pediment: cutting of Siddhartha’s hair



24. North pediment: the “Great Departure”



25. West pediment: Buddha meditating under the Bodhi tree



26. Statue of Avalokitesvara transformed into a linga

The sanctuary opens to the east, with blind doors on the other three sides. Originally the temple was cruciform with doors opening on the all four sides. Later, three doors were closed and elephants placed at the corners, making the temple round. A standing Avalokitesvara is carved on each of the blind doors. Above the one facing north, whose head was recently stolen in 1995, the pediment shows the “Great Departure” (Fig. 24). On the east pediment is the cutting of Siddhartha’s hair (Fig. 23), on the west pediment is the Buddha in meditation under the Bodhi tree (Fig. 25), while that on the south is unrecognizable. The tower itself is in the shape of a pointed arch, topped with a lotus bud. Just east of the island, the statue of a flying horse rises from the water. Clinging to its tail and its flanks is a group of men. Although unfinished, the horse is clearly Balaha, one of the forms taken by the compassionate

Bodhisattva Avaokitesvara, and in this instance he is helping seafaring merchants escape from an island inhabited by female giants. Balaha also appears in the hidden part of the terrace of the Elephants in Angkor Thom. Stone images are found on the other three sides of the island: a statue of Vishnu to the west, some lingas to the south, and an unrecognizable image to the north.

Four small chapels link the main pond with the smaller ones; only their vaulted roofs appear above the level of the terrace surrounding the pond, and these are decorated with pediments and half-pediments with standing Avalokitesvara figures. But one of the statues of Avalokitesvara was transformed into a linga (Fig. 26) during the reign of King Jayavarman VIII. Within each chapel, water poured by a priest from above into a central spout passes through a conduit to emerge from a mouth, in the eastern chapel in the form of a man's face, and the others are a lion in the southern chapel, a horse in the west, and an elephant in the north.

II. Archaeological Research

On 28-30 July 1995, the International Co-ordination Committee for the Safeguarding and Development of the site of Angkor (ICC) discussed and made recommendations about Angkor and water. Mr. Fournier, the Reporter General, presented these recommendations and the conclusions of the workshops and of the plenary session. The Angkor temples occupy an exceptional place among World Heritage sites. Therefore the Kingdom of Cambodia may consider tourism to continue being a major source of revenue. However, while acting to conserve the relevant archaeological structures, it should also simultaneously take into account the necessity of preserving the environment and maintaining the natural resources, particularly the food resources, on which the population lives. Furthermore, it is necessary to integrate the local population into the development of the region.

These considerations led to the organization of a colloquium, entitled "Angkor and Water," held by the Higher Council for National Culture of Cambodia, l'Ecole Francase d'Extreme-Orient, and UNESCO, during which three working groups met to discuss the following: the management of hydraulic systems in archaeological structures; the management of hydraulic systems in agricultural structures; socio-economic constraints on the management of water. The three working groups also issued specific recommendations on different themes they had discussed. These groups concentrated their discussion on the three aspects of the enhancement of the barays (reservoirs), the canals and ditches, and the stability of the monuments. But I would like to comment on the first aspect, the enhancement of the barays, which has relevance for various barays in the Angkor area, including the East Baray (Yasodhara), the West Baray (Toeuk Thla), and especially Jayatataka Baray. In discussions of baray enhancement, historical, sociological, pedagogical (understanding of the site), aesthetic (tourism), technological, and finally, hydrological issues were all addressed. For the Jayatataka Baray, it was noted that from a historical point of view, this was the last hydraulic work built by King Jayavarman VII, a fact that was part of the site's historical coherence. From a sociological point of view, there would be no problem in filling it with water, since there is no village there, it being situated upstream from the site. Also, from a hydrological perspective, there are very few breaches in

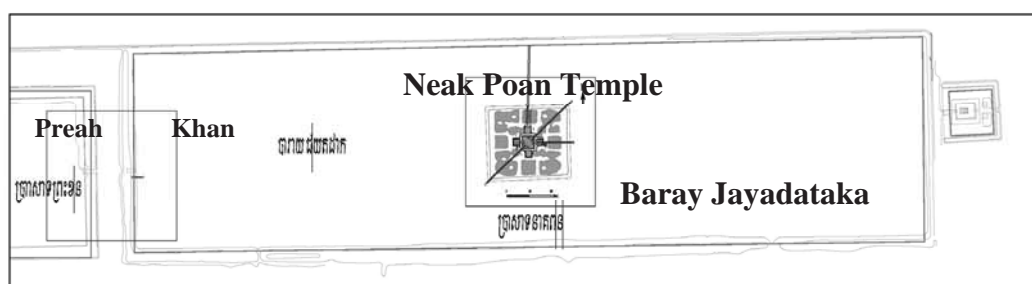
its dikes, and it has the advantage of having at its centre the particularly remarkable site of Neak Poan temple, which would benefit from the reservoir being refilled. Finally, doing so would also be useful for agriculture. It was also recommended that Jayatataka Baray be filled with water with the intent of returning the baray to its original level, preferably by building up its dikes. Should difficulties ensue in carrying out this plan, then an alternative solution should be found. In order to carry out these recommendations, it became necessary to have a project of archaeological excavation at Neak Poan temple.

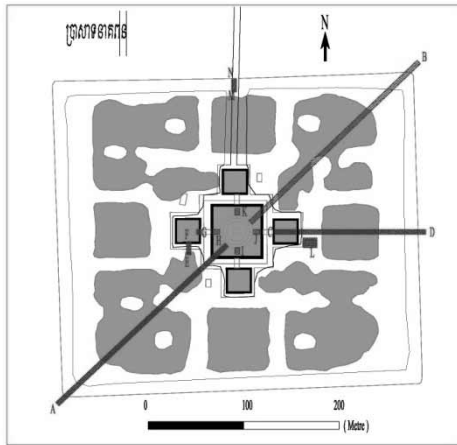
1. Archaeological Excavation at Neak Poan Temple

Neak Poan temple can be called a special building, constructed in the middle of a water reservoir known as Jayatataka Baray (reservoir of Jayavarman VII, or Northern Baray), and it probably dried up after the Angkor period. Thus the people who are living in the Angkor area call this water reservoir Veal Raja Tadaka, meaning the field of the royal water reservoir. With support from the ICC, starting in 2007 the Apsara Authority tried to bring water from the outside and fill the baray as it had been in ancient times. But in October 2007, while in the process of opening the water gate to allow the water to flow into the baray, there was a storm called Ketsana hitting some parts of Cambodia, including a large part of Siem Reap province. This storm brought too much water, causing floods in some places in the Angkor region with high levels of water. The water of the Northern Baray also irregularly flooded, posing threats to the structures around the Neak Poan temple. In order to carry out this work, to understand better the archaeological remains and especially the historical value of the temple, the Department of Archaeology in Angkor Park has planned a project of archeological excavation at the Neak Poan temple site.

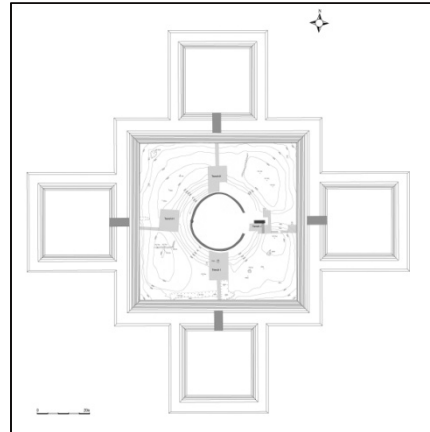
The members of the Department of Archaeology in Angkor Park conferred with members from Ecole Française d'Extrême Orient (EFEO) about plans for the archaeological study of this temple site, making a special visit to the site with Mr. Eric Lopis (INRAP), who has given valuable assistance for many archaeological research and excavation projects in the Angkor area.

For the first stage of this work, it was important to make a topographic map of the area around the temple, to help in understanding the functions of the general structures of Neak Poan temple and the area around the temple, and in particular to know clearly about the evolution of the entire history of the temple. Next, choices were made for the locations of excavation trenches and their positions were laid out. This work was divided into two parts, namely, the locations for excavation at Neak Poan temple, and locations for excavation inside the water reservoir (Jayatataka Baray).





27. Trenches at Neak Poan temple



28. Trenches at Neak Poan temple

This year, 2010, we started excavating in the big pond at the central tower. We divided the work at four trenches (H, I, J, K) among six archaeologists (Chhouk Somala and San Kosal at Trench H, Hou Nalamony and Tho Thon at Trench I, Seng Chantha at Trench J, Phoeung Dara and Thoeurn Sokhon at Trench K) and 40 workers. The purpose of excavation work at Trench J is to study the reasons for damage to the pond (choosing as places for excavation spots near the steps of eastern pond, at the location of the horse in the central pond, and at the steps east of the central tower), and in Trenches I, H, and K it is to study about the structures of the small chapels at these three places, where presently many kinds of ancient objects and statues are stored separately (in Trench I there are many lingas, Trench H is at a place used to store a reclining statue of the god Vishnu, while Trench K is at a place used to store the statues' supports).

2. Review of the Preliminary Results of Archaeological Excavation at Trench J

Trench J is located to the east of the central tower, between the tower and the staircase on the eastern side of the central pond. It was set up in order to check the condition of the foundation of statue of the horse Balaha, for future reconstruction by DMA. Originally the trench was opened 0.6 m wide by 1.5 m long. However, the buried laterite causeway connecting the tower to the eastern bank of the central pond was found unexpectedly, so the trench was repeatedly enlarged in order to investigate its structure, foundation system, and the condition of the causeway and its relationship with the temple. The whole trench was divided in to three sections (A, B, C). A is located to the southwest, B to the northwest, and C located on the southeast side of the causeway (Fig. 28).



29. Trench J in front of the central tower



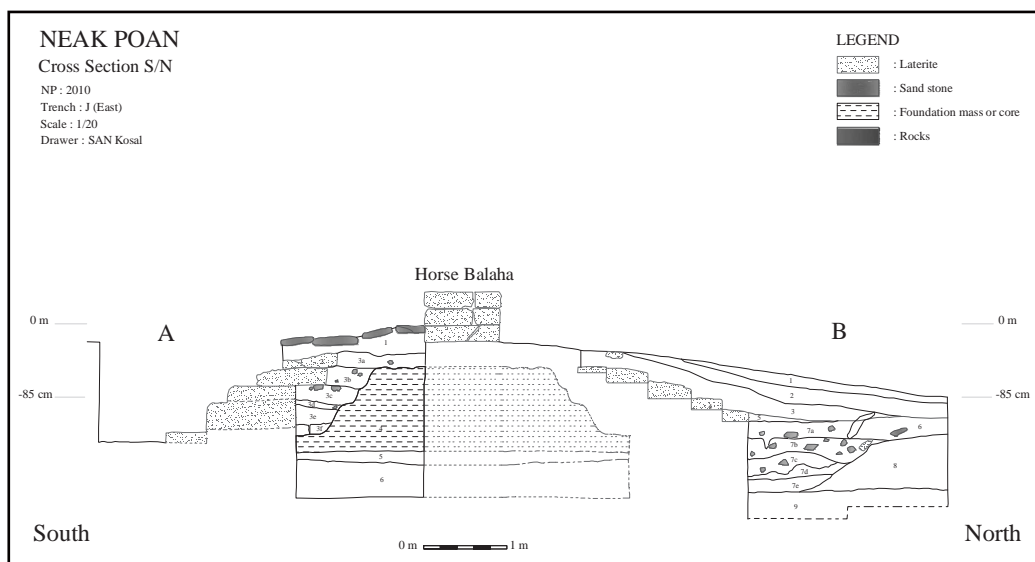
30. Foundation of the horse Balaha and the core of the causeway



31. South side of the laterite causeway



32. North side of the laterite causeway



33. Profile of Trench J

China

MA Chaolong

Deputy Director / Assistant Professor

Longmen Grottoes Academy

Conservation Research Report on World Cultural Heritage: Longmen Grottoes

The Longmen Grottoes, distributed on the cliffs along the banks of the Yi river to the south of Luoyang, an ancient capital city in China, represent an extremely important part of the Chinese art of stone carving, and a most splendid and glorious chapter of stone carving in world art. Developed between the fifth and the eighth centuries, the grottoes are masterpieces situated between the early and middle periods of the history of Chinese stone carving. Standing on two hills today are 2,345 niches housing more than 100,000 statues, and 2,800 steles with inscriptions containing more than 300,000 Chinese characters.



Picture 1. Bird's-eye view of Longmen

The Longmen Grottoes comprise one of the three major treasure houses in China of stone inscription and art, and were inscribed on the World Heritage List in 2000. But they have also been subjected for 1,500 years to many destructive forces, such as pollution, weathering, water leakage, plant and animal growth, and collapsing rock. These adverse factors threaten the cultural relics' long-term preservation, making it difficult for researchers working on the conservation and restoration of the Longmen Grottoes.



Picture 2. Landscape of Longmenshan, the west mountain

I. Location and Environmental Context

The grottoes are carved on the cliffs at Longmen along the banks of the Yi river, where the two mountains Xiangshan (to the east) and Longmenshan (to the west) stand facing each other. Seen from a distance, they appear to form a natural gate, where the Yi flows northward through a gorge. The stone is limestone from the Middle and Upper Cambrian eras, and is of medium hardness, suitable for carving. The stone is characteristically soluble, however, especially in the presence of carbon dioxide and water.

The area has a temperate continental monsoon climate, with distinct seasons, excellent natural surroundings, and suitable temperatures. The average rainfall amount and temperature are 593 mm and 14.5°, based on long-term data.

II. Main Problems of Conservation

For over 1,500 years, the Longmen Grottoes have sustained destruction from human forces as well as natural disasters. The grottoes face many problems. For example, some rocks are badly corroded, and



Picture 3. Indistinct, weathered carving



Picture 4. Weathered carving

some sculptures covered with coatings of calcite from the limestone. Exposure to rain and the resulting weathering of the rocks, plus the growth of wild grass and trees are also serious problems. As a result, cracks can be seen in the rock at the bases of the caves, with water leaking through some of the crevices, and in some places the rock has collapsed. The surface of the sculptures is also deteriorated and damaged. This weathering of the carvings is a serious problem at the Longmen Grottoes, as the crusting, peeling, or other types of changes caused by weathering are most harmful to the cultural relics. It is impossible for us to root out damage from weathering, but we can improve the environmental conditions of the grottoes to slow its speed.

III. Treatments and Measures Used for Conservation

Ever since the 1970s, planned conservation and restoration projects have been initiated and implemented. Reinforcement with steel riveting has been used to strengthen the rocks, a seep-proof layer of cement was applied on the top of the caves, plank pathways and staircases for touring have been repaired and constructed, and enclosures along the sides of sites needing protection have been set up. Various engineering conservation plans have been used experimentally in trying to solve the problems mentioned above. However, no specific methods have been found that provide permanent or long-term conservation and management for the caves with regard to mass displacement of rock, leaking in the caves, or weathering on the surface of the sculptures. Meanwhile, it is hoped that further research will secure the durability of the previous strengthening by steel riveting and water-proof



Picture 5. The biggest Buddha before restoration



Picture 6. The biggest Buddha after restoration

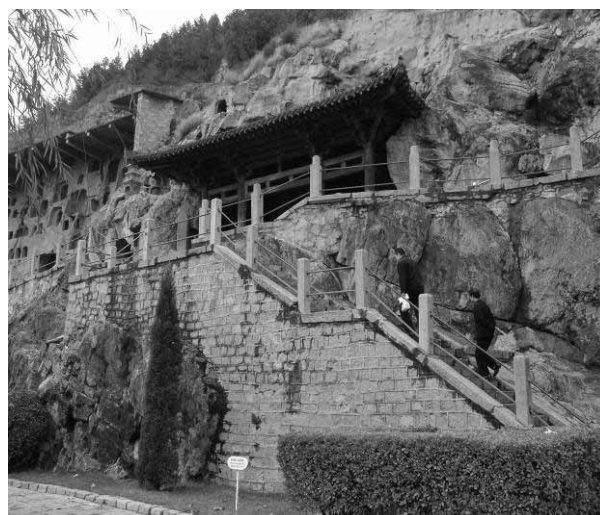
layers of cement. This would give a fundamental guarantee for the security of the Longmen Grottoes. Thereafter, further research can be carried out by the conservation staff at Longmen with regard to cave water leakage and the weathering of the stone sculptures.

Since 1991 we have carried out large-scale renovation projects in the surroundings of the Longmen Grottoes, demolishing unharmonious buildings in the protection zone, and closing limekilns and quarries, steps made when applying for status as world cultural heritage for the Longmen Grottoes, which was successful. Subsequently the Luoyang government has made the World Heritage Site the focus of a new start, and has continued strengthening its investment in the renovation of the surroundings. Two bridges over the Yi river were built to the north and south, outside the protection zone, which drastically improved the problem of automobiles passing through. In April 2003 further shielding of the protection zone was carried out, realizing a promise to UNESCO. The surroundings and environment quality have thus changed greatly.

From 2002-08, the UNESCO Conservation and Restoration Project for the Longmen Grottoes was conducted as aid given gratis by UNESCO, utilizing the “Japanese Entrusted Funds for the Conservation of Cultural Heritage” for its operation. It consisted of cooperation between China, Japan and UNESCO, with the purpose of carrying out conservation and restoration work on the Longmen Grottoes. The total investment in the project was 1.25 million U.S dollars. The Project was officially signed in November 2001 and brought into effect in January 2002. It divided into two periods. The focus of the first period (2002-05) was the collection of topographic and geological survey data, the mapping and monitoring of the grotto environment and damage, and experimental work involving materials and technology. In the second period (2006-08), major efforts were devoted to conservation and restoration work in three experimental caves. At present all work has been successfully completed, and has resulted in significant achievements.



Picture 7. Leakproof cement shelf



Picture 8. Leakproof wooden shelf

IV. Classification of Natural Damage at the Longmen Grottoes

As a huge site of immovable heritage, the Longmen Grottoes have been subject to various types of natural damage for ages. Classification of this damage has been difficult but important basic work. Having been studied for years, the natural damage at Longmen Grottoes can be grouped into three categories: the collapse of the statues and rock around the caves and niches, water leaking into the caves, and weathering of the sculptures. Each of these consists of several subtypes. We have searched for accurate descriptions and definitions of these various types. It turns out that the classification of such damage has played a significant role in the conservation of the Longmen Grottoes.

A. COLLAPSE OF STATUES AND ROCK AROUND CAVES AND NICHES

This is a type of major natural damage. After 1,500 years, in many cases the rock around the caves and niches has been lost. Due to the development of crevices, blocks of rock become isolated from the parent rock on the cliffs. After some time, these isolated blocks fall down of their own weight, or due to the ground shaking. For these reasons, many statues have lost their heads, arms, hands or other parts of their bodies. Sometimes parts of the statues themselves collapse. The damage can be divided into the following subtypes.

1. Loss. Medium or large parts such as the heads, hands, arms, legs, etc. are lost. It is impossible to restore such losses.
2. Rupture. Wide cracks have split the rock into two or three parts, but it has not fallen off yet.
3. Separation. A piece has a tendency to fall off, always for small parts linked to the rock mass or base.
4. Detachment. Parts of rocks or statues have become isolated.

B. WATER LEAKING INTO THE CAVES

Cause of leaking water. The Longmen Grottoes were excavated in cliffs of carbonate rock on two mountains, Xiangshan and Longmenshan, along the banks of the Yi river. The rock is composed of strata of dolostones and limestone of the Middle to Upper Cambrian, and the Upper Cambrian layers can be divided into deep and massive layers of fine-crystalline, micro-crystalline, and reef shoal dolostones, while the Middle Cambrian strata divide into thinner layers of soil and zebra limestone and reef shoal limestone. Most of caves and sculptures were excavated in the middle and upper part of the deep and massive layers of fine-crystalline and micro-crystalline dolostones from the Upper Cambrian, as well as reef shoal limestone and the soil and zebra limestone of the Middle Cambrian. The mineral composition of the rock where the caves are located is uniform, with high mechanical intensity, good durability, but with dissolubility. Even though the rock itself is impervious to water, a lattice percolation network has been formed by the development of many kinds of cracks, such as layer cracks, unloading cracks, weathering and tectonic cracks, which intersect each other. This network has become a path for seepage, providing access for the entry of rainfall. Almost all large and medium

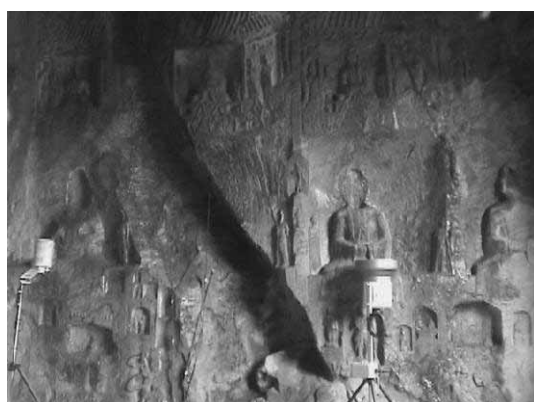
caves in the Longmen Grottoes have problems of leaking water to various degrees, some being very severe such as Qianxi Temple Cave, Wanfo Cave and Kanjing Cave, etc. After careful research, it has been confirmed that layer cracks and unloading cracks are the main causes for leaking water in caves at the Longmen Grottoes.



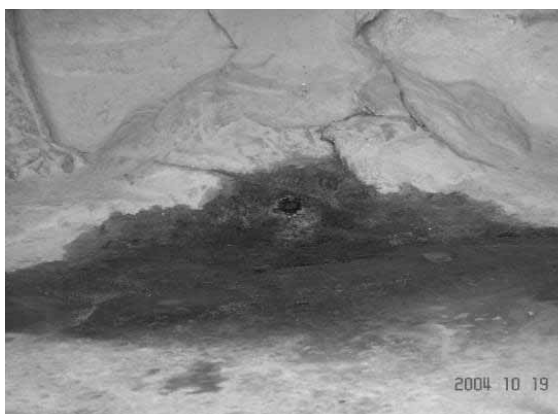
Picture 9. Leaking water on the Wanfo Cave roof



Picture 10. Standing water on the floor of Wanfo Cave



Picture 11. Leaking water running through cracks on the north walls, inside Ludong Cave



Picture 12. Biological growth on the floor, caused by water dripping from the roof of Yaofang Cave

Damage from leaking water. The carbonate rock where the caves are located is susceptible to erosion caused by leaking water. Rain seeps into the caves through tectonic and layer cracks, eroding the rock surfaces along the sides of the cracks, enlarging them into wider gutters and troughs. It directly destroys the sculptures. It can also leave sediments on surfaces of the cave walls and sculptures, the residue of a slurry of dissolved limestone which covers the cave walls and sculptures so badly that their artistic value is unrecognizable. Percolating water can also increase the humidity inside the mini-environment after entering the caves, accelerating the condensation of water in the summer, so that salt inside the sculptures is drawn out by the water and crystallizes with the change between a humid and a dry environment. These various problems together accelerate the breakup of connections between rock granules at the surface, leading to an expansion of cracks, and resulting in damage to the

sculptures, such as surface cracking, flaking, and separation of matter, etc. After entering into caves, the percolating water, together with gaseous carbon dioxide, sulfur dioxide, and nitrogen oxides, cause hydration, oxidation and acidification on sculpture surfaces, and can result in surfaces disintegrating to the point of becoming unrecognizable. Percolating water also runs into the sculptures and provides conditions for the growth of microorganisms, and acids created during the growth and decomposition of these microorganisms accelerate the disintegration and loss of recognizable features at the surface. According to measurements of percolated water, its ph value in the presence of microorganisms is in the slightly acidic range, from 5.6 to 6.2. Its erosive effect on the sculptures cannot be neglected.

Damage from leaking water mainly includes the following.

1. Deposition of dissolved limestone. Limestone dissolved by water is left upon evaporation as a layer covering the walls and sculptures in the caves, rendering many of the statues or small niches no longer visible.
2. Microorganisms. Microorganisms grow at areas around the points where water leaks in, making those portions disharmonious with the rest of the walls and statues.
3. Erosion. Leaking water erodes the surface of the rocks and statues continuously, making these surfaces fragile and weak.
4. Stains. Discolorations left by water on the surfaces of rock and statues, making those areas disharmonious with the rest of the grottoes.



Picture13. Carvings covered with sediment



Picture 14. A Buddha eroded by water and dust

C. WEATHERING OF SCULPTURES AND STELES

The weathering of sculptures and steles, which is familiar and serious, especially in the southern part of grottoes, is far more difficult to resolve. Geologically speaking, the weathering is caused by such factors as rainwater, solar radiation, wind, temperature difference, organisms, etc. The weathering appears first on statues and steles exposed to sunlight, wind and rain, and later becomes visible on statues in the caves. Damage from weathering can be divided into the following sub types.

1. Exfoliation. All or part of the surface of rocks separate gradually from the parent rock, usually parallel to the surface. Such loss cannot be restored. According to its morphology, exfoliation can be subdivided into many types, such as flaking, scale, granular, powder, banded, etc.
2. Dissolution. Dissolving of the surface, in either a uniform manner or unevenly, or limited to a particular spot producing a solution hole.
3. Fracturing. The appearance at the surface of fissures or micro-fissures.
4. Pitting. This is formed by the action of wind and water on rocks over thousands of years.
5. Nicking. Various marks made on the surface, independent of carving and molding, usually from manmade behavior.
6. Encrustation. This may be caused by the crystallization of a carbonate from within the rock, or through efflorescence from the deposition of soluble material brought to it.
7. Discoloration. This may be the result of oxidization or rainfall, or soiling from any type of pollution on the surface, including rusty spots, oil stains, ink marks, organic secretions, and other chemical materials, etc.
8. Surface deposits. This may be from falling dust or the activities of organisms, which are easy to clear up by gentle mechanical actions, or a harder crust or film, caused by falling dust or acid rain.



Picture 15. Ink mark

V. Factors Affecting the Longmen Grottoes in the Future

A. DEVELOPMENT PRESSURES

The Longmen Grottoes are located in an agricultural and forested region. There are many development-related activities, such as the leveling of hills, quarrying, mining, logging, grazing, storing inflammables and explosives, which could pose a threat in this region. Since the demarcation of the zone for the protection of the Longmen Grottoes in 1962, those activities are strictly controlled. In 1983, a wider zone restricting construction (for greater protection) was demarcated. In this zone, no facilities that may endanger the safety of the cultural relics shall be constructed, nor any buildings or structure disharmonious with the environmental features of the sites to be protected for their historical and cultural value. It is also strictly forbidden to cut the forests, reclaim waste land, mine, conduct explosions, level the hills, or quarry in this zone.

B. ENVIRONMENTAL PRESSURES

The Longmen Grottoes are located in a mountainous area in western Henan province, and on the southern edge of the Heluo basin. Based on years of monitoring, the area in which the Longmen Grottoes sit is known to have the following environmental conditions.



Picture 16. Ice freezing

Climate. With a northern temperate continental monsoon climate, Longmen has four clearly demarcated seasons. Characteristic of this climate is a cold winter with little rain or snow, dry and windy conditions in spring, a hot and comparatively rainy summer, and fine weather with long sunshine in autumn. The average annual temperature is 14.5°, with the average hottest monthly temperature 27.4° and the average coldest monthly temperature being -0.5°. As for humidity, it is 75% in the hottest month and 63% in the coldest month, averaging 65% annually. Total annual rainfall is

593 mm (averaged over many years), of which 60% falls in summer. The most rainfall in a twenty-four hour period is 105 mm, and the greatest hourly rainfall is 39.1 mm. There are 200 frost free days and 28.3 thunderstorms in a year. The absolute highest ground temperature is 69°. The greatest wind power is force 8. As described above, the monsoons and wide temperature range cause frequent expansion and shrinkage of the rocks, and can easily lead to the intensification of the weathering of the carvings at Longmen.

Atmospheric conditions and environmental quality. The average annual value of sulfur dioxide was 0.038 mg/m³ and that of nitrogen dioxide was 0.027 mg/m³. The ph value of rainfall is 6.19 on the average. Air pollutants resulting from industrial development may increase the acidity of rainfall, thereby worsening the corrosion of the surfaces of the carvings and the rocks on which they stand from the water leaking into the caves. This will not be helpful in protecting the grottoes. What is encouraging, however, is that the Longmen Grottoes are located in an area with a comparatively large cover of forest and vegetation, and comparatively little industrial pollution. Thanks also to years of effort at environmental improvement, the air and environmental quality are fairly good.

Environmental vibration. Among the threats in the surrounding environment, the Longmen Grottoes are exposed to vibration from the movement of trains and automobiles, which has a large impact upon the safety of the cultural relics. As for the re-routing of the highways, the People's Government of Luoyang City constructed two highways in 2003, away from the zone marked for the protection of the Longmen Grottoes.

C. NATURAL DISASTERS AND PREPAREDNESS

There are no earthquakes or wind storms in the area where the Longmen Grottoes are located, with floods being the only natural disaster. Passing the Longmen valley from the south to the north, the Yi river flows 1 km through the grottoes on the two hills. During flooding seasons in summer, the water in the river rises, sometimes reaching 0.5 m above the sightseeing paths. A few caves become flooded. In order to reduce the leaking of the caves and the washing of the carvings by rainfall during rainy seasons, leakproof cement and steel plates have now been laid and drainage ditches have been built atop the grottoes.

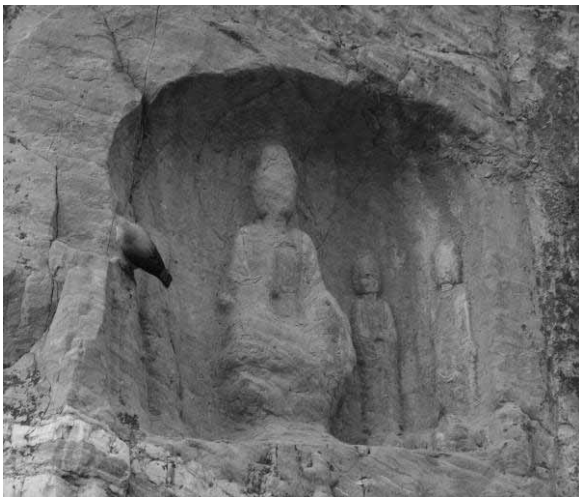
The growth of wild grass and tree roots has led to the expansion of crevices in the rocks, and has worsened the problem of leaking in the caves. In order to control the situation, the trees and wild grass that grow around the caves, which may endanger the safety of the caves and statues, are cleared on a regular basis.



Picture 17. The river overflowing its banks



Picture 18. Flood water reaches the carvings



Picture 19. Animal damage



Picture 20. Plant damage

D. VISITOR/TOURISM PRESSURES

As a tourist resort since ancient times, Longmen receives continuous flows of visitors all the time. It ranks first in China in terms of the number of tourists received by a grotto site. The cumulative number of tourists, calculated from 2000, reached 1.6 million in 2009.

Most tourists come to Longmen in spring or autumn when the temperature is comparatively lower than that in summer. Since most of the statues remain in the caves where the temperature is more stable than outside, and protective railing has been set up around all grottoes to prevent the tourists entering the caves, an increase in the number of tourists will not add pressure to the carved artistic works, although it may raise the temperature somewhat.

VI. Main Conservation Tasks at Present

For a long period, we had focused our efforts on conservation for rescue. In recent years, we have been more concerned with daily maintenance and engineering conservation. These tasks receive most of our attention each year. As a result, the grottoes are in a good and stable condition. However, much further research is necessary to resolve challenges such as the weathering of statues, water seeping into the caves, and the need to increase tourist capacity. As a result of the inscription on the World Heritage List by UNESCO, international and bilateral collaboration has become more and more frequent, and effective projects such as the UNESCO Conservation and Restoration Project for the Longmen Grottoes, carried out over a period of several years, have played a significant role alongside civil collaboration projects. Benefiting from this, the seven members of our staff have all attended different training courses or other study opportunities at various times over these years. However, due a shortage of funds, we have been unsuccessful for a number of years in having a specialized laboratory established. A simple and low-grade lab is unsuitable for the growing demands of conservation and restoration work. So we applied two years ago for a soft loan from Italy to establish a modern specialized laboratory. When it is completed in two more years' time, we will have a brand new, advanced and modern specialized laboratory for conservation and restoration work.



Picture 21. Maintenance work on the Vairocana Buddha (17.14 m tall)



Picture 22. Water leakage control project, Qianxisi Cave



Picture 23. Environmental monitoring station



Picture 24. Leaking water monitoring

According to the complexity and nature of the work, we have routinely carried out many comprehensive projects and plans that consist of interdisciplinary collaboration. From this I have gained much experience and various kinds of scientific knowledge involved. In addition, many different difficulties have been met and solutions prepared relevant to my working environment: for instance, how to build up a complete and systematic working record of conservation; how to link archival records, environmental monitoring, and damage investigation with final treatments and assessments in a comprehensive fashion; how to consolidate and restore strongly-weathered layers on the surface of statues

in the open air.

More difficult work requires us to make decisions on up-to-date tasks. What should be done and what can be done for conservation? What techniques and treatments should be applied for this purpose? Is it reasonable to carry out any restoration in the caves before the leaking water is completely prevented and cured?

We feel the responsibility is more serious and urgent with regard to the acceleration of decay and damage. We are searching new methods and chances for collaboration to solve these problems, and welcome all types of international societies to take part in the conservation of the Longmen Grottoes, which belong to the World Heritage and contribute to the memorialization of human history.

Fiji

Ulaiasi MOTONIKUMI

Field Research Officer

Institute of iTaukei Language and Culture

Ministry of Indigenous Affairs

Safeguarding Intangible Cultural Heritage in Fiji

Introduction

Fiji was first inhabited by the early iTaukei (indigenous people) about 3,400 years ago. The iTaukei, who are part of the Melanesian group of people, lived a purely traditional life before Abel Tasman sighted Fiji in 1643. Then, there was an influx of European missionaries, explorers, whalers, traders and even ex-convicts. This resulted in Fiji being ceded to Great Britain in 1874. The British, who set up the first colonial government, introduced the Native Administration to guarantee that the native Fijians were developed without disturbing their culture. Since independence in 1970, the Fijian Administration continues to be an important institution in Fiji. Successive governments have supported the protection and promotion of the iTaukei language and culture.

General Information on iTaukei ICH

Like other indigenous peoples of the world, the iTaukei value their native culture dearly. This culture is closely related to the land, and the chiefs are always at its centre.¹

Although the intangible cultural heritage (ICH) also includes contemporary rural and urban practices,² this indigenous Fijian ICH report focuses mainly on traditions inherited from the past. Revisiting and researching these past traditions and customs involves looking at the *vanua*³ (the land).

¹ Tuwere, I. S. *Vanua: Towards a Fijian theology of place* (Institute of Pacific Studies, University of the South Pacific, 2002), p. 52. The *turaga* (chief) and the *ka vakaturaga* (chiefly thing) stand at the centre of the *vanua*.

² “What is Intangible Cultural Heritage?” (UNESCO pamphlet, 2009), p. 4.

³ Tuwere, *Vanua*. On the *vanua*, Ravuvu explains that: “the Fijian term *vanua*, has physical, social and cultural dimensions which are interrelated. It does not mean only the land area one is identified with, and the vegetation, animal life and other objects on it, but it also includes the social and cultural system – the people, their traditions and customs, beliefs and values, and the various institutions established for the sake of achieving harmony, solidarity and prosperity within a particular social context....” Ravuvu, A. *The Fijian way of life* (Institute of Pacific Studies, University of the South Pacific, 1983), p. 70.

Indigenous Fijians, like indigenous peoples around the world, are unique because we are born into very particular family roles and responsibilities. Responsibilities of a particular family would include special knowledge and skills that are passed down from generation to generation. These are regarded highly as God-given heritage not easy to part with, unlike matters of choice or preference.

The special knowledge and skills encompassed by Fiji's intangible heritage can be classified as follows: (1) traditional beliefs and knowledge, including religious beliefs, knowledge of the environment, natural history, social structure, kinship; (2) arts and entertainments such as music, dance, and games; (3) traditional technologies of daily life and livelihood, such as agriculture, fishing, house building, pottery, canoe construction and sailing, barkcloth manufacture, and the preparation and use of costumes and ornaments, food, and medicine; (4) oral traditions, including fables, legends, and historical accounts.

As in most indigenous cultures, the majority of the intangible aspects of the indigenous Fijian culture are mainly unrecorded. Indigenous Fijian customs, language, dances, traditional etiquette, etc. are oral, and so their preservation rests pivotally on continual usage and observance. However, the spread of a dominant global culture, combined with the influence of, among other factors, a cosmopolitan livelihood, an apathetic youthful population, and an emphasis on economic development, has placed intangible heritage in a precariously desperate position, being continually threatened and exploited.

Fiji is a multiracial country but this paper will focus mainly on the protection and preservation of the indigenous Fijian culture.

Institutions and Measures that Safeguard Fijian ICH

Governmental institutions, NGOs, and legal measures directly involved in the management of Fiji's intangible heritage are briefly described in the following sections.

Fiji Museum

The Fiji Museum is governed by the Museum Act, which also helps in the safeguarding of ICH. The museum became a government agency in 1929, with the mission of researching and preserving the country's history and culture. It is also tasked with the identification and surveying of heritage sites. It is very important to preserve the story of these particular sites, especially fortifications, which are also legally protected by the Museum Act.

National Heritage, Culture and Arts

This department, established in 1999, is the primary adviser to the government on policies that affect indigenous culture and heritage, and coordinates existing government agencies in planning and

implementing complementary activities. It is the responsible agency and point of contact in the government for statutory bodies and NGOs, namely the Fiji Arts Council, National Trust of Fiji and the Fiji Museum. Moreover, the department acts as the link to UNESCO for the cultural sector, through the Fiji National Commission.

Ministry of Education

Governed under the Education Act, the Ministry is also contributing towards the safeguarding of ICH in Fiji. At present the iTaukei language, an intangible heritage and the main means of communicating traditional knowledge, is receiving priority at present for inclusion as a compulsory subject in primary and secondary schools in Fiji.⁴ Besides, in its “20 Year Development Plan (2001-2020) for the Enhancement of Participation of Indigenous Fijians and Rotumans in the Socio-Economic Development of Fiji,” the government strongly recommended the integration of the Fijian knowledge system within the official knowledge system. This involves the inclusion of Fijian language, literature, culture, and performing arts in the curriculum – to be tested through exams like any other subject and not regarded as an extra-curricular activity.

Tertiary Institutions

At present in Fiji, tertiary institutions such as the University of the South Pacific, the University of Fiji, and the Fiji Institute of Technology have included ICH in their teaching curriculum. Apart from local institutions, there are international institutions which also carry out the study of iTaukei ICH. These include the University of Hawaii and Auckland University in New Zealand.

iTaukei Institute of Language and Culture

The Institute is governed by the iTaukei Affairs Act, and operates under the Ministry of iTaukei Affairs, which foresees the wellbeing and governance of the iTaukei in Fiji. Established in 1986 by a resolution of the Great Council of Chiefs and with the endorsement of the cabinet, the Institute is responsible for promoting the understanding, preservation, and development of indigenous language and culture. It undertakes research both in archives and in the field, and acts as a resource center, for local and overseas researchers, with its substantial archive of books, journals, audio and visual records and other resources on iTaukei language and culture.

Legal Protection of Intangible Cultural Heritage in Fiji

In 2003, the Institute became involved in the drafting of legislation for the protection of traditional knowledge and expressions of culture (TKEC). While the drafting of this legislation was in progress, the government felt a need to conduct a cultural mapping project, to inventory all aspects of TKEC of

⁴ Teaching of vernacular languages is an item listed in “The Way Forward” of Pillar 2, “Developing a Common National Identity and Building Social Cohesion,” of the People’s Charter for Change, Peace and Progress.

the iTaukei in Fiji. On January 7, 2010, the Fiji government agreed in principle to ratify the UNESCO 2003 convention, regarding the current inventorying of TKEC, as carried out by the iTaukei Institute of Language and Culture, as the foremost implementing arm of this policy for the Department of National Heritage, Culture and Arts.

Cultural Mapping Project: An Ongoing Government Initiative for Protection of Fiji's ICH

Need for this project arose from the draft legislation on TKEC. The government, through the Ministry of iTaukei Affairs, recruited and trained officers to meet the need. After conducting a pilot test, the actual program began in 2004. By 2009, five provinces had been mapped and the officers were half way done with the sixth province. The cultural mapping is hoped to be complete by 2014.

Cultural mapping involves the collection, recording, and documentation of iTaukei tangible and intangible cultural heritage in all fourteen provinces in Fiji. The information collected through cultural mapping will then be covered by the legislation for the protection of Traditional Knowledge and Expressions of Culture.

Provinces mapped so far are Serua, Rewa, Namosi, Tailevu, Lomaiviti, and parts of Ra. The remaining provinces that are still yet to be mapped are Ba, Bua, Cakaudrove, Kadavu, Lau, Macuata, Nadroga/Navosa, and Naitasiri.

The program at this time is operating with a staff of fifteen members. There are six project research officers classified under the iTaukei Intellectual Property Rights project and supervised by a project Administration Officer. In addition, the Institute has recently recruited eight more to serve on the project. The eight consist of four transcribers, two editors and two database operators.

The various roles of those working in the project, details of the database being compiled, and the overall structure of the project are described in the following sections.

Project Research Officers

These persons are responsible for: collecting and recording data; interviewing and consulting respective leaders of a *mataqali*, a landowning kin group; compiling fieldwork reports; submitting individual and monthly work plans; reporting directly to the project Administration Officer. The six project officers are grouped in pairs (one male and one female) to make up a team. These three project teams are each assigned to one village per week. Hence, three villages can be covered in one week. Project officers spend a week in the office after four weeks in the field. This serves to allow project officers to compile all data, recuperate, and prepare for the following weeks of fieldwork.

The teams of researchers are thus tasked with the important responsibility of collecting raw information from villages across the country. When in the field, they conduct interviews following the research framework used in the Institute with informants selected by village elders. The topics covered are the special knowledge and skills comprising Fiji's intangible heritage, as enumerated above, under the categories of (1) traditional beliefs and knowledge, (2) arts and entertainments, (3) traditional technologies of daily life and livelihood, and (4) oral traditions.

In addition, part of their research is to trace past migration paths taken by the tribes researched and to find supporting evidence, such as stories that can be identified with abandoned heritage sites. These heritage sites, their archaeological remains, and intangible traces in the form of stories, are all evidence of early tribal activity. We are currently in negotiation with our Fiji Museum Department for training in the use of Global Positioning System (GPS) technology to assist us in our heritage research. At the moment, we are capturing data by taking video and digital footage, and we work closely with traditional owners in identifying their long forgotten village and fortification sites for preservation purposes. The Institute is now establishing a heritage site registry of all heritage sites, and it is my responsibility to reserve one day out of four in a village to visit, take photos and videos, and collect information on these heritage sites.

Apart from all of the above tasks carried out by the researchers, each male researcher must also keep a record of all heritage sites from villages in which research has been undertaken. There is an officer within the team who collects and stores all data on a historic site and the stories behind it. An Excel spreadsheet is used to store this information because there is no database at present. In addition, there has never been any work in Fiji where all of the heritage or historic sites are recorded in an inventory. The information stored includes the name of the site, the (village) owner of the site, its location and relevant stories related to the particular site. We always try our best to look for ways of safeguarding this information better.

We believe this Training Course on Preservation and Restoration of Cultural Heritage will enable Fiji to make progress in what we have started regarding heritage sites in our beloved Fiji, using the experience and training provided by the ACCU. It will broaden our understanding of the importance of combining archaeological and anthropological knowledge in preparing archaeological assessments and reports on the heritage and historic sites identified.

Transcribers

These four are responsible for transcribing recorded audio materials. In addition, they are responsible for typing the transcriptions before passing them on to the editors for editing.

Editors

The editors are responsible for the following.

- Editing the transcribed information, according to the database settings and format.
- Editing the audio recordings according to specified audio formats for the database (corresponding with audio log sheets), and making backup copies.
- Editing digital image descriptions entered into computer.
- Editing video footage according to the database format.
- Editing and cross-checking information entered into the database (for evaluation).

Data Base Operators

The two database operators are responsible for the following.

- Digitizing audio recordings and making backup copies of the materials digitized.
- Entering descriptions of digital images (to ensure proper alignment when used) and making backups.
- Entering information into the database, on audio/video/digital images and on transcribed information.

Administrative Officer (Project)

This person is responsible for: coordinating and implementing the project; consult with cultural authorities and stakeholders; preparing and designing awareness programs, and assessment and monitoring procedures; providing policy advice and analysis; submitting reports, financial forecasts, work programs, and budget estimates; reporting directly to Director of IFLC.

In a proposal already submitted for restructuring the project, including its budgetary aspects, an additional seven field officers and a Senior Research Officer are to be recruited. In addition, all field officer positions will be upgraded to Executive Officer rank to compensate for the nature of the work, and the specific skills and qualifications needed for research duties.

The Traditional Knowledge and Expressions of Culture (TKEC) Database

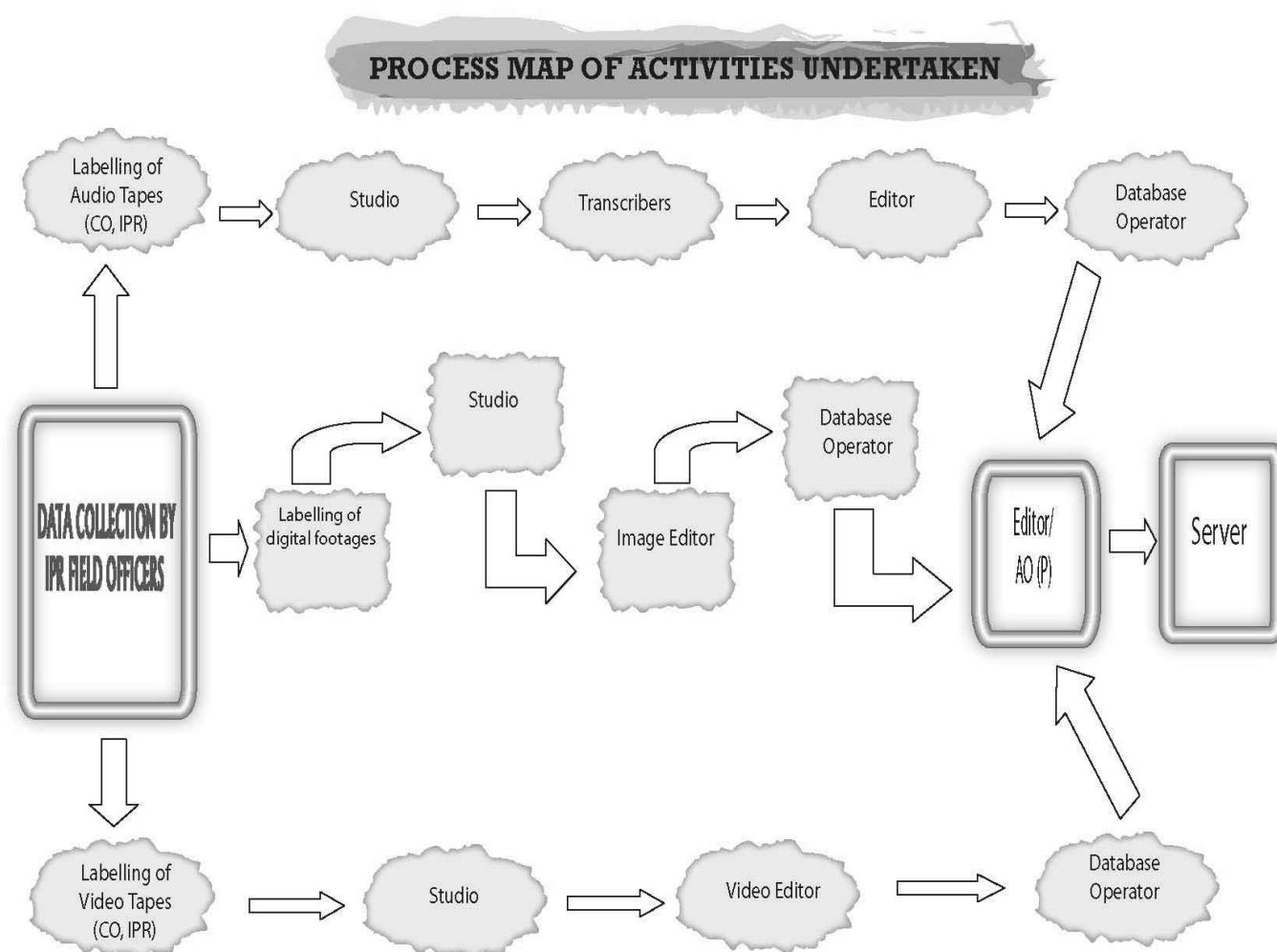
In 2005, a database system was developed for the project to facilitate the input of edited data collected from the various villages and provinces. Local and foreign consultants carried out the necessary IT and language configurations to suit our needs for data storage. It was the first ever software created to receive commands in the indigenous iTaukei language, which put to good use the linguistic and interpretive professionals in the Institute. This is in anticipation of those who will later access the data.

The system has enhanced proper storage of the information accumulated from the field, and ensured that each cultural expression is filed appropriately. In this way, the data are retrieved easily and

efficiently when needed, to be accessed by custodians and individuals/parties with the traditional bearer's consent. Records entered into the database are based on the domains outlined earlier, in the following format: text, images (digitalized photos), audio recordings and accompanying film footage. Hence, each Fijian village will have entries of aspects of its ICH in our database.

Structure of the Project

The diagram below is a detailed illustration of the program's organizational structure.



Main Threats to iTaukei ICH

The main threats to the iTaukei intangible cultural heritage are as follows.

- Challenges in regards to staffing, funding and logistical issues.
- Loss of important aspects of Fijian culture, without any chance of revitalization, through the deaths of key custodians. The research team took three years to cover the first three provinces, and at this rate all fourteen provinces may require a total of twelve years for completion, and since only 1.5 % of Fiji's population of 445,907 is aged 70 or older (according to the Bureau

of Statistics, as of 2003), there is a high risk of losing valuable information that our old people have. In addition, as of 2003 the death rate for Fijians 70 years and above is 107.58 (per 100,000) for males and 94 for females. This shows that old people who are custodians of the culture and language are dying at fast rate.

- Rise in rural-urban migration and emigration, among indigenous youths. This contributes to a vacuum in the transmission of know-how, skills, and practices from the older to the younger generations.
- Reduced amounts or lack of recognition and due acknowledgement given, through financial and non-financial means, for the contribution of the iTaukei population to an innovation, a new creation, or to a research activity in which the indigenous population served as the primary informant

Conclusion

The cultural mapping project since its inception has managed, with governmental support, to carry out the scope of work required as mandated by the Great Council of Chiefs. It is a national project intended to cover the fourteen provinces in Fiji, and so far all or parts of six provinces have been mapped.

In light of what has been discussed in this report, the following is envisaged as Fiji's expectation for this training workshop.

- To help showcase Fiji's efforts in safeguarding its Intangible Cultural Heritage, especially the work of the Ministry of iTaukei Affairs, and the iTaukei Institute of Language and Culture.
- To learn from Japan ways to improve the protection of ICH.
- To strengthen Fiji's network with international organisations for the protection of its ICH.

India

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Safeguarding Archaeological Sites: Ahichhatra, a Case Study of Challenges for the Protection and Preservation of Cultural Heritage

Introduction

Archaeological sites are a primary repository of the cultural heritage of the land and people. In the Indian context, an archaeological site is defined as “any area which contains or is reasonably believed to contain ruins or relics of historical or archaeological importance which have been in existence for not less than one hundred years, and includes— (i) such portion of land adjoining the area as may be required for fencing or covering in or otherwise preserving it, and (ii) the means of access to, and convenient inspection of the area” (Sec 2 [d], Ancient Monuments and Archaeological Sites and Remains Act, 1958). India is a country with roots deep in antiquity. There are many archaeological sites which show, unlike counterparts in Europe and America, multicultural sequences indicating a long continuity of human settlement. In the post independence era, i.e. after 1947, India’s archaeological heritage was reduced as the most ancient centres of civilization had gone to Pakistan. All the focus was trained on exploring ancient sites and plotting them on the archaeological map of India. In this endeavour, many sites were brought to light from various periods in antiquity, ranging from Early Harappan to Ochre Coloured ware, Painted Grey Ware, Northern Black Polished Ware and several subsequent historic phases. The monumental heritage was more or less known, documented, conserved and protected during the British period. But only a few ancient sites were known and understood in that phase of Indian archaeology.

Since excavating all the sites and retrieving the ancient relics and remains is neither feasible nor necessary, only a handful of these have been excavated, while a large number of ancient sites have been declared of archaeological importance and given centrally protected status under the provisions of Ancient Monuments and Archaeological Sites and Remains Act, 1958, and its predecessors. Declaring an archaeological site as a centrally protected site provides relative safety for these sites. It is one form of protection for safeguarding archaeological sites, which should serve that purpose for quite some time, but population pressure and the resultant need to bring maximum amounts of land under cultivation pose a great threat to these archaeological sites, as they have only been protected under a central government Act, but the ownership of the land remains in most cases with state governments or private citizens.

This peculiar situation of dual management often proves a great hindrance in the preservation and safeguarding of archaeological sites. Where the actual ownership of a protected site lies with the state government, the ancient landscape is often used for the construction of schools, dispensaries, offices and staff quarters of the various government departments and the site is damaged, while for other sites which are under private ownership, the land may be appropriated for agriculture/cultivation. There are several archaeological sites that continue to be inhabited and the entire ancient area is covered with modern structures, and older houses are replaced by modern construction. In short, development is the biggest threat to archaeological sites.

Accordingly, transferring ownership from state governments or private hands to the central government, and in particular the Archaeological Survey of India, is the best remedy for such dangers to archaeological sites. But the cost of compensation for the land would be enormous, and therefore not feasible as the number of such sites is too large. In such a situation, a different approach is being adopted at the archaeological site of Ahichhatra, located in the Bareilly district of Uttar Pradesh.

Ahichhatra: A Case Study

Ahichhatra, located near village Ramnagar, 11 km away from the Aonla subdivision of Bareilly district in Uttar Pradesh, is one of the most extensive early historical sites in India. It covers an area of about 225 hectares and is surrounded by a defensive wall almost 6 km long. Hiuen Tsang, who visited the site in seventh century, mentioned Ahichhatra as Ahi-Chi-Ta-lo. Ptolemy identifies this place as Adisadra. The tradition of associating this site with kings and religious teachers protected by serpents is very strong. Tradition maintains that the ancient fort was built by Raja Adi an Ahir, whose future elevation to sovereignty was predicted by Drona when the latter found him sleeping safely under the expanded hood of a serpent.

Ahichhatra was the capital of North Panchala. According to the Mahabharata, the capital of Panchala extended from the Himalayas in the north to the Chambal river in the south. The kingdom was captured by the Kurus. The kingdom of Panchala attained prominence during the early centuries of Christian era. The Buddha preached here seven days in the favour of the serpent king, and the site was marked by Ashoka with a stupa. General Cunningham identified the remains of this stupa built by Ashoka. Later, Ahichhatra formed an administrative division under the Gupta Empire.

The site is triangular in shape, and devoid of any physical encroachment. It is surrounded by three villages lying in its immediate vicinity, namely Anandapur in the southeast, Nasaratganj in the north and Ramnagar in the west. The earliest documentary evidence, the map prepared by Cunningham in 1862, shows that all three villages were of nearly the same size (Fig. 1), but at present Ramnagar has

outstripped the other two (Fig. 2), due to its popularity as a Jaina pilgrimage centre, and its location on the road connecting Aonla and Shahbad.

The popularity of Ramnagar as a Jaina centre relating to Parsvanath has lead to the construction of temples of the Jaina sect and large *dharmashalas*, rest house complexes to accommodate large number of pilgrims. This phenomenon has resulted in a marked increase in demand for land, which in turn has resulted in the conversion of agricultural land into sites for new construction.

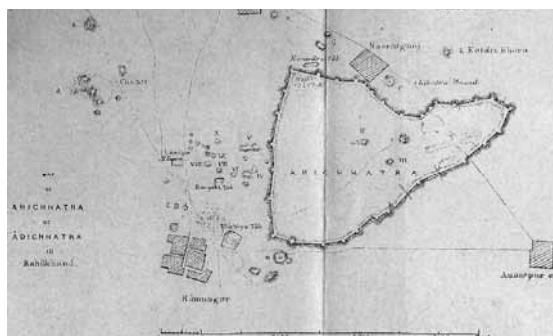


Fig. 1. A. Cunningham, *Annual Report* vol.1-2, 1871



Fig. 2. Google image

THREATS TO THE SITE

The site of Ahichhatra is devoid of any encroachment since the first records of it were made, except for a small temple and few sheds and structures used to house the archaeological remains found at the site from time to time. The land within the site belongs to the state government and private citizens. Some of the government land has been leased out to farmers, and most of the land is therefore under cultivation. Factors posing a threat to the site may be summarized under the following headings.

Agricultural activities. Although farming does not directly damage the site below 30 cm in depth, it accelerates the rate of erosion of the protective topsoil. Also, the use of modern agricultural equipment such as tractor-drawn ploughs, harvesters, etc. has hastened the appropriation of land at the site for cultivation. Due to this expanding agriculture, large and small bodies of water in and around the site are gradually silting up, resulting in a complete changeover in the ancient landscape.

Awareness about the antiquity of the site. Knowledge about the ancient nature of the settlement, instead of protecting the site through pride generated among the local residents, has on the contrary resulted in greed for the rich material remains it possesses. Belief that the ancient city has buried treasure has produced relic hunters, both large and small scale, who have formed a network for illegally retrieving and marketing of the ancient remains from the site. Local people scavenge the site in search of ancient material, and some even dig at the site.

Construction activities. Growth of population in the surrounding villages has necessitated the construction of more houses. The large site proves a great source of readily available ancient burnt bricks, and brick robbing has become a great threat to the site's survival. Outside of the fortified area, which is close to the road where large-scale construction projects are launched for rest houses and temples, smaller ancient mounds are levelled with backhoes and other mechanised excavators. Accordingly the ancient landscape is being reshaped at a much faster pace.

Archaeological Excavations. The site has been subjected to archaeological excavation many times since its discovery in 1862-63. Several structures and remains were exposed and left that way, only to deteriorate and decay. As no measures were taken to drain rain water from near the excavated remains, most of the smaller structures have changed drastically. Wherever structural conservation was attempted in the past, it did not match the original material and fabric of the structures, and therefore failed to arrest the decay, and in effect resulted in degrading the appearance of the site. Further, the excavations and subsequent conservation efforts were done piecemeal, and without proper documentation of the methodology. This makes subsequent efforts towards reconstruction of the remains almost impossible. Excavation is truly destruction.

The archaeological site which was first brought to the notice of the educated world in 1871 thus reached, by the time the present author visited the site in 2004, a vulnerable condition where the above factors were combining to ruin it completely.

STRATEGY FOR THE PROTECTION AND PRESERVATION OF AHICHHATRA

Protection and preservation are the two main concerns involving the physical landscape of the site, and the data comprising its archaeological content. The strategy to be followed for these two aspects, protection from physical damage and preservation of the data, is as follows.

Physical protection. The site had been declared as a centrally protected archaeological site under the Archaeological Act in the year 1920, but there was no demarcation of the boundaries of the protected property on the ground, so it was decided to demarcate the land first and place proper notice boards in clear view claiming it as a protected ancient property. But the site is too large for manual surveillance, and moreover is not under central ownership, so the entry of villagers cannot be restricted, nor can unauthorised digging be stopped completely. Unless the entire archaeological area, which is more than 300 hectares, is taken over by the central government, the site may not survive for long.

Preservation of the archaeological data. As the mere declaration of protection for the site has not proved a satisfactory solution for preserving the archaeological features, and acquisition of land is still far from realization, it was decided to preserve data from the site using modern technology in digital format, through extensive surface studies with minimal excavation. Therefore, a multidisciplinary

project was initiated, involving the Indian Institute of Technology, Kanpur (IITK). IITK carried out Global Positioning System (GPS) surveys, a Total Station survey, and a Ground Penetrating Radar (GPR) survey. Later on the Birbal Sahni Institute of Palaeobotany (BSIP), Lucknow, also became involved, with a view to carrying out the sampling of organic material for botanical studies, as well as for ^{14}C dating of various archaeological strata. For incorporating all the data thus generated, a Geographic Information System (GIS) platform was developed.

DIGITAL ARCHIVING AND EXCAVATION

In the year 2007 preparations were once again underway for work at Ahichhatra, but this time the site was destined to see the application of new technologies in archaeological investigation in addition to traditional methods. A project for Multidisciplinary Studies at Ahichhatra, Bareilly, was initiated in collaboration with IITK. Global Positioning System (GPS) and Total Station surveys were done extensively to generate dense data for preparing contour plans and elevation models, and also three-dimensional fly-through models. High-precision GPS, with an accuracy of 1 mm, was used courtesy of IITK. The entire site was gridded following the established practice. In addition to the GPS survey, a Total Station survey was used to generate dense data of the study area (Fig. 3), which was utilized to generate a contour map (Fig. 4) and digital elevation models (DEMs) (Figs. 5-6). Digital elevation models helped in understanding the land use pattern and identification of ancient water bodies, and the nature of archaeological deposits within and outside the site. Satellite images were used to understand the peculiarities of the ancient landscape, and the reasoning behind the establishment of the settlement at the spot and its gradual expansion.



Fig. 3. Google Earth image



Fig. 4. Contour map made with Total Station

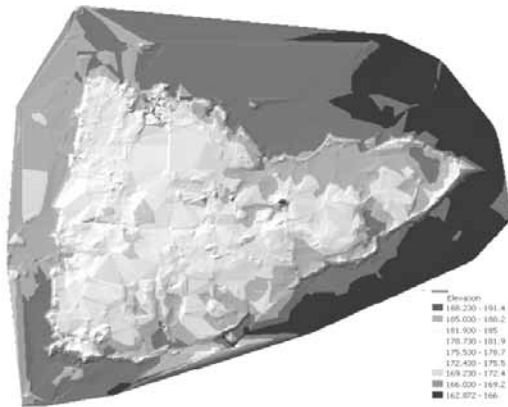


Fig. 5. DEM based on Total Station data

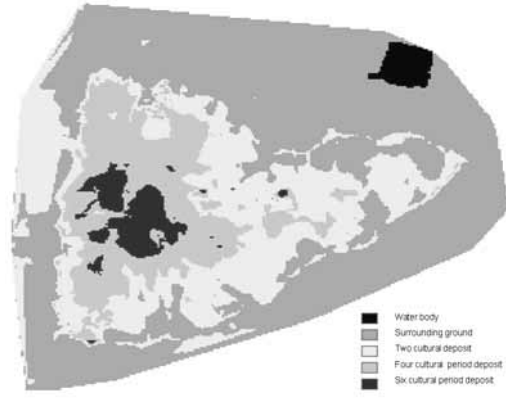


Fig. 6. DEM-2 based on Total Station data

Ground Penetrating Radar (GPR) was used selectively to procure two- and three-dimensional profiles of the subsurface features for later verification by excavation, and also alongside excavated remains, to check the veracity of the GPR profile, and to find the horizontal and vertical extents of the remains. Further, after establishing the reliability of GPR data by matching them with excavation results, extensive GPR profiles were generated for many other regions. One of the GPR profiles tentatively established that there probably existed another defensive wall within the city, indicating the possibility of separate fortified localities within the cityscape (Fig. 7). Areas close to excavated remains were also scanned with GPR and good confirmatory results were obtained (Fig. 8).

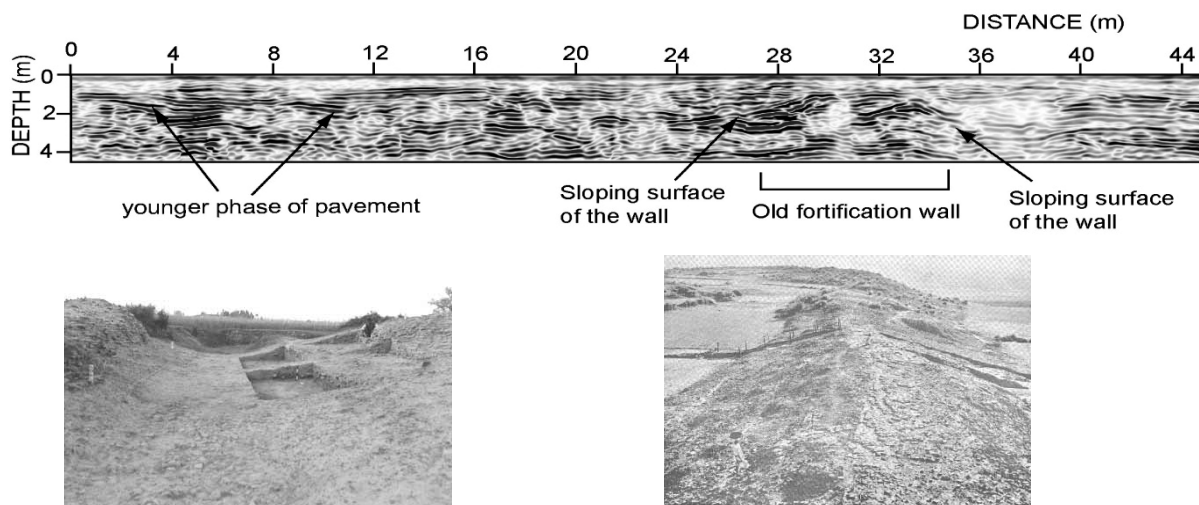


Fig. 7. (top) GPR profile; (below, left) Street pavement; (below, right) fortification wall matching the GPR profile

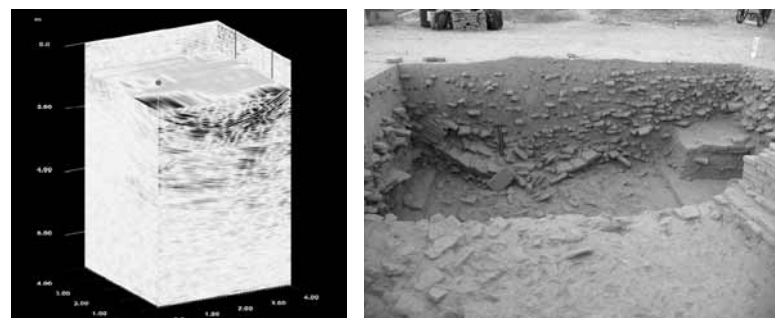


Fig. 8. Three-dimensional GPR profile and an excavated trench

Various types of satellite images were processed and analysed for inferences about archaeological data, in conjunction with the GIS platform that was developed. For the first time since General Cunningham, attention has been focused on the vast spread of low-rising habitation mounds, punctuated with a string of isolated mounds of some height towards the west beyond the walls.

Surface study and satellite images helped in making detailed identifications of openings in the defensive wall. Although at present, due to animal and human traffic and agricultural activities (the use of tractors, excavators, etc.), the defensive wall has been breached at several point which now on ground appear as majestic gateways, after study of the analysed data a set of parameters was defined for identifying the gates.

1. Cup-shaped formation in the wall protruding into the city space, which might have served as a holding area.
2. Projecting bastions on either side of the opening.
3. Linear depressions, forking or otherwise, leading from the opening inside the city. These depressions are the streets.
4. Small but tall mound/s immediately outside the opening. These were temples of the custodian gods of the routes (*baat mangala/marg devta/dikpala*) and/or *sarais* (travellers' inns).
5. Large open space immediately inside the openings, from where streets issue. This condition is applicable only to major gates which probably allowed entry for goods and traders.

Applying these parameters nine gates were identified, of which six were major entry points fulfilling all five conditions, while the remaining three were smaller and fulfilled at least two conditions (Fig. 9).



Fig. 9. Identification of gateways and street network

Some 34 trenches were opened on the five mounds located immediately outside one of the major gates in the west wall, which fulfilled all the parameters, and good results were obtained ranging from Mauryan period to the tenth and eleventh centuries A.D. The data also confirmed the premise that the mounds outside the defensive wall openings were the remains of temples or *sarais*. On a mound designated ACT IVA, a series of three north-facing temples was found in outline (Fig. 10 A), i.e. at where the temples had stood, while on the much larger and higher mound ACT IV, evidence of the existence of a group of temples was unearthed. Two circular structures were also evidenced, but their affiliation to Buddhism could not be established, and due to the majority of links being to the Brahman faith, especially of the Vaishnava affiliation, these circular structures may be regarded as circular or apsidal temples of the same faith (Fig. 10 B).

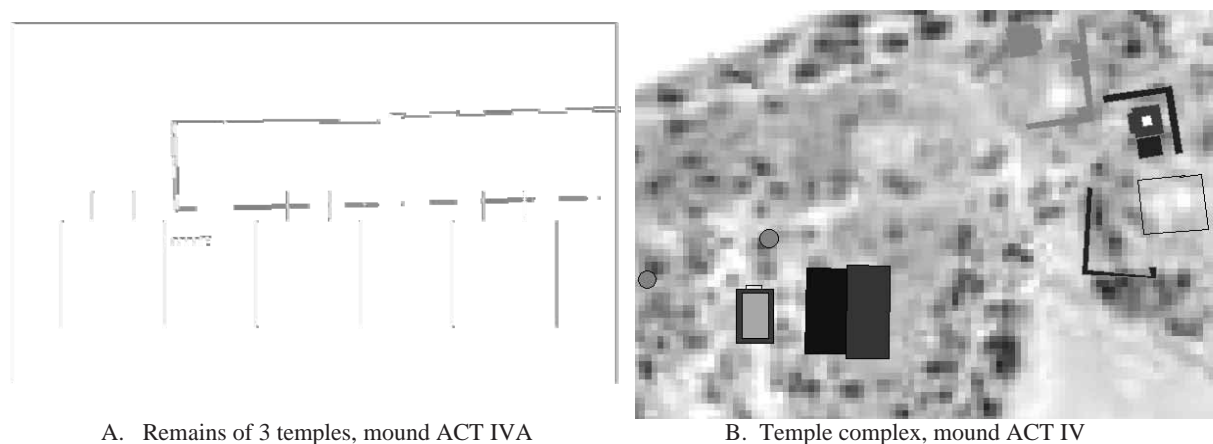


Fig. 10

Apart from generating physical data relating to the site, the project also aims to develop a database for the artefactual remains from the site, which can not only record the data but also share the information with the GIS database for study in three-dimensional space. This will further help in creating a virtual site, where students can even be trained.

BENEFITS OF THE PROJECT

The entire project has involved small scale excavations only, to support and verify the results obtained by the application of new digital technologies. This project has also involved the presence of working teams for most of the year, so a healthy message has been passed on to the local people that the property belongs to the nation, while the local people will benefit from it in many ways. Villagers were engaged as labourers in the project, and this involvement helped promote a feeling of association among the villagers with the site, besides helping them financially.

The project is still under way, and even when the work teams are not there in the field, villagers look after the site as their own and report any act of damage or attempt thereof.

The project is aimed at preserving the archaeological site in its totality including the landscape, artefacts and archaeological features left by men, and also to develop a mechanism to monitor any change in the future. Thus, the site is at least digitally preserved for the time being.

Acknowledgements

This study is fresh and unique, not only in its findings but also in its being the concerted effort of a broadly based and young team who have worked in spells at the site. The project would not have been a possible without the initiative of the Director General, Archaeological Survey of India, New Delhi, and the interest shown by the Director, Indian Institute of Technology, Kanpur, and the able guidance of Dr. Onkar Dikshit (Prof. and Dept. Chair, Civil Engineering, IITK) who supervised the GPS and Total Station surveys and the development of the GIS database, and Dr. Javed N. Malik (Assoc. Prof., Dept. Of Civil Engineering, IITK) who conducted the GPR surveys at the site. The project was sustained through timely contributions of Amit Tare, Abhijit, Ashutosh, Satish, Khalid, Sravanthi (M. Tech. Students, IITK), Mishra, Shitala Tripathi, Maurya (technical staff of IITK), Y. P. Agarwal, Rakesh Tiwari, C. B. Singh, Lochan Singh Chahar (technical staff, Agra Circle, Archaeological Survey of India).

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Indonesia

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Problems and Needs for Cultural Heritage Protection Activities in Indonesia

Introduction

The Indonesia Charter for Heritage Conservation (2003) defines heritage according to the following criteria.

- a. The heritage of Indonesia is natural, cultural, and landscape heritage. Natural heritage is a special construct of nature. Cultural heritage is the legacy of thought, emotion, intentions, and works that spring from people of over 500 ethnic groups in Indonesia as individuals and together as one nation, and from the interactions with other cultures throughout its length of history. Cultural landscape heritage is the inextricable unity between nature and cultural heritage in space and time.
- b. Cultural heritage includes both tangible and intangible legacies.



Cultural heritage in Yogyakarta, Indonesia (images by the author)

Cultural Heritage protection is the management of heritage through research, planning, preservation, maintenance, reuse, and selected development to maintain sustainability, harmony, and the capacity to respond to the dynamics of the age, in order to improve the quality of life. Much of Indonesia's heritage has been degraded, damaged, destroyed, lost, or is threatened due to neglect, incompetence, and mismanagement for short term gain, and by special interest groups. This is allowed by low public awareness of the need for cultural heritage protection. For example, a recent incident in

July 2010 saw the robbing of gold and other artifacts from the museum collection in Sonobudoyo Museum Yogyakarta.

As an instructor in the Department of Archaeology, Faculty of Cultural Sciences, Gadjah Mada University, I have some experience with research on Indonesia's cultural heritage, and issues involved in its conservation and protection. I want to explore the problems and needs of cultural heritage protection in my country based on my activities and experiences.

General heritage protection activities in Indonesia

A brief look at the various heritage protection activities in Indonesia can be made under the following headings.

1. *Conservation.* Conservation is the management of heritage through research, planning, preservation, maintenance, reuse, and selected development to maintain sustainability, harmony, and the capacity to respond to the dynamics of the age, and improve the quality of life. This is one aspect of most activities in cultural heritage protection, such as the conservation of temples, heritage buildings, heritage areas, and sites.
2. *Research.* Research in cultural heritage is one of the activities done by both the government and universities. This activity includes surveys, excavations, and recording and analyzing data.
3. *Revitalization.* Revitalization is the process of re-establishing economic, social, and cultural activity in an area or street. It aims to convert cultural heritage buildings etc. from a lifeless state to an active one.
4. *Regulation.* The national regulation addressing conservation is Legislation #5 of 1992 on Cultural Heritage. This regulation focuses on tangible heritage. Now, regional governments at the provincial and city levels also have regulation (*Perda*) to support the national regulation.
5. *Education.* The government and NGOs have the responsibility to educate all of the people, to impart knowledge and awareness of the need for cultural heritage protection. NGOs also educate the young people, meaning primary school students.
6. *Awarding cultural heritage preservation.* In the case of Yogyakarta, the government gives awards for cultural heritage preservation. To show appreciation to the owner of such property, the government also has a policy of decreasing the building tax.
7. *Publishing a homeowner's conservation manual.* This book contains a practical guide for rehabilitating, retrofitting, renovating, reconstructing, and maintaining traditional houses. It explains both traditional and modern conservation techniques which are needed for conservation. This manual also provides knowledge of the conservation process, to help homeowners understand the value of their houses and proper ways of conservation, such as what should be conserved, and how to plan and undertake conservation work.

8. *Utilizing underwater heritage.* There is policy for utilization of the underwater heritage. While shipwrecks have large potential economic value as a way to generate government income, the main purpose of excavation and utilization of these cultural objects is to put the historical, scientific, and cultural aspects as the top priority. This means that exploration, excavation and conservation should follow proper archaeological methods, and that artifacts must be kept by the government, to enrich national and local museum collections for education.
9. *Holding festivals and exhibitions.* Festivals and exhibitions of cultural heritage are aimed at introducing and promoting interest in a broad spectrum of cultural heritage. They are especially useful for elevating public knowledge and awareness.

Problems and needs based on my experience

Based on the experience I have had working in the field of heritage conservation in Indonesia, I will briefly describe the problems and needs of my country in this area are as follows.

TECHNICAL CONSERVATION

I have experience in the conservation of the historic mosque in Purworejo, Central Java. This mosque was built in 1750. In this case we maintained the original condition of the material of the building while inhibiting the process of decay. The materials of the mosque include the wood used in the floor, walls and roof. We excavated the floor of the mosque mainly in the area of the four main wooden pillars. Here we found the original floor, dating from the same time as when the mosque was built. Then we tried to preserve the Arabic inscriptions on the mosque wall. Also, part of the roof was changed, requiring new material having similar form and quality as the original.

One of the main problems is how to preserve while changing parts using new materials. We have difficulty getting similar forms and quality of material for the same part of the mosque. The new floor tiles and roof tiles must be ordered from another city at a high price. For the wooden pillars as well, we have to pay a high price. This has become a big problem in preserving cultural heritage.



Various old floor tiles (images by the author)

Sometimes we lack skilled laborers for preservation activities. There are differences in the methods used to build new and old buildings. For example, in the past nails were not used, though now they are common.

Based on other experiences I have had in conservation, additional steps that are vital for protecting cultural heritage, especially heritage buildings, are as follows.

1. *Documenting.* Documentation is a very important task to begin even before undertaking conservation work, because it is related to research on the authenticity of building. The results of documentation are needed to analyze the cultural significance of a building, as well as its architectural, social, and economical value. Complete documentation will be very helpful for homeowner and planners.
2. *Evaluating the heritage building.* It is important to understand the main problem of the building before deciding how to alter it. Problems related to the building, such as damage caused by earthquakes or aging, or due to lack of proper maintenance, should be identified and understood through this evaluation.
3. *Knowing the regulations on conservation.* It is important to know in detail the regulations, especially local ones, relevant to conservation. For example, at the municipal level there may be a mayor's decree explaining the territorial status, land use, and intensity of space utilization related to physical building.
4. *Setting conservation objectives.* Before beginning the conservation work, it should first be determined what is valuable about the building. This is important in that it will make clear which part of the original building must be repaired and which part must be altered. Conservation work will be easier if the new function does not differ greatly from the previous one. For example, this will be true for a house becoming a place of lodging, because the adaptation will be easier to do, and the risk of losing original elements can be minimized, so the cost will be cheaper.
5. *Determining what must be preserved and what may be altered.* Basically, conservation must be preceded by an evaluation of the current condition of the building to determine which part must be preserved in its original form, and which parts can be altered. Parts of the house whose originality and authenticity should be preserved need to be distinguished from other parts, for which alteration is possible provided it does not damage the building's architectural value. If the house is to be handed down to several heirs, the unity of the structures should be taken into consideration.
6. *Considering alternative choices for change or adaptive reuse.* Conservation of a building is often misunderstood as keeping the building exactly as it was, but alternatives should be recognized and considered. To carry out such alterations, first we must identify the original function and spatial arrangement of the building. Alteration of the building's function will

probably require new construction and techniques, therefore we must consider structural unity between the new and old parts of the building.



New floor tiles (image by the author)



Original facade (image by the author)

In my opinion, conservation activity is complicated and difficult. It also needs highly skilled laborers and a long time to carry out properly. In addition, conservation activity is costly. In the future, preservation activity should be not only the government's responsibility, but shared by the community and private sector as well.

ARCHAEOLOGICAL RESEARCH AND EXCAVATION

As an instructor at Gadjah Mada University, I have experience in research and excavation at various archaeological sites. In my country there are many archaeological sites. From prehistoric to historic sites, rural and urban heritage can be found easily. Every year we conduct research and excavation for training students of my university.



Research and excavation activity, 2010, at the Plered site (images by the author)

In the case of research and excavation conducted at the Plered site, however, we face problems such a lack of follow up regarding this research and excavation. We only collected the data, without the necessary follow up. There are no future plans for work at this site. The university has no funds to continue, and no plans for doing so in the future. Under conditions such as these, in research and excavations, we always stop collecting and analyze the data. Then data will be placed in storage.

In 2010, we found a new temple on the campus of Indonesia Islamic University, Yogyakarta. It is unique temple, very different in character from other temples in Indonesia. How to preserve the temple on the campus has become a challenge for archaeologists in Yogyakarta. I have been trying to solve the problem with my students. We have an idea for preserving the temple without destroying the campus or temple. We suggested the temple serve as a basement below the library building. The temple could thereby also become a museum. We presented this idea in the student academic competition. As the result, we were the winner in this competition.

In my opinion, the idea for preserving the temple without destroying it, and offering a creative reuse of the temple, is a good example of problem solving in cultural heritage protection.



We presented our idea to preserve the temple on the campus (image by the author)

CONFLICT OF INTEREST IN THE REVITALIZATION OF HERITAGE BUILDINGS AND SITES

In reality, there are big problems involved in the revitalization of heritage buildings and sites. Many heritage buildings have been destroyed, and the sites then changed with new buildings, especially those with economic functions such as supermarkets or malls (i.e. trade centers). At the base of the conflict are different points of view and understandings of cultural heritage. Academics want to preserve the cultural heritage, but on the other hand the private sector, and sometimes government as well, wants to destroy cultural heritage structures in favor of new or modern buildings. The reason is to develop the economic sector.

I have some direct experience in this type of case. The owner of a heritage building wanted to rebuild and change to a new building for economic reasons. We held a meeting between the

government and the owner. As an academic I tried to give a “win-win” solution, but the owner did not agree. Finally there was no agreement, and the heritage building was destroyed.



Before destruction



After destruction began

This case can inspire us as a reminder that conflict of interest is very dangerous for cultural heritage protection. Economic reasons can become dominant, leaving no compromise solution, and the ability of the law to enforce protection is weak.

But I also have experience in preserving cultural heritage without destruction. The reuse of a heritage building in line with economic interests can achieve this. We can preserve the building facade while changing the building for a modern economic function, for example, as for a restaurant.



Heritage building reused as a restaurant (image by the author)

REGULATION AND LAW ENFORCEMENT

Regulation is one of the important tools for cultural heritage protection. In my country there are both national and regional regulations. But in actuality, regulation has little power to solve many problems in cultural heritage protection. The main problem is a lack of enforcement of the law. There are many cases such as the robbing of museum collections, destruction of heritage buildings and sites, and illegal heritage trade, all becoming threats for cultural heritage protection activities.

It would be easier for any concerned party to carry out conservation if each city or country had its own regulation on the conservation of cultural heritage. There should also be efforts to generate a conservation mechanism so that the main task of each concerned government institution can be managed to support each other and not overlap. To support this conservation mechanism, it would be advisable to construct a legal board consisting of representatives of related institutions, both government and non government.

Making regulation known throughout society is also important. All people have to know about cultural heritage regulation. Through seminars, workshops, and training, knowledge of heritage protection through regulation would be received by many more people.

PUBLIC AWARENESS AND IGNORANCE

Cultural heritage, bequeathed from the generations that have preceded us, is the vital foundation and the initial capital for the development of the Indonesian nation in the future, and for these reasons, must be conserved and passed along to the next generation in good condition, without loss of value, and if possible, with an enhanced value, to form the heritage for the future.

Much irreplaceable Indonesian heritage is degraded, damaged, destroyed, lost, or threatened through neglect, ignorance and incompetence on the part of the public. There have been trivialization and impoverishment of culture, and the weakening of the creativity, initiative and self confidence which are urgently needed in the face of a turbulent, rapidly developing world.

In my experience, many people plead ignorance of the law and its cultural heritage preservation mechanisms. They fail to understand the need and the means for conserving their cultural heritage. So we need a solution about how to raise public awareness. It is important to raise the awareness of all parties (government, professionals, the private sector and the local community, including its youth) on the importance of cultural heritage through education, training, public campaigns, and other persuasive approaches.

Conclusion

I believe that cultural heritage protection is an important activity for my country, because the historical and cultural values of Indonesia are reflected in the natural, cultural, and landscape heritage. We have a responsibility to take care of the cultural heritage for the future of the nation. "The great nation is a nation which preserves its cultural heritage." Nevertheless, preserving cultural heritage is not easy to do. There are many problems regarding heritage protection. We need solutions in order to solve these problems. This has become the challenge for us, demanding our commitment to cultural heritage protection.

Kazakhstan

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Ethnographic and Archaeological Remains Renovation Department

Research and Production Center of Historical and Cultural Heritage

Problems and Needs for Cultural Heritage Protection and Restoration Activities in Kazakhstan

1. Background: Cultural heritage protection up to 1995

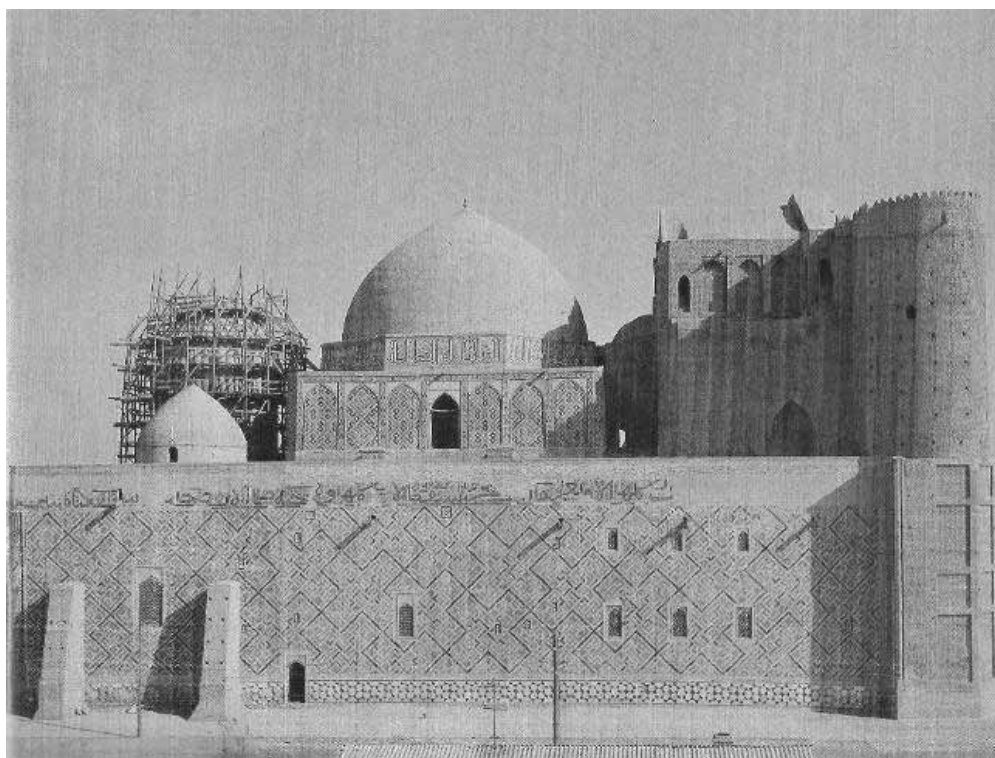
Issues of preserving the cultural heritage of the Republic of Kazakhstan include a wide range of problems, of historical, cultural, archaeological, ethnological, methodological, technical, organizational, legal, financial, and socio-economic character.

From the moment the organizing of preservation and restoration services began, under the Ministry of Culture of Kazakh, SSR in 1967, around 30,000 immovable historical and cultural monuments have been identified and taken under state preservation, including around 10,000 artifacts of medieval architecture, monumental and urban construction arts, and 20,000 archaeological compounds containing the remains of ancient and medieval settlements, towns, irrigation systems, cemeteries, sanctuaries, petroglyphs, and other cultural objects and landscapes. Chronologically, these materials divide between those of ancient periods, belonging to the Paleolithic, Bronze and Iron ages, and those from medieval epochs, the periods of Turkic, Arabic, Mongolian, Jungar, and other conquests. Materials of the eighteenth and nineteenth centuries, the time of the Russian Regency, which comprise significant ensembles possessing cultural value, are taken under local categories of preservation. With the exceptions of the excavations of the Otrar site and Issyk barrow, which were done by the archaeological team of the Institute of History, Ethnography and Archaeology of Kazakh, SSR, all reconnaissance and archaeological work up to 1992 was undertaken by archeology, history, and cultural artifacts collection units of the Kazproyektrestavratsia (Kazakh Restoration Project) Institute of the Ministry of Culture, which engaged faculty members of institutions of higher education of the republic along with foreign experts.

In response to industrial and agricultural reclamation of land in Kazakhstan, steps for the reconstruction of historical towns and settlements, the formation of new zones for developing historical and urban construction outline plans of cities and settlements possessing heritage, and for creating a registry of and collecting artifacts, were taken by the Institute. Within a few years, 28 historical towns and settlements were examined, and 25,000 immovable artifacts were recorded and certified by this group of professionals, spurred by the enthusiasm of being first restoration workers at

the national level. On the initiative of Bayan Tuyakbayeva, Director of the Institute and a chairperson of the regional council of ICOMOS, a global project of Soviet times, the construction of a channel for the transfer of Siberian rivers into Kazakhstan and Middle Asia, was suspended, and later, with the support of other scientific institutions and ministries from different republics, was rejected. Prior to that, several expeditions into Central, Northern and Western Kazakhstan were organized to survey the artifacts, which were on the way of the channel route.

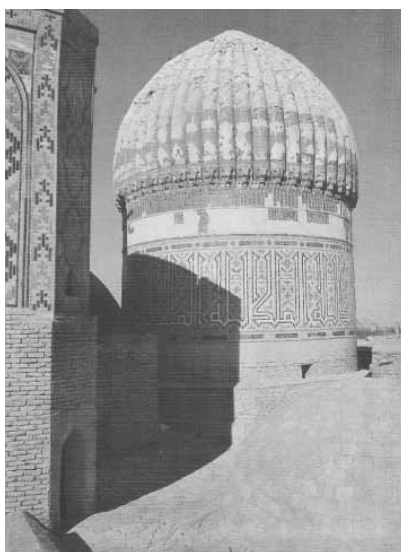
From 1985 to the early 1990s, in order to undertake the complex preservation of monuments, eight historical-cultural and archaeological museum-reserves, twenty-four restoration workshops in regional centers, and nineteen regional inspection centers of preservation of material culture artifacts were created. Scientific and restoration work for artifact preservation was undertaken in the main historical centers of the Republic (in the cities of Turkestan, Shymkent, Taraz, Almaty, Talgar, Zharkent, Semipalatinsk, Uralsk, Guriyev, Shevchenko, Petropavlovsk, etc). The main tasks of the restoration were to preserve as much of authentic remains as possible from being destroyed by the development of modern facilities and agriculture, by the effects of nature, or by total reconstruction. Another task was to recreate the historical landscape, and when possible preserve the original appearance and function of monuments and their surroundings.



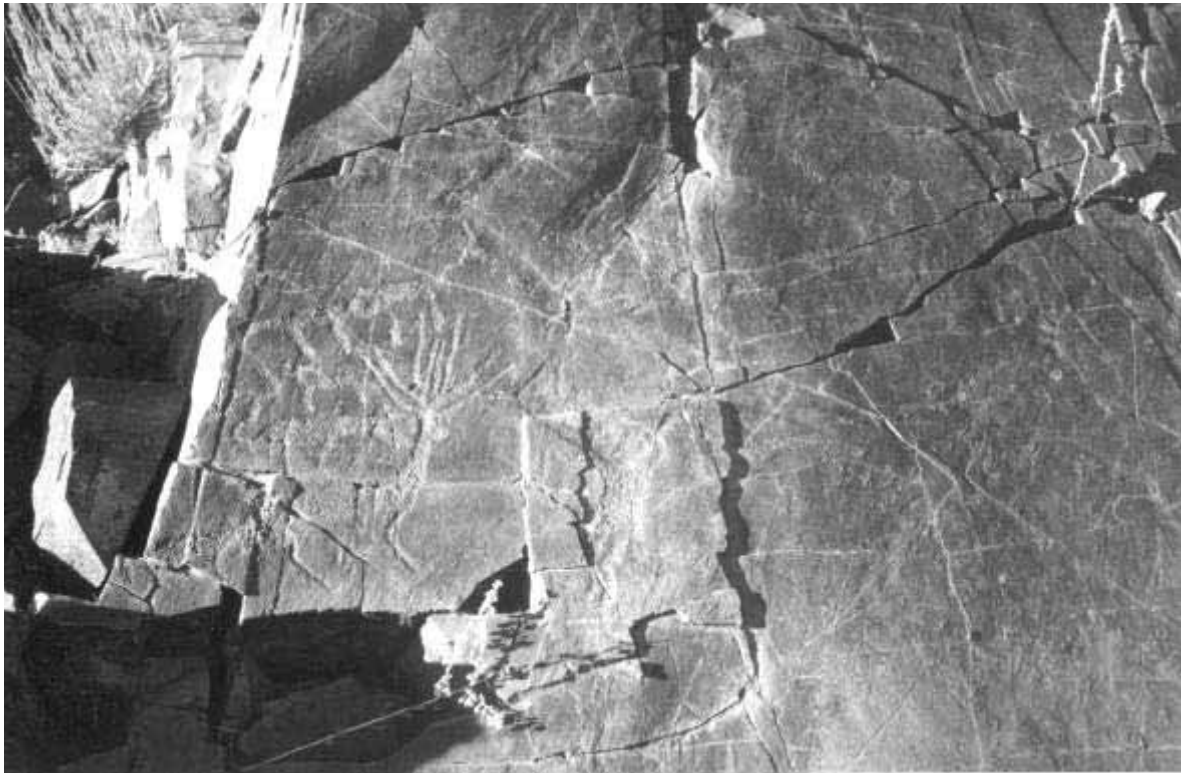
Mausoleum of Hodja Ahmed Yasawi, before restoration



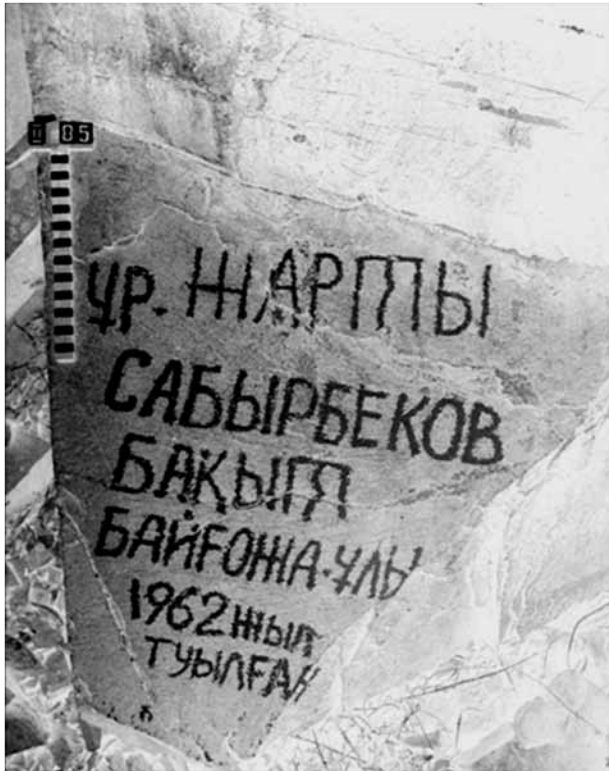
Mausoleum of Hodja Ahmed Yasawi, after restoration



Restoration of the dome made by the Kazproyektrestavratsia Institute



Petroglyphs of Tamgaly: Preventing exfoliation of the stone



Petroglyphs of Tamgaly: Erasing modern graffiti

With support from UNESCO and the regional council of ICOMOS, the training of specialists for conserving and restoring artifacts was undertaken in Finland, Italy, Turkey, Russia, and India.

In 1991, after Kazakhstan gained its independence, there was need for new evidence of the nation's culture. Large-scale archaeological excavations, governed by a newly established Institute of Archeology under the Ministry of Education and Science, took place all over the Kazakhstan. To mention just a few of the ancient and medieval settlements, they include Turkestan, Sauran, Shymkent, Sairam, Baba-Ata, Kulan, Akyr-tas, Taraz, Kostobe, Aktobe, the Tamgaly sanctuary, the vicinities of the cities of Almaty, Talgar, Kayalyk, Sarayshik, Zhayik and others, as well as Neolithic and Paleolithic period settlements such as Botay, Shoktas and Koshkurgan.

Many of the recovered materials required immediate measures for their preservation. The only method of conservation for archaeological remains at that time was backfilling. Attempts at conservation by methods of hydrophobic polymer coating and thermal processing were ineffective, costly, and non-durable. All these problems required the creation of scientific laboratories, the coordination of efforts by experts in the spheres of the natural sciences and humanities, the development of complex programs and projects on a national basis, and the preparation of the appropriate technical, scientific-methodological, and legal bases needed for successful solutions. To this end, the law of the Republic of Kazakhstan on preserving and using cultural heritage was ratified by the Parliament in 1992.

This is when the Department for Historical and Cultural Heritage was established within the Institute, supported by an integrated governmental program for preserving and using the cultural heritage. The department cooperated closely with the academic Institutes of History and Ethnology, of Archeology, of Geology, of Construction Materials, and also with the laboratories of the Uzbek Scientific Research Institute of Restoration and the Russian Restoration Association. Combined architectural and archaeological expeditions for studying and conserving the unique artifacts of the history and culture of steppe civilization were organized.

All these activities were stopped in 1995 due to liquidation of this sector and the privatization of its facilities. Thus a scientific, industrial and professional basis for the preservation and restoration activities of the Republic, being created within decades, was destroyed, resulting in the subsequent destruction of artifacts, both under the influence of natural conditions, as well as damage on the part of visitors.

Separate restoration works continued to be done, but the sponsorship and funding were chaotic and unsystematic, and the specialists not always aware of the specific nature of Kazakhstani artifacts. Accordingly, for instance, Turkish specialists with the company Vakif Insaat undertook work on strengthening the structure of the *hanaka* (mausoleum) of Akhmed Yassawi in Turkestan city,

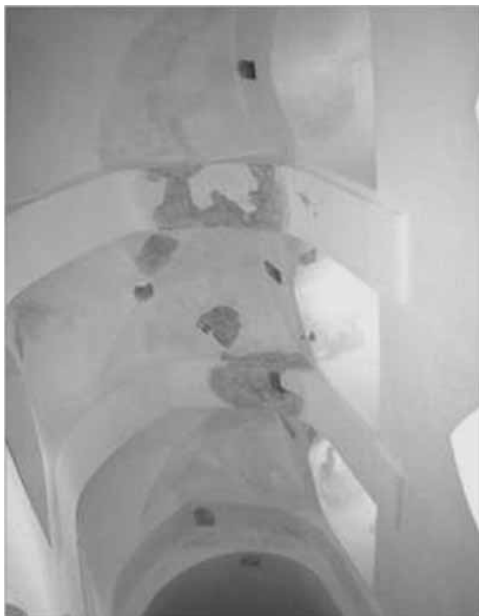
connecting a reinforced concrete groundwork slab with a foundation of piles penetrating to a depth of up to 12 m, injecting wall cracks, providing a water resistant shield for the roof, and reconstructing the drainage system. These restoration works had both positive and negative sides. It should be noted that the attempt to provide a water resistant steam-conducting roof resulted in the creation of an extraneous half-meter layer of material, distorting the architecture of the open courtyard at the roof. Unfortunately, this roof reconstruction did not resolve the problems of condensation at the sub-dome and sub-arc parts, which continue to become damp.



A view before restoration, 1979



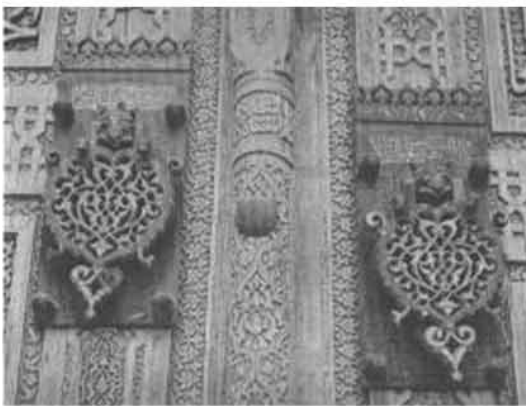
Water resistant shield forming an extraneous layer



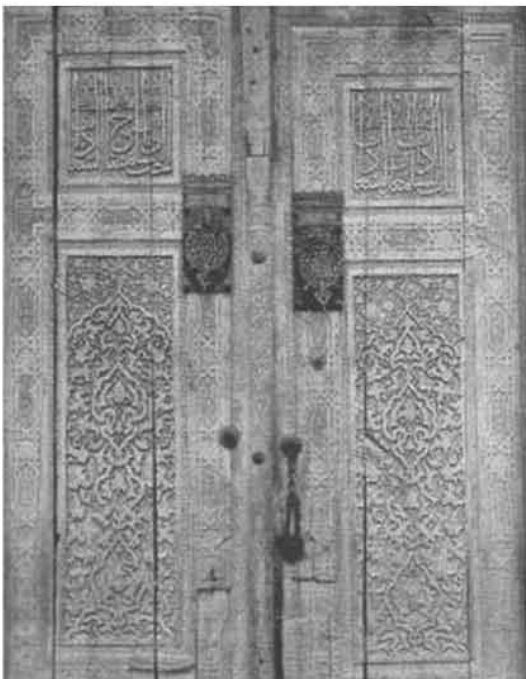
Damp ceiling even after installation of a water resistant shield



The placement of a modern reinforced concrete groundwork slab under all the walls of the building eliminated the danger of local sagging caused by changes in subsoil water levels. At the same time, however, the monument lost one of the important components of this ancient edifice in its capacity as a scientific artifact, and the possibility of studying it further.



Some drastic solutions sometimes resulted in the loss of authentic portions of the monument. For example, while undertaking restoration work with white gypsum plaster on the interior of the monument, authentic gypsum-clay coatings of the walls and domes of the rooms, on which earlier the traces of unique polychrome paintings, with gold-plating and epigraphy of the *kumdal* technique, were completely destroyed.



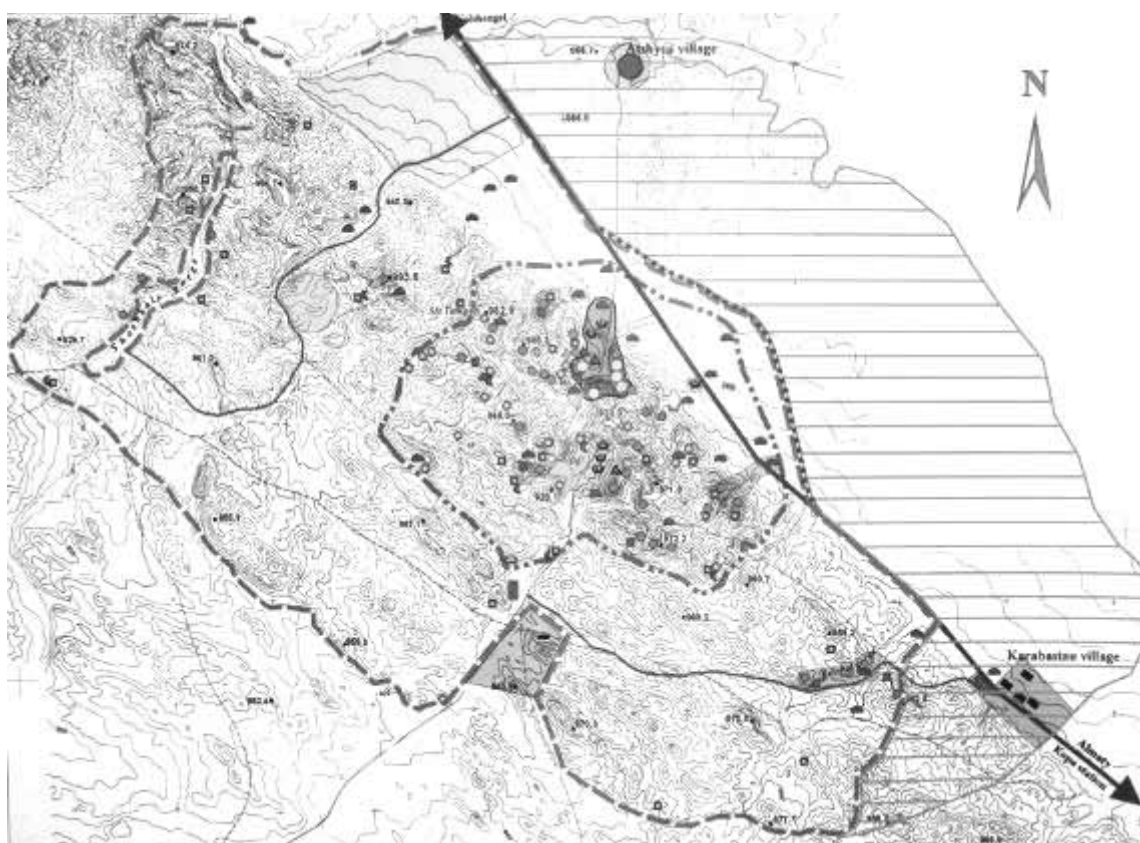
Furthermore, a so-called restoration of the unique central double-leaved door of the *hanaka*, made of a valuable species of wood, is viewed by us as a total crime. The door has a three-dimensional carved ornament with bronze details completely encrusted with bone, mother of pearl, silver, and gold. The rosettes of the door panel framings contained theological sentences and syncretic signs of Sufi learning. All of these were scraped off with an abrasive cloth and the smooth surface covered with a so-called conserving lacquer. A unique work of art of the fourteenth century was thus actually lost.

Examples of improper restoration

2. Interlude of 1995-2000: Effects visible at Tamgaly

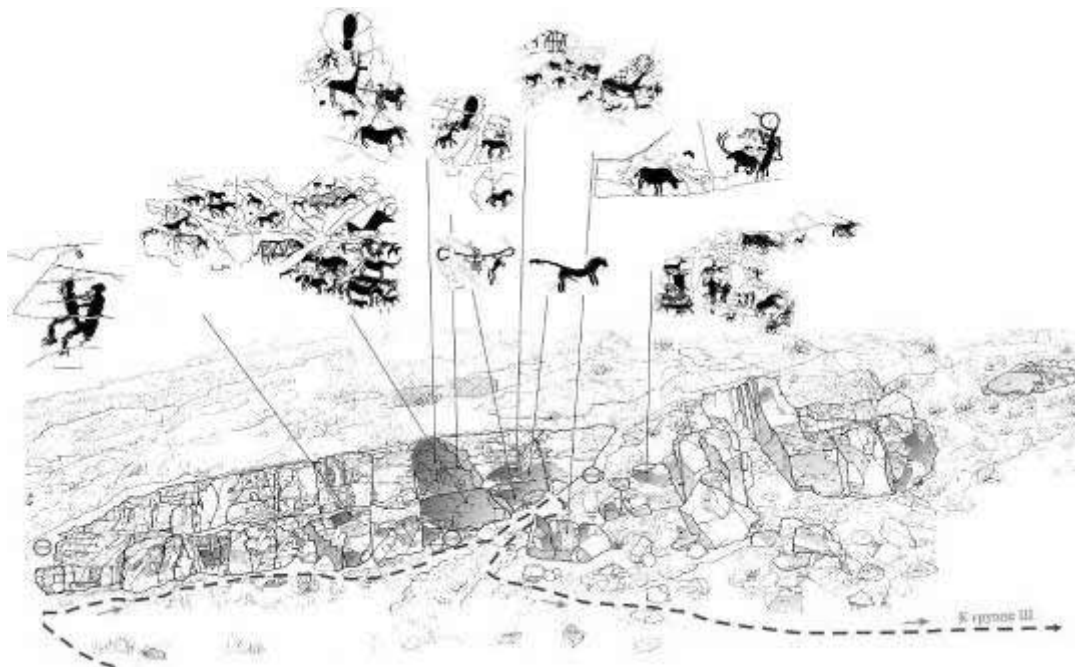
The results of liquidating the sector of monuments preservation and scientific-restoration research during the period 1995-2000 were reflected especially vividly in the conditions of another artifact of ancient art, emblematic for Kazakhstan – the concentration of petroglyphs at Tamgaly (Tanbaly), which was inscribed on the list of World Heritage Sites in 2004.

This archaeological landscape was discovered in the course of an expedition lead by A. G. Maximova in 1957. Examining the petroglyphs together with archaeological objects located at features (ancient settlements, burial mounds) in the vicinity allowed differentiation of the remains by major historical periods, extending from the second half of the second millennium B.C. to modern times (nineteenth and twentieth centuries). The total number of Tamgaly petroglyphs amounts to around 5,000 items, dividing into five groups in terms of space. The entire area of the heritage complex, including as its most significant part the rocks with carvings, settlements, and burial mounds, plus the buffer zones amounts to approximately 3,800 hectares.

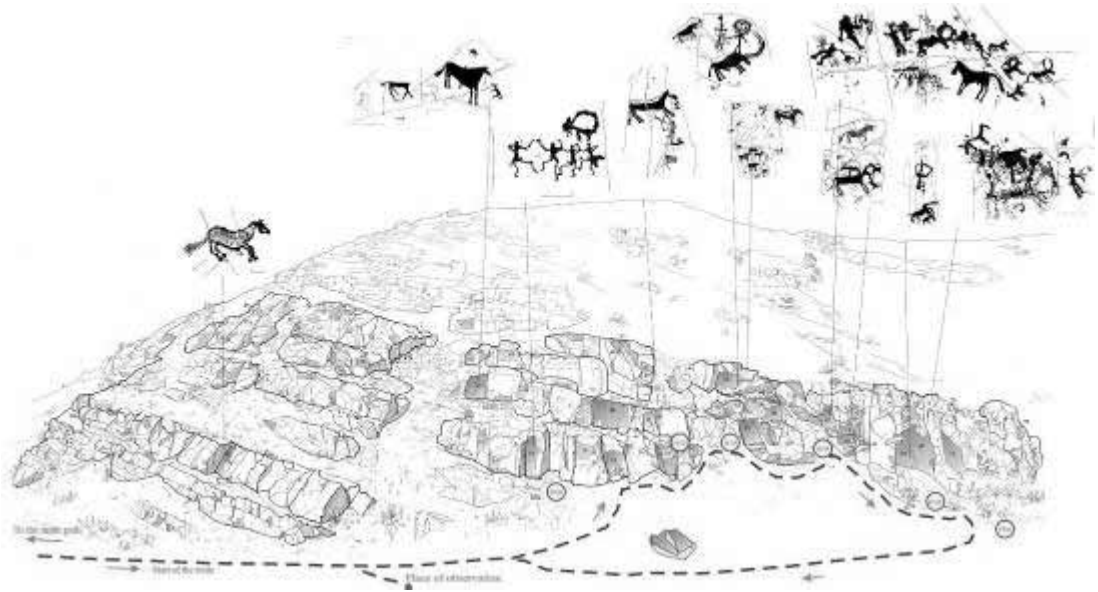




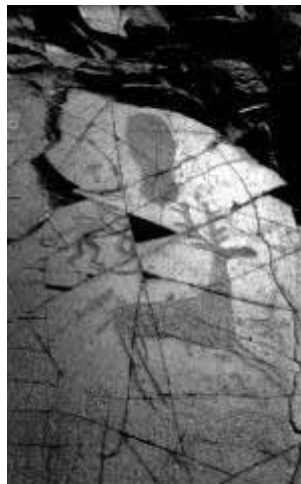
Settlements, burial mounds and assets of the Bronze Age



Rock art



The second group of petroglyphs



The third group of petroglyphs



Different images of rock art (deer, dogs, bulls, horses, footprint, carriage)

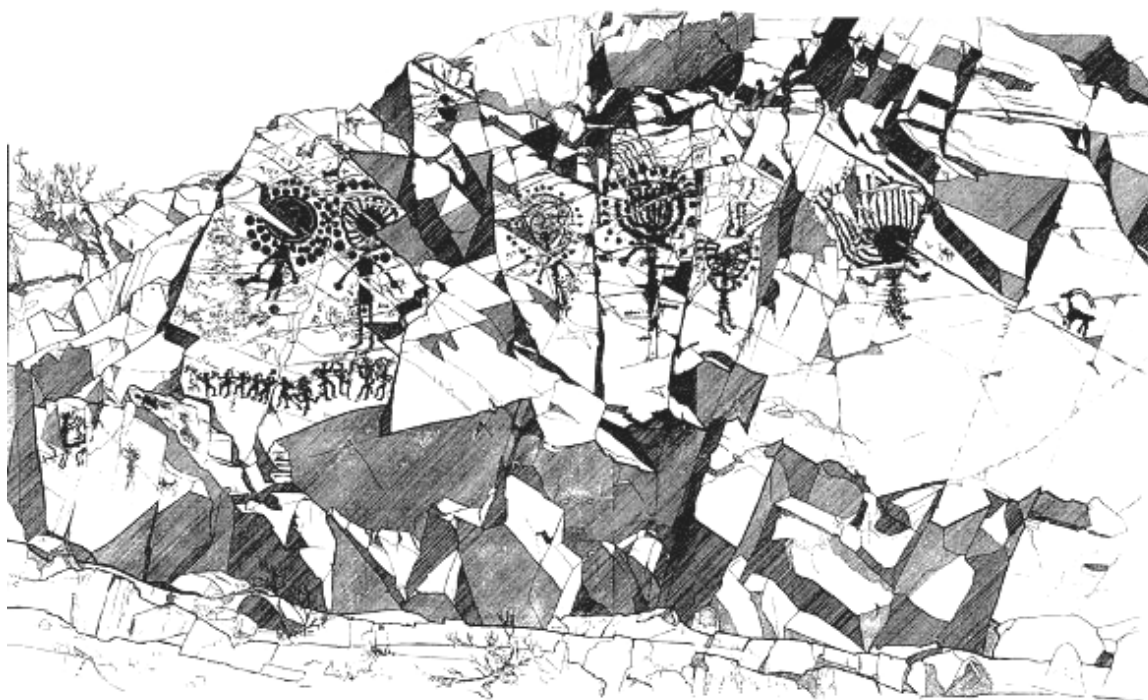
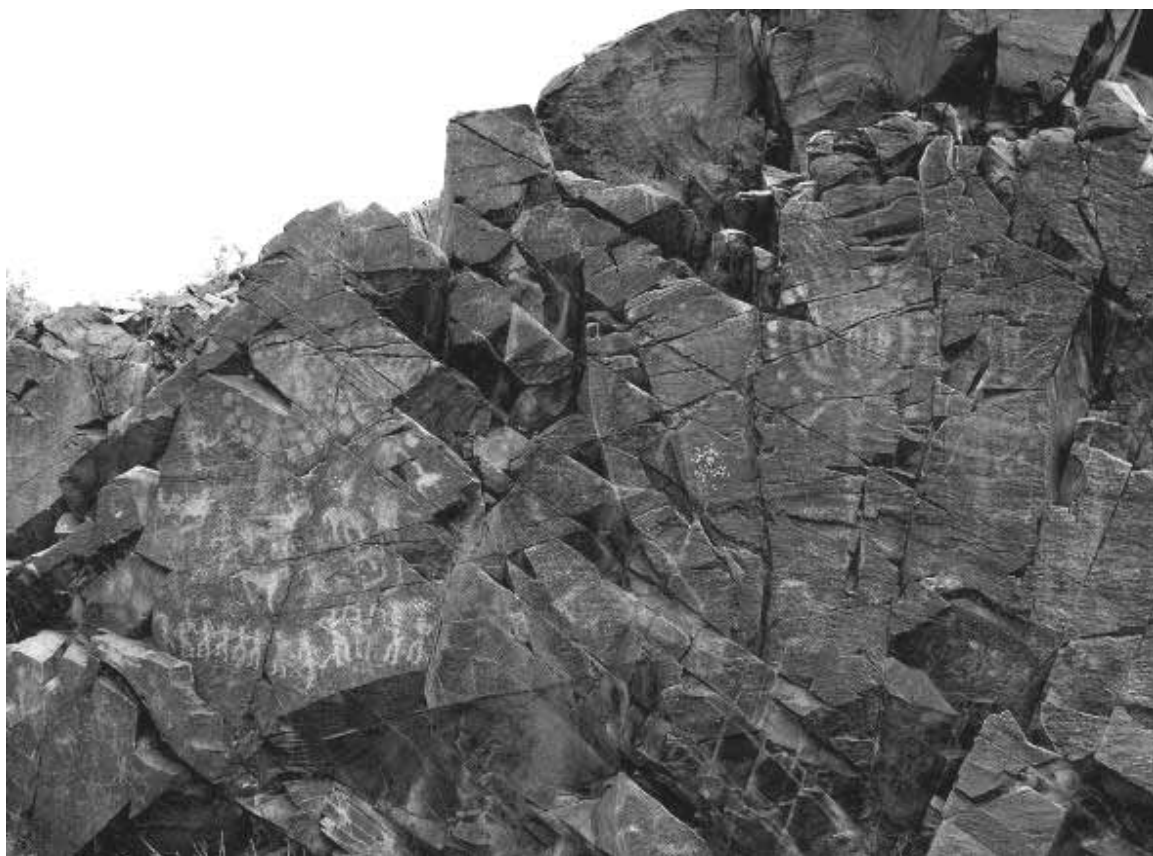


Images of bulls belonging to the Bronze Age



Anthropomorphic images of the Bronze Age

Of special value are the unique images of the Bronze Age, made with the characteristic Tamgaly technique. The central object of the complex of features is a sanctuary. This multi-figured composition of people, the heads of whom radiate with beams of light, is made on a rock surface 7 x 4 m in size.



The scientific value of the Tamgaly petroglyphs is defined as justified for inscription on the World Heritage List by criterion iii: "The dense and coherent group of petroglyphs, with sacred images, altars and cult areas, together with their associated settlements and burial sites, provide a substantial testimony to the lives and beliefs of the pastoral peoples of the central Asian steppes from the Bronze Age to the present day." The Tamgaly artistic tradition thus represents a holistic and universal concept of the Asiatic steppes in the mid-second millennium B.C. in a specific landscape. None of the other rock carvings of Kazakhstan known at present have greater reason than Tamgaly, a unique open air temple, for inclusion among the representative cultic artifacts of the steppe peoples in this manner.

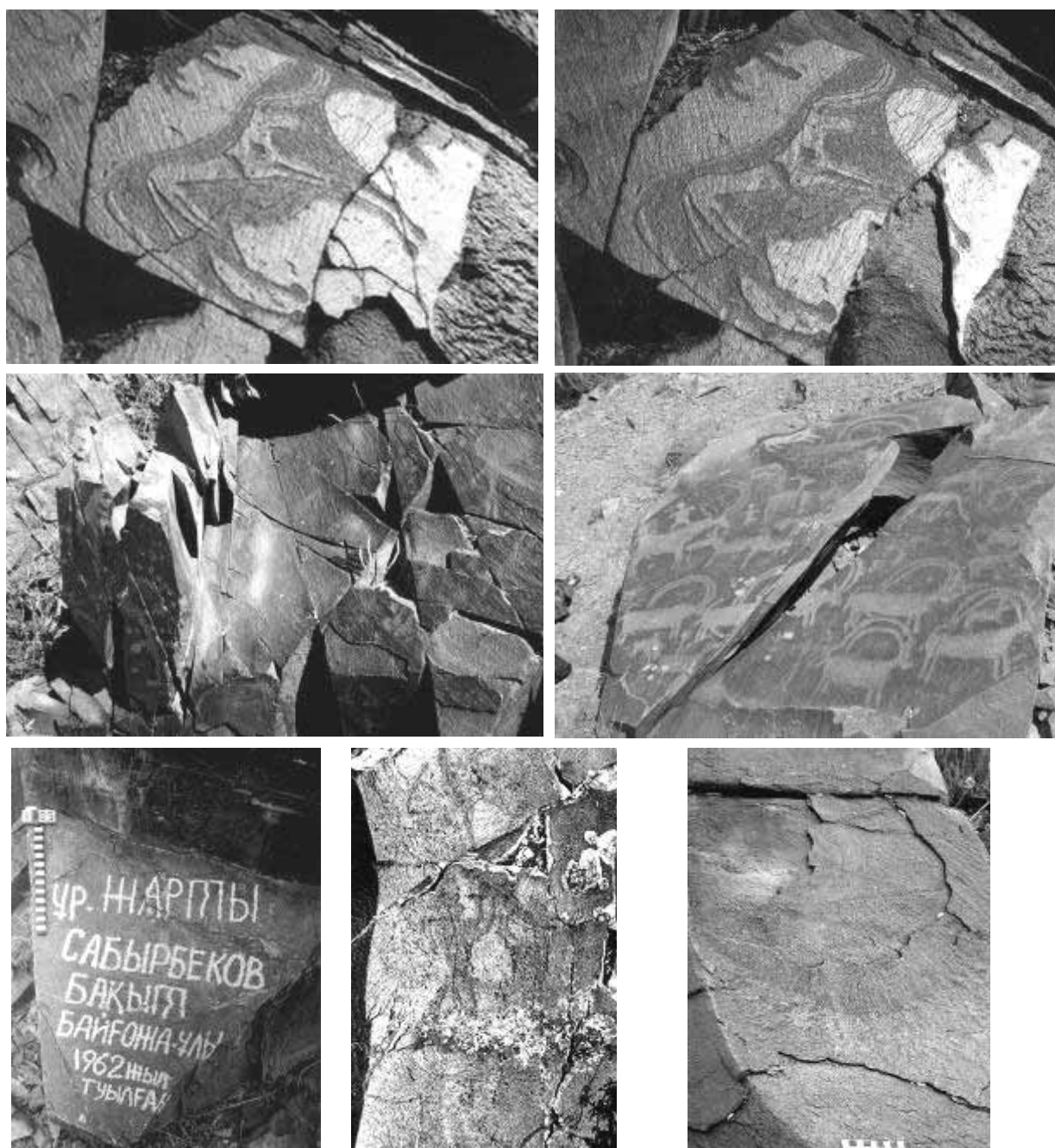
During the 1970s and 1980s, archaeological and geological explorations were done at Tamgaly, although they were characterized by only occasional fieldwork and a lack of coordination of archaeological and scientific research at the site.

An important stimulus that ensured a change in the quality of planning and execution of both scientific research and conservation work at the complex was a new state project called the "Tamgaly rock carvings conservation," in which the Kazproyektrestavratsia Institute played the roles of coordinator and executor. By engaging specialists of various scientific institutions for project, within a short period of time the Institute was able to obtain significant data and start work on conserving the petroglyphs. Specifically, in 1990-91 a geodesic survey was done, and maps at scales of 1:500, 1:200, and 1:100 were prepared for sites containing the most important ensembles of artifacts. Geological and geochemical research was undertaken to develop methods for conserving the petroglyphs. In developing the conservation methods and selecting the materials, Kazakhstani specialists consulted with M. K. Nikitin, head of the chemical-biological laboratory of the Russian Museum of Saint-Petersburg. The first experimental work on conserving the rock surfaces with petroglyphs was done by the restorers L. F. Charlina and N. N. Taipina, and by the architect E. N. Ripinskaya. In 1992 a group of restorers supervised by S. B. Shigoretz ("Alton," Saint-Petersburg) undertook the application of mastic to cracks, removal of graffiti, and patching of large fragments with drawings that were revealed while clearing rock slides at the second group of petroglyphs. Also, water drainage was arranged.

Thus by 1994, the research necessary for defining the cultural significance of Tamgaly was done, together with justifications of the borders of its territory and the preservation zone. However, the lack of funding did not allow the complete preparation of materials and of documentation. Excavations and study of the Tamgaly petroglyphs stopped. Continuation of the urgent work of conserving the petroglyphs became impossible. The collapse of previously formed mechanisms for managing and preserving the monuments aggravated the critical condition of Tamgaly.

Lack of control and care led to both natural and anthropogenic damage to this monument and its landscape. The previous years of fruitful work, the results and goals of which were thoroughly and

regularly reported to the wider community by the mass media, secured popularity for the monument, which in 1995-2001 resulted in an uncontrolled flow of tourists, posing a threat of destruction for the petroglyphs. The traditional topography of Tamgaly became badly distorted. A road was constructed through the canyon, which up to the summer of 2001 was used regularly to transport heavy equipment along the rocks of the petroglyphs of the first to fifth groups. As a consequence, not only was the disintegration of the rocks increasing, but also the carving of modern autographs and drawings above the ancient petroglyphs became popular. Housing and industrial construction appeared on the territory of the Bronze Age burial mounds of Tamgaly 5 and 6, and for the construction of two more farms on the periphery of Tamgaly, rocks with petroglyphs from nearby locations were used.



From 2001, UNESCO has taken an active part in preserving Tamgaly. In that year, with the assistance of UNESCO, the first grant was allocated for undertaking the urgent measures of preserving, conserving and managing the Tamgaly compound, and by 2004 the complex was already inscribed on the World Heritage List.



Training courses on conservation organized by UNESCO

The phenomenon of petroglyphs such as those at Tamgaly needs further study. Their genesis and evolution still are the main historical questions. The modern way of studying these materials fails to provide unambiguous answers. None of the known large monuments of the vast region is comparable to Tamgaly in regards to the representativeness and inclusiveness of the repertory of petroglyphs of the Bronze Age, and the obvious professionalism of their artistic depiction, and the exhaustive completeness of the organic connections of the petroglyphs with the extraordinary landscape, functionally organized as a cultic center.

Other serious problems visible at Tamgaly, which occurred over this interlude from around 1995-2000, may be listed as follows:

- Spontaneous privatization of state lands in the early 1990s, and a lack of controlling mechanisms, which resulted in the demolition or partial destruction of the monuments, caused by utilization of these lands for new construction or agricultural purposes.
- Spontaneous restoration work conducted by non-professionals, much in the manner of the restoring of historic mosques and mausoleums by groups of worshipers, often without proper planning and with inappropriate use of modern building materials such as concrete, ceramic tiles or even plastic.
- Emergence of so-called “black archeology,” taking and selling historical assets for profit.
- Proliferation of unauthorized archaeological excavations.

3. The situation of protecting cultural heritage today

Presently the state of the Republic of Kazakhstan pays great attention to issues of cultural heritage. This is due not only to the necessity of raising national consciousness and patriotism as a part of the national policy of sovereign Kazakhstan, but also from increasing interest on the part of the global community, international organizations, and research institutes studying the processes of anthropogenic reclamation of territories of the steppe zones of Eurasia, and the ancient contacts of the peoples of northwestern Europe, western Siberia, Kazakhstan, Central Asia, India, Iran, the Middle East and Egypt, Mongolia, China, Korea and Japan. The most global of these interrelations were the great transmigration of peoples in the third to seventh centuries, and the Silk Road from the second century B.C. to the twelfth century A.D. Thus, the cultural heritage of Kazakhstan is recognized as not only of importance to the republic, but also as part of such phenomenal occurrences of panhuman nature as the formation of the Indo-European, Scythian-Saki, and Finno-Ugrian cultural affinities.

In 2003, at the meeting of Committee of UNESCO and ISESCO affairs in Kazakhstan, B. T. Tuyakbayeva, already director of the Historical and Cultural Heritage Research and Development Center, proposed a “Cultural Heritage” state program. The project was supported by the chairman of the committee, I. N. Tasmagambetov, and in four days an appeal to the President of Kazakhstan was published, in which the urgent tasks and issues of studying and preserving the country’s historical-cultural heritage were defined.

The goal of this program is, first of all, the forming of a national and state consciousness and preserving the cultural heritage as the spirituality of the nation. Archaeological works, proposed for study in accordance with the program, were selected with consideration for the degree of previous research, their significance from the point of view of historical-cultural values, and their value for the development of a tourism infrastructure.

In the period from 2004 to the present, large amounts of new archaeological materials have been excavated, with projects focused on conserving and restoring them. Other historical and cultural materials, which had been discovered earlier, have also been prepared and studied.

At the moment, archaeological and preservation/restoration activities are not experiencing a funding deficit. Annually, around \$25,000,000 is allocated centrally to the cultural heritage program alone, not including funding from local budgets. However, the laudable striving of relevant agencies to handle simultaneously vast amounts of materials has revealed another problem, namely their insufficient experience and lack of core professional personnel. Consequently, ill-judged decisions are made, which is unallowable for such a valuable fund of information and knowledge as the artifacts of this culture. Of course, restored monuments attract greater numbers of visitors than ones in ruins, but drastic decisions and ill-conceived renovations, not based on sufficient evidence, decrease the value of the restoration undertaken and negate its scientific significance.

The problem of preservation of archaeological heritage in Kazakhstan has its unique features, in its technological and methodological aspects, and also in the legal maintenance of these actions. As I have already mentioned, at present more than 30,000 immovable monuments of history and culture have been taken under protection, and more than 20,000 of them are archaeological remains in a ruined condition, and these numbers continue to grow with each newly discovered monument. The methods of preservation of archaeological monuments practiced today in Kazakhstan, according to the Venetian charter of 1964, do not seem to be very effective. The reason is that the overwhelming majority of these monuments are made from adobe (sun-dried, rather than kiln-fired bricks) and the existing conservation means today cannot provide guarantees for strengthening them. Consequently, with the purpose of protecting these remains from the natural elements and to prolong their lives, the provision of stationary cover is strongly recommended. But besides destroying the appearance of the monuments themselves and their historical landscape, these measures have other weak points such as the necessity of organizing security services to protect them from vandalism, which is not possible for such a great number of monuments spread over a big territory, and many in the uninhabited steppe.

These problems of protection were taken into consideration by specialists from the Research and Production Center and comprehensive methods of preservation for the historical and cultural heritage were worked out, including both conservation aspects and the integration of this heritage into the vital activities of society, by including it in social and economic plans for development of the regions where it is located. This method of protection has been presented and comprehensively described in the catalog of norms and standards (SNIP RK B1-7-01), "Instructions on coordination of expertise and approval of project documentation on regeneration of historical monuments of architecture and town-planning, including those in a ruined state." Using these instructions, provided by the consolidated work of specialists in different spheres, renovation projects of historical centers have been conducted,

with the development of a tourism infrastructure, in Almaty, Zhambyl, South Kazakhstan, Mangystau, Atyrau and the West Kazakhstan regions.

4. Projects of Regeneration

In this report I would like to note some of the programs for regenerating several significant historical compounds, proposed by our center and showing vividly the necessity of controlled integration of these places into the life of society, as a natural means for perpetuating their timeless value.

Kazakhstan is one of the states where nomadic peoples have lived from ancient times using mobile housing, such as yurts, tents, marquees, lean-tos, and other various portable constructions, as well as structures fixed on wheeled platforms. The culture of building mobile housing, being based on pole constructions and removable covers, long ago reached significant levels of technical and artistic perfection, as witnessed by the descriptions of medieval authors. But the non-durable nature of the materials, in terms of poor resistance to fire, damp, and the destructive impact of some species of insects, has not allowed these constructions to last. Individual, isolated samples can be observed in the museum exhibitions of some countries, such as Turkey, Uzbekistan, and Russia. Artistic forms of mobile housing were transferred to religious stone constructions, mounds, mausoleums and chapels, some of which have remained to the present day. From the middle of first millennium, urban culture started to form in the territory of Kazakhstan. Due to historical turbulence and cruel destructive wars, the ancient towns of Kazakhstan were also destroyed and lay in ruins. Thus, two foci have emerged in the archaeological studies of Kazakhstani heritage: research on both nomadic and settled cultural monuments.

RESTORATION OF THE PALACE MOSQUE IN THE ANCIENT SETTLEMENT OF OTRAR

One of the fundamental research projects of the second focus mentioned above is the large-scale, long-term excavation work at the Otrar site, undertaken from 1966 to the present. In the medieval period the Otrar oasis was one of the largest centers of urban civilization of Kazakhstan. This oasis included more than 60 settlements, castles, and small towns. The center was Otrar – a site in the shape of a pentangle, with an area of around 300 hectares and with a height of up to 18 meters.

The period of existence of this town spanned the fourth to the seventeenth centuries. Issues in the study of Otrar include the origin of urban culture, and the development of the construction arts in the history of the town. Problems concerning the exhibition of excavated objects from Otrar, and of conserving and restoring them were not raised initially. Attention was paid to these matters only when the remains of capital buildings such as the palace, a cathedral mosque with a madrasah, and bathhouses, etc., started to be uncovered at the excavations. For the preservation of the discovered artifacts, temporary tents and waterproof coatings and encasings are used. Also, some backfilling has been done for preservation.



For the convenience of visitors, pathways and observation platforms of bricks are being made. As experience shows, these efforts are inefficient, expensive and non-durable. Such conservation methods are especially unsatisfactory at massive features such as housing, and as a rule, the basic structures of a site's fortifications. The destruction of such conserved sites is usually revealed by the next season. Here we should emphasize that developing a method of conserving the sun-dried bricks is the main task at Kazakhstani sites.

The purpose of the project and its significance for Kazakhstan. The project aims at restoration of the initial architectural and artistic appearance, while preserving the functional purpose of the monument, introducing it into the system of local and international tourism along the path of the ancient Silk Road. The ancient settlement of Otrar has a two-thousand-year old history, from the first centuries up to the eighteenth century A.D., and is undoubtedly an important part of the cultural heritage, not only of Kazakhstan, but of the international community as well. Investigations of this monument, and conservation and restoration of the initial architectural and artistic appearance of some portions of the historic buildings such as the palace mosque, will give the chance to preserve the ethnographic, cultural, architectural and artistic traditions of the people who inhabited this region.



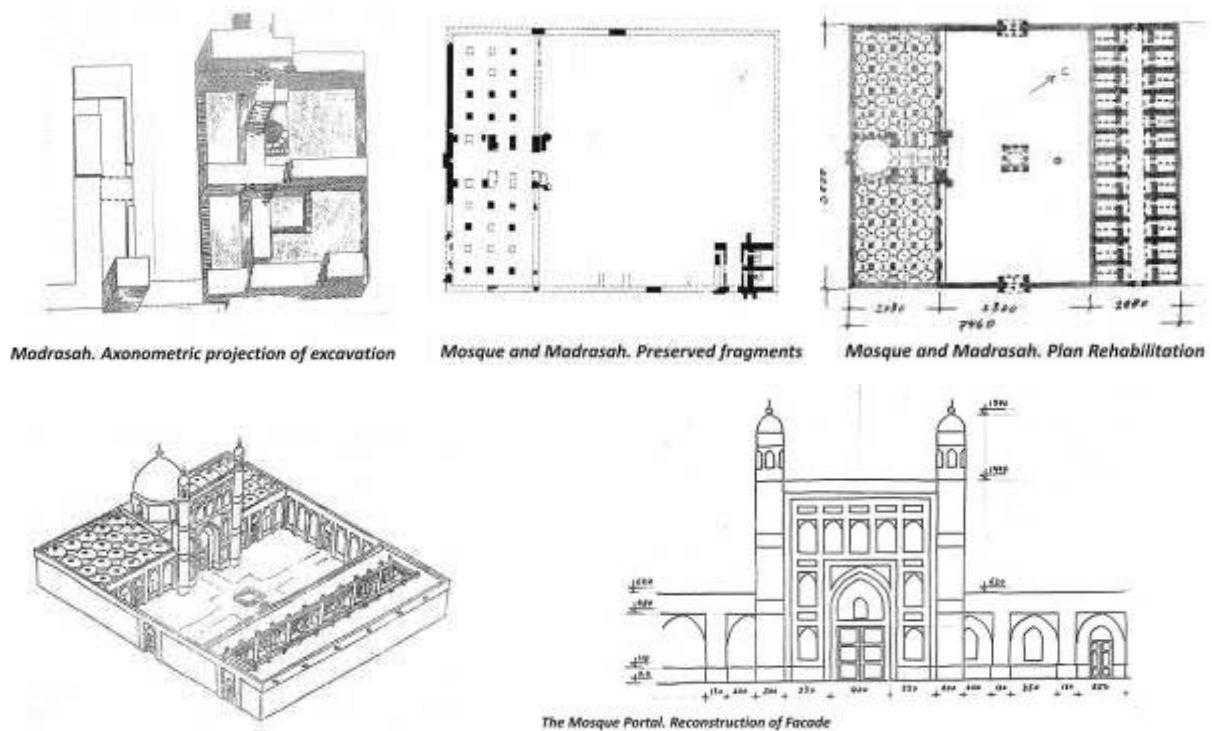
Project description. Ancient Otrar is known as the birthplace of the famous Medieval philosopher and scientist Abu Nasr Al-Farabi. Also, it is the place where Emir Timur, the founder of a huge empire, died in 1405. The work of investigating this settlement began in 1969, and has been carried out by the Institute of History, Ethnography and Archeology of the Academy of Science of Kazakhstan.

City buildings dating from the tenth through eighteenth centuries, including baths of the eleventh to fourteenth centuries, and pottery workshops of the thirteenth to fifteenth centuries, were all examined. One of the most interesting areas turned out to be the citadel precinct (Arka), where the palace complex, built with kiln-fired bricks, was formerly located. It fell to ruins in the fourteenth century, but was later furnished with buildings from the sixteenth to eighteenth centuries erected at the site. During the excavations only the area of the palace mosque, built from the end of the fourteenth to the beginning of the fifteenth centuries, was explored. It was constructed simultaneously with the mausoleum of Khoja Ahmed Yassawi in Turkistan. The Otrar mosque consists of indoor and outdoor parts. The indoor part is 60 x 20 m in size. The entrance was constructed in the form of a portal with rectangular pylons of 2.7 x 1.35 m. One of these pylons, with a height of 1.7 m, is well preserved. The mosque had cylindrical minarets, 2 m in diameter, attached to the corners of the portal. By examining the four surviving steps of the stairs of one of the minarets, the spiral-shaped staircases of all of them can be restored, with entrances of 1 m in width from the inner side of the portal.



The architectural plan of the mosque could also be recognized in the surviving features of the basement and the walls, in one of which remains of a *mikhrab* niche with square pylons on its sides were found. The wall has a doorway leading to the street. The Otrar assembly mosque belongs to the piers-cupola type of construction, well known in the mediaeval architecture of Central Asia. According to the available evidence, this mosque was most likely constructed for the noble estate. Even supporting structures, such as walls, piers, portal pylons, etc., were made of high quality kiln-fired bricks. A significant role was played by the architectural decoration of the walls, which were all paved with ceramic tiles and glazed bricks with ornamental and syncretic zoo-morphic images. The mosque had a garden of 60 x 55 m surrounded by walls of kiln-fired bricks. The entrance, *darbaza*, together with a toilet and other necessary facilities, was located in the western part of the yard.

The project envisages a complex of works, including the complete restoration of the mosque, with preservation and conservation of the remaining features, and regeneration of its original function. The partial conservation made in 2003-04 seems not to have been effective since the ruins, even if well preserved, attract only the attention of scientists. Other important features of this monument, such as its architectural and artistic appearance, touristic, religious and educational importance, are thus being neglected. In our opinion, only through conservation which both professionally restores the historical objects and integrates them into the vital activity of today's society can they be preserved from further destruction and disintegration.

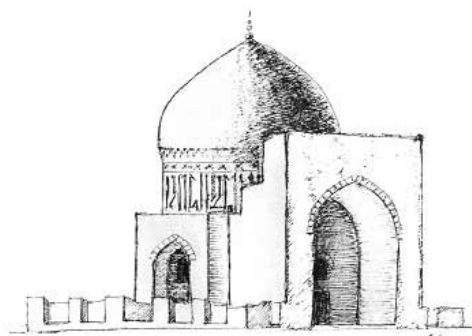
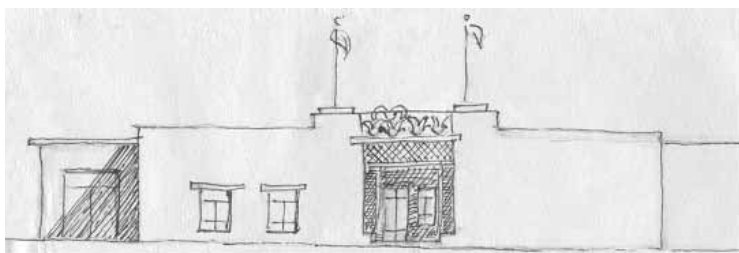


REGENERATION PROJECT OF A PORTION OF THE TURKISTAN CITY HISTORICAL CENTER

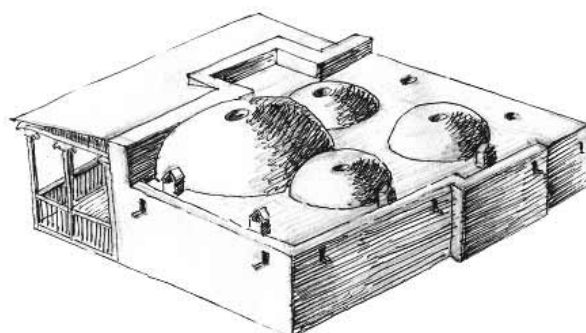
Another significant monument of the urban culture of Kazakhstan is the compound of the *hanaka* (mausoleum) of Khoja Akhmed Yassawi, including not only the preserved monumental edifices of Timurid period architecture, such as the *hanaka*, *hilvet* (underground mosque), an oriental bathhouse, mausoleums of Kazakh khans, but also the ruined remnants of fortification and irrigation constructions, streets and housing of a Medieval town site.



Hanaka (mausoleum) of Hodja Akhmed Yassawi, fourteenth century



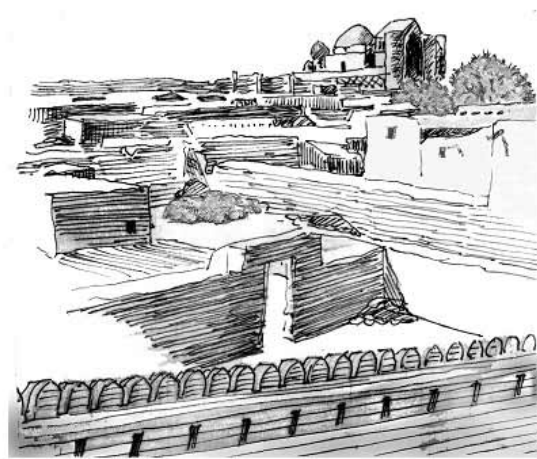
Upper left: *Hilvet* (underground mosque), twelfth century. Bottom left, right: Mausoleum of Rabiya Sultan Begum, fifteenth century. Photo and general view.



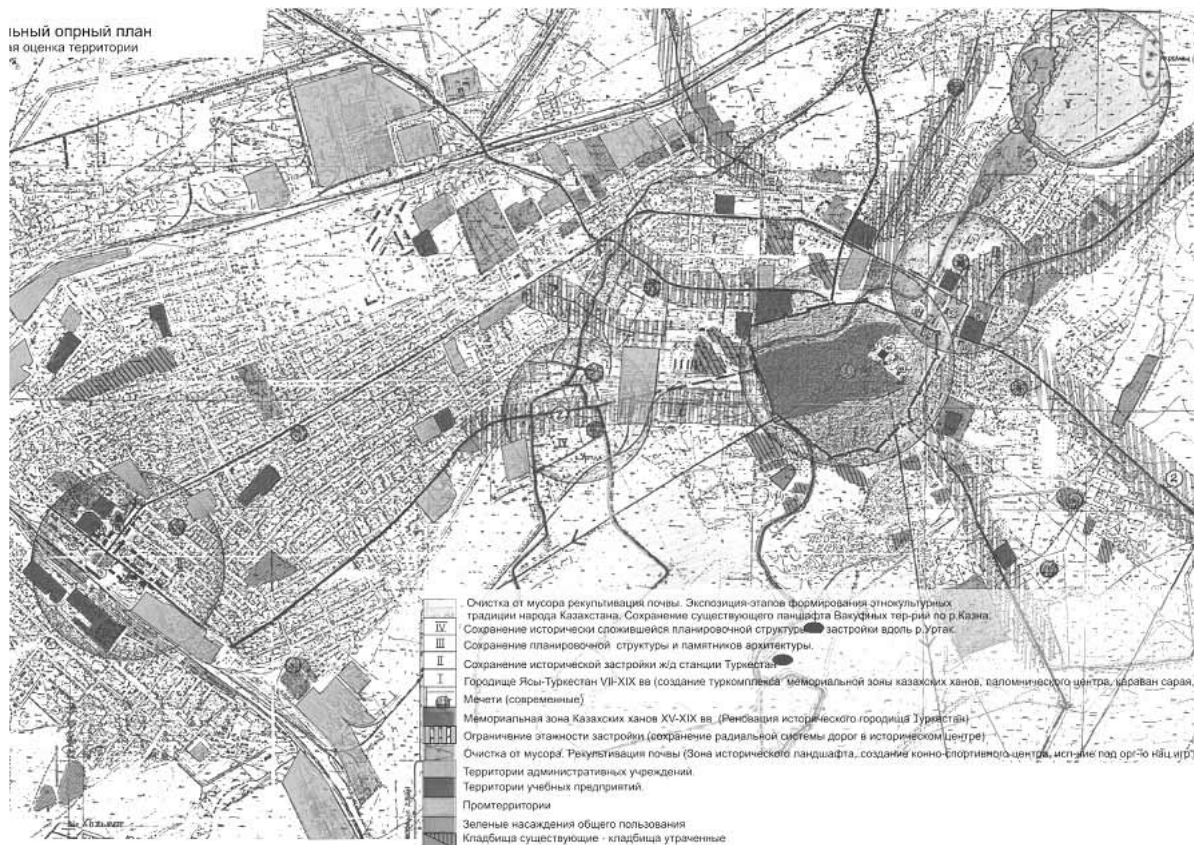
Oriental bathhouse, sixteenth century. Photo and general view.

Taking into account the national and international significance of the historical monument, town-planning and architecture (criteria i, iii and iv), the *hanaka* of Khoja Ahmed Yasawi in 2003 became the first monument in Kazakhstan to be inscribed on the World Heritage List.

The purpose of the project and its significance for Kazakhstan. The project aims to revive the architectural and ethnic-cultural atmosphere of the Medieval center of an ancient city of Turkistan, along with the establishment of pilgrimage, tourist and ethnographic sites on the basis of restored historical buildings. Turkistan was the first capital of the Kazakh state. Its medieval center, with an area of 88.7 hectares, is under governmental protection.

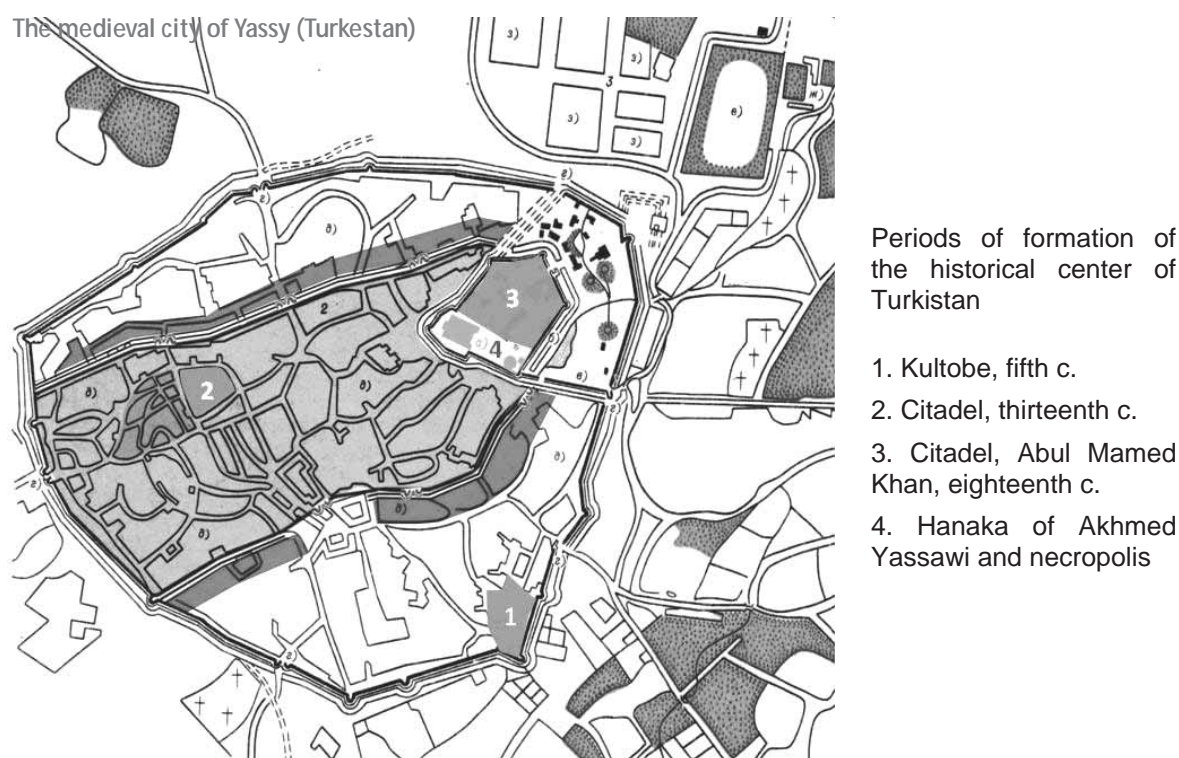


Location. The monument occupies the northern part of medieval Turkistan and lies next to its citadel and necropolis from the southern side, and to the modern city from the eastern side. Turkistan is one of the main centers of the steppe section of the Silk Road, and is located in the valley of the Syr-Darya foothills of Karatau mountains. At present it is the administrative center of the Turkistan region.



Project description. The city of Turkistan was founded in the fourth to sixth centuries at the site of a castle settlement known as Shavgar Yassy. In the eleventh and twelfth centuries, between the city and its necropolis, there was a *hilvet* on the way to a *ziarat* (pilgrimage), according to sufi the of Yassavite

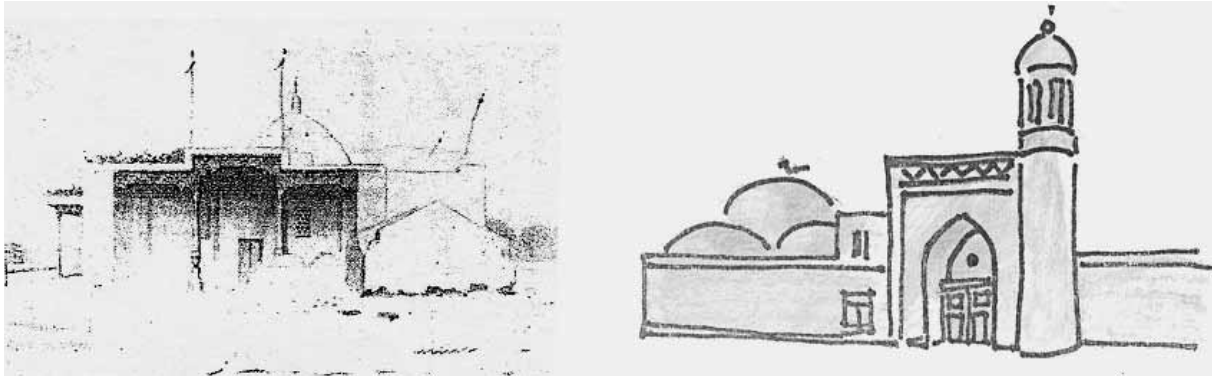
order. In the fourteenth century, the emir Timur created the mighty spiritual center of the Syr-Darya region, Desht-i-Kypchak. In the fifteenth century the headquarters of the Kypchak khans were shifted from Sygnak city to Turkistan, and the second city citadel appeared next to the existing residence of Turkistan's ruler from the eastern side of the necropolis and *hanaka*. After the consolidation of the three Kazakh clans (the Younger, Middle and Elder *zhuzes*) in the sixteenth century, Turkistan became the capital of the Kazakh state, and the Khan's headquarters were located in the citadel. In the necropolis, next to the *hanaka*, the mausoleums of Tawakel, Tauke, Dzhangir, Yesim, and Ablay khans, the establishers of the Kazakh khanate, were placed, which turned the old necropolis into a memorial complex.



The necropolis and the headquarters were surrounded with defensive walls with towers, gates, moats and bridges, and this territory of 4.5 hectares became the sacred zone of the city. To the south of it, a storage pond was constructed, and a city bath was built in the southwest. A trading center for sales of fresh goods and inns emerged at the western gates of the city which, existing until the fifteenth century.

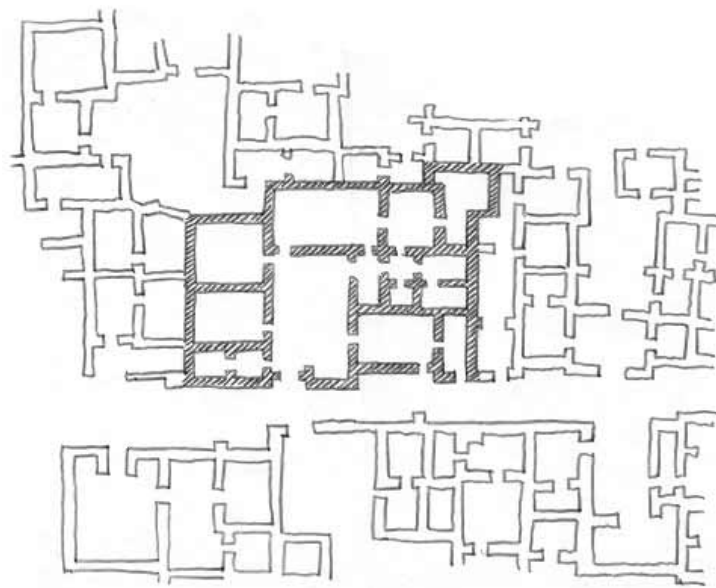
During the sixteenth to eighteenth centuries, the territory of the city was growing intensely. Dwellings were formed using the so called *makhala* type, dwelling blocks connected with narrow blind streets, and each having its mosque. By the nineteenth century there were total of 40 mosques in Turkistan, one per *makhala* block. These dwelling blocks were differentiated according to the class and professional estates of the residents, with the clergy blocks located closer to the necropolis and citadel.

The merchants had occupied the central and the most ancient part of the city, between the trading center (bazaar) and citadel. The housing blocks surrounding the citadel from the northeast and north were covered in rich decoration, and belonged to the most prosperous part of the population. The Khan's headquarters and the military garrison were located inside the citadel. According to a statistical report of the nineteenth century, in the city of Turkistan there were about 1,200 houses, with a population estimated at 5,000 people.



A Makala Mosque. Photo and sketch.

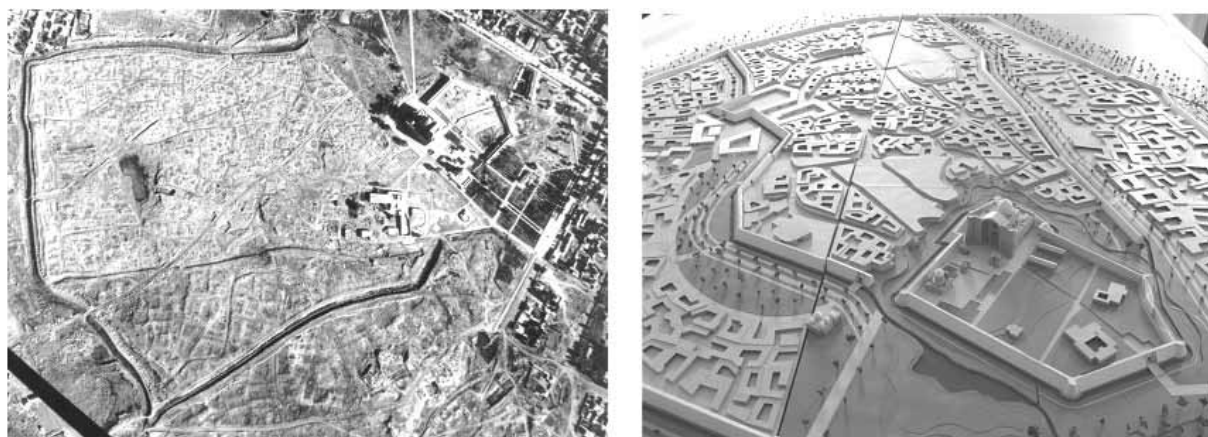
Besides the houses with crafts shops of artisans such as potters, carpet weavers, jewelers, tanners, etc. there were also small shops producing bricks, wooden and iron objects, and soap in the city.



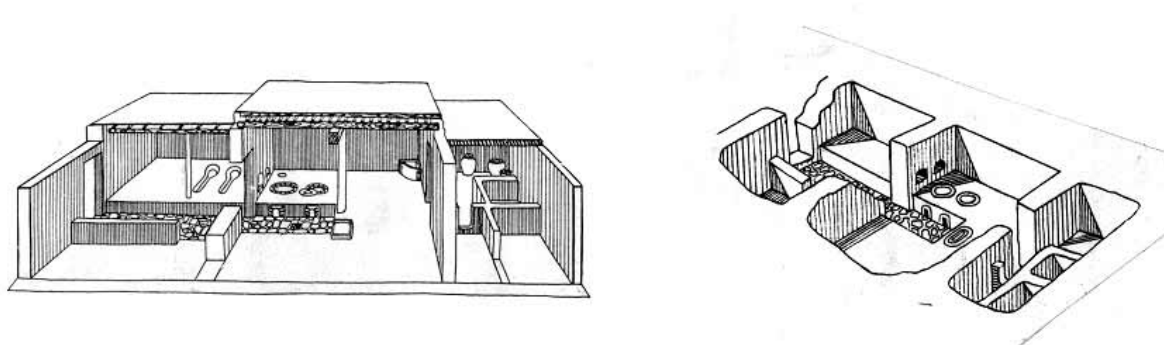
Plan of the dwelling housing found during archaeological excavations.

At present, the medieval core of Turkistan represents a city with a 4.5 m deposit of cultural layer, and a street network that can be identified, plus monumental religious and civil buildings of the twelfth through nineteenth centuries, with details of the fortifications of the citadel and the city preserved. Today all necessary materials are available for regeneration of this unique medieval city. Some of these monuments (ritual buildings: the *hanaka* of the Khoja Ahmed Yassawi; the *hilvet* or the first

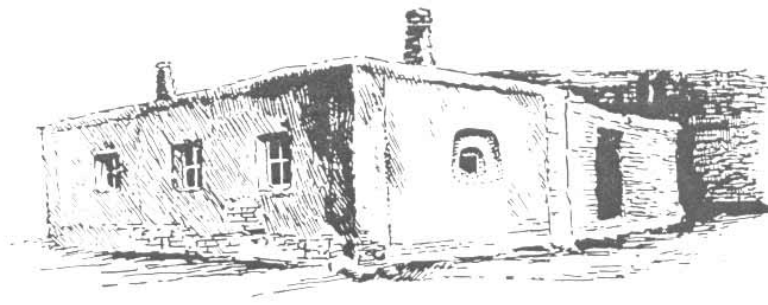
dwelling of the sufis, Auliye Kumchik Ata; Chila-hana, a headquarter mosque; a mausoleum of Rabi'a Sultan Begim, the grand-granddaughter of Timur; the medieval eastern bath; the remains of the fortification of the citadel with towers and gates) have already been restored. But this is a very small part of the city and much more needs to be done in order to restore it to its original appearance. The present project assumes the regeneration of the housing area of the northern part of the city, with a territory of 12 hectares of already ruined by 1980 (due to the modern city planning). Relying on the architectural and archaeological evidence, graphic materials, written sources of the fifteenth to nineteenth centuries, and mostly, preserved photos taken from 1910-52, when the medieval dwellings still existed, there is a chance to restore the ruined parts of this city with a high level of authenticity.



The core of medieval Turkistan, with the cultural layer identified. Google Earth view and a model.



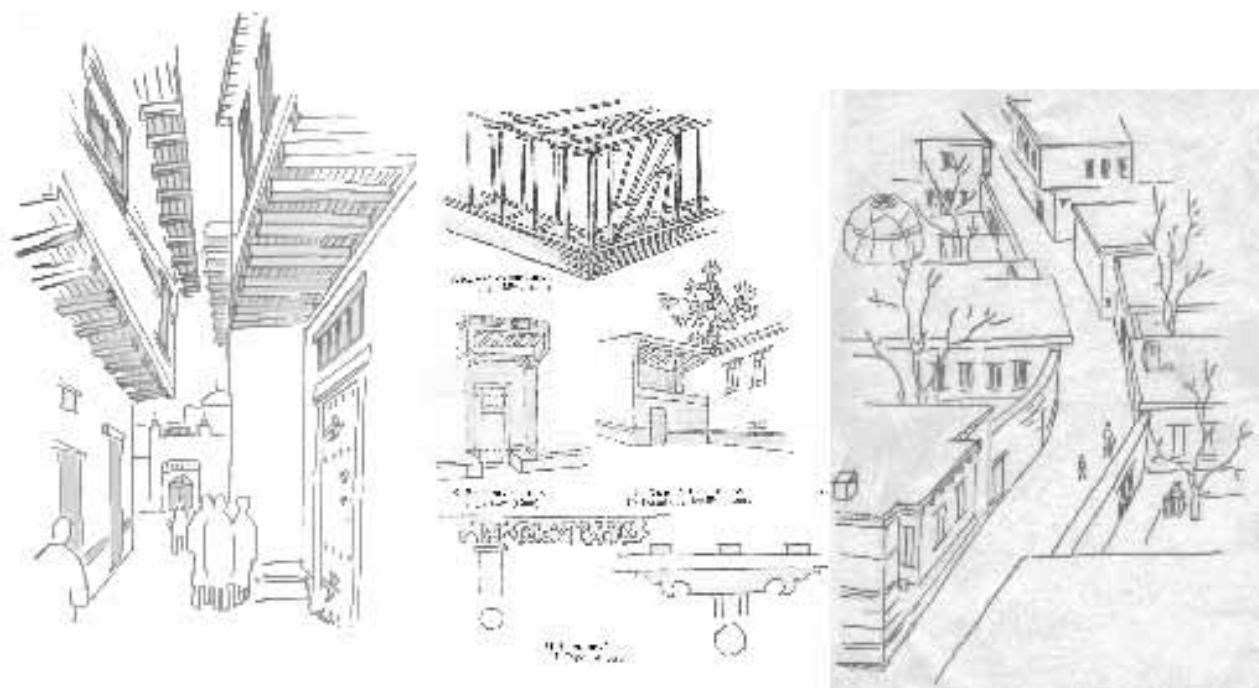
Dwelling houses of medieval Turkistan. Preserved features.



The portion of the historical part of the city proposed for restoration is attached to the outer side of the city walls, behind which the arterial road of the modern city lies, thus separating the modern city medieval one. In this area, according to the above-mentioned evidence, there were about 6-7 dwelling blocks of compactly placed one- and two-stored houses. Each block included a public center, consisting of a mosque and *medresse* (dormitory), with a garden and 10-12 farmsteads. The farmstead generally was inhabited by 5-10 family members and functionally was divided into two parts, male and female. All premises were connected by an inner garden. The entrance, with a stable, woodshed for agricultural tools, living and bedrooms belonged to the male part. The backside of the yard, with a kitchen, and bedrooms for women and children represented the female part. The premises on the second floor, except for the guest room above the gates, also belonged to the female area. This guest room had a window facing the street, with all others facing the inner-garden, thus the streets had the appearance of narrow clay corridors. All parts of the premises on both floors had exits to the yard and were connected between themselves by a terrace. Sometimes the terrace was constructed only on the first floor, roofed on the second by a mezzanine, thus considerably increasing the area and creating shaded spaces in the yard. The yard was considered to be the central part of the farmstead and as a rule much attention was paid to its improvement: it was fitted out with a small rectangular pool (*haus*), a well, many fruit trees with bird cages on them, and grape bushes all around. It was paved with stone or kiln-fired bricks of 30 x 30 x 6 cm in size. Some of the yards were covered with layers of colored clay.

In some large yards there were mounted yurts on clay platforms, thus preserving nomadic traditions until the twentieth century. Some stone platforms for yurts were found on the precincts of the Khan's headquarters inside the citadel.

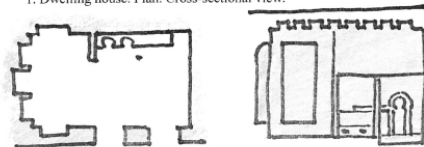
The project envisages utilization of the restored buildings, taking into account a harmonious combination of historic and modern features. Thus, the block on the main street, situated next to the ancient city's northern gates, is foreseen as a tourist complex. Eight or nine restored farmsteads could accommodate about 300 tourists, and provide them with comfortable conditions for their stay and entertainment. The block located to the west from the tourist complex, also connected to the main street, is planned for use as a pilgrimage complex. In this block, besides the dwelling houses supplying the necessary premises, for the ritual needs of the pilgrims a quarter mosque with a sacred garden for 100 persons is planned for restoration. The block next to the city citadel, consisting of 9 farmsteads, will be restored for utilization as a cultural and ethnographic center, including an ethnographic theater and museum, spaces and premises for exhibiting the national cuisine, *kumis*, and *chayhanas*, places for conducting national games and sports, plus horse stables and technical rooms. A small block of 4 farmsteads in between the above-mentioned complexes is planned to be used as a handicraft village.



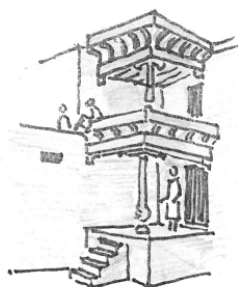
Project sketches



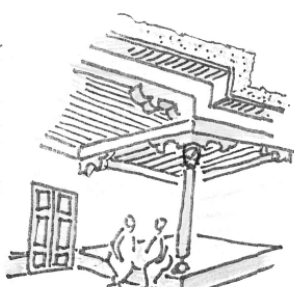
1. Жилой дом. План, разрез
1. Dwelling house. Plan. Cross-sectional view.



2. Кухня. План, разрез
2. Kitchen. Plan. Cross-sectional view.



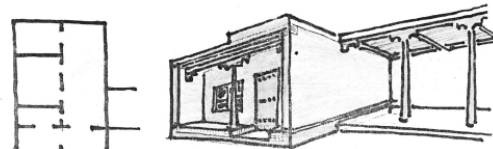
3. Балкон жилого дома
3. Balcony of a dwelling house.



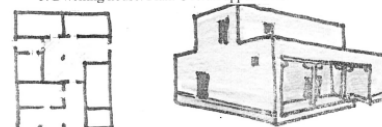
4. Айван
4. Aivan (Terrace).

ФРАГМЕНТЫ АРХИТЕКТУРНЫХ И КОНСТРУКТИВНЫХ ПРИЕМОВ
РЕКОМЕНДУЕМЫХ ДЛЯ РЕГЕНЕРАЦИИ ЖИЛОЙ ЗАСТРОЙКИ
ГОРОДИЩА ТУРКЕСТАН

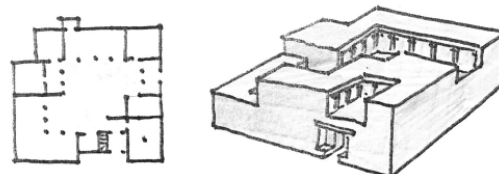
ARCHITECTURAL AND STRUCTURAL SOLUTIONS RECOMMENDED
FOR REPRODUCTION OF TURKESTAN HISTORICAL TOWN SITE



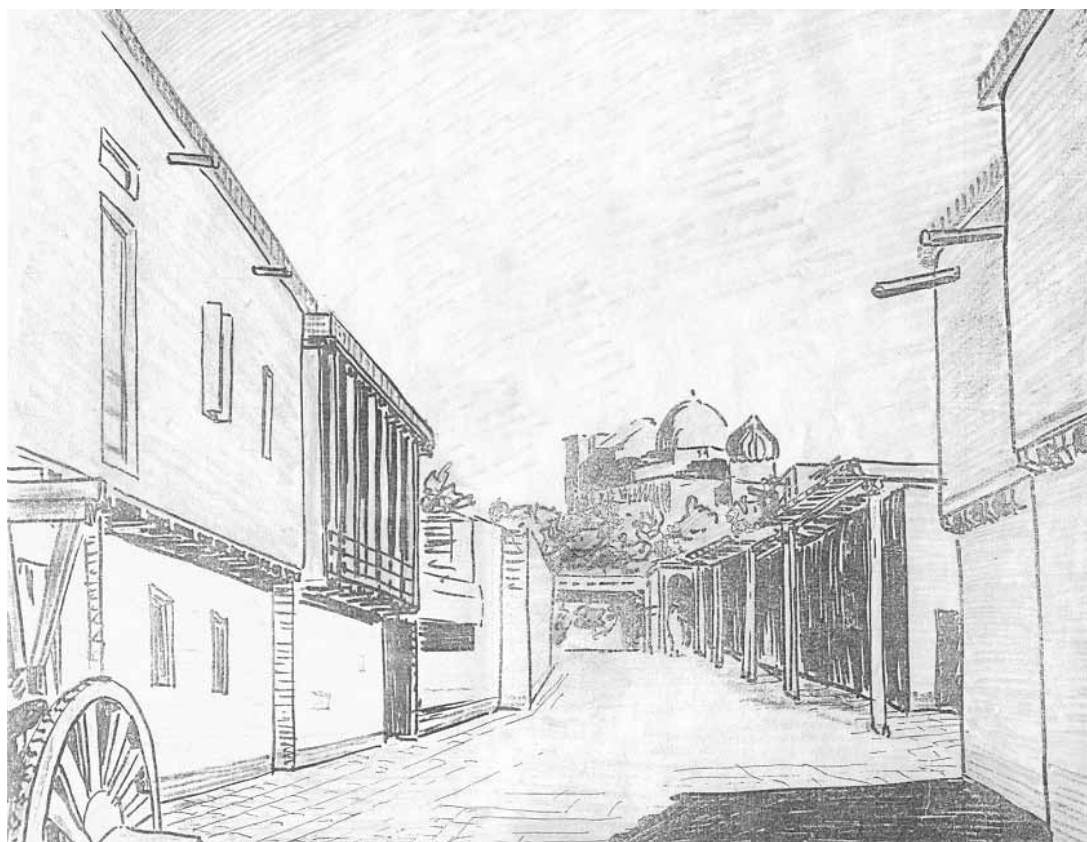
5. Жилой дом. План, общий вид.
5. Dwelling house. Plan. Overall appearance.



6. Жилой дом. План, общий вид.
6. Dwelling house. Plan. Overall appearance.



7. Жилой дом. План, общий вид.
7. Dwelling house. Plan. Overall appearance.

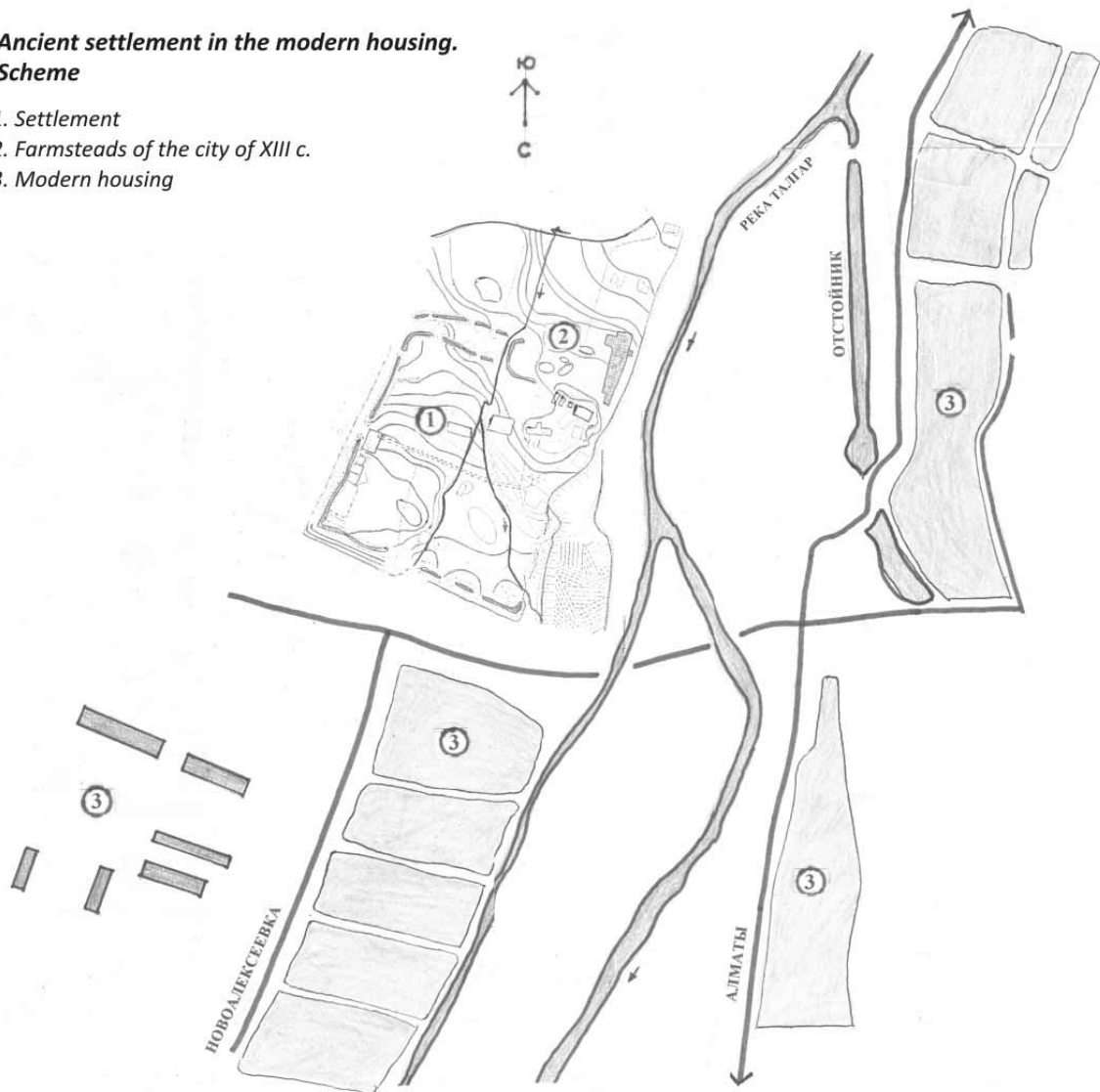


REGENERATION PROJECT FOR THE MEDIEVAL CITY OF TALGAR

Purpose of the project and its significance for Kazakhstan. The project aims at the museumification of a medieval city site, the reconstruction of a living quarter, and the architectural and archaeological study of the monument, plus the inclusion of the complex into national and international tours of the ancient Silk Road. The medieval city of Talgar is unique historical evidence of the art of town-planning in the northeast of the Semirechie region, and is a property of national and international cultural importance.

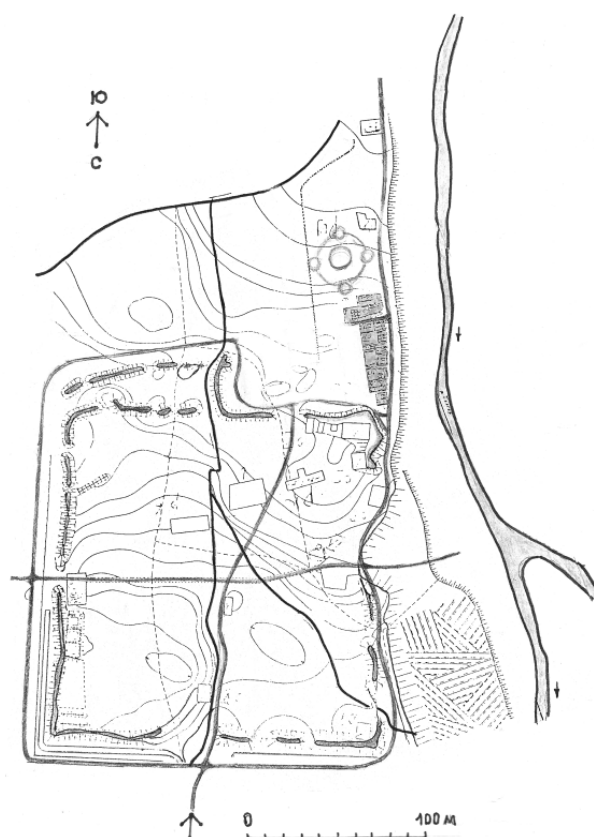
Ancient settlement in the modern housing. Scheme

1. Settlement
2. Farmsteads of the city of XIII c.
3. Modern housing

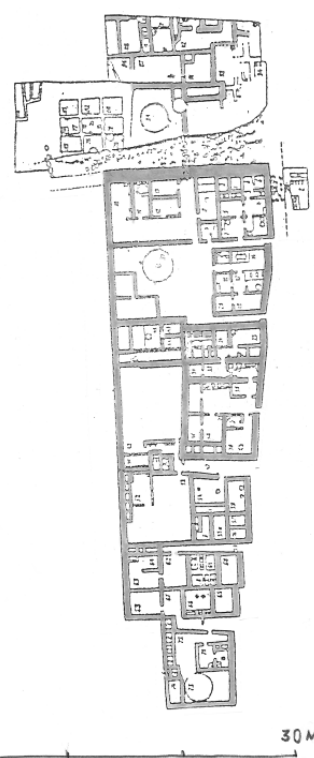


Project description. The Talgar city site is identified with the famous Talhir city on the Great Silk Road, where it crossed the Ili valley. Medieval Talgar was one of the largest political, economic, and cultural centers of ancient Kazakhstan. Here, in the foothills of the Zailiyski Alatau, even in the age of the Saka and Uisun states, numerous settlements were concentrated. The archaeological remains found

show that along with livestock herding, farming through irrigation also played an important role in the life of the ancient population of Semirechie. The city was founded at the locus of an agricultural settlement of the eighth century, and in the tenth century geographical treatise *Hudud al-Aalem* (Boundaries of the world), the Persian author describes Talhir as the political center of the lands of the Djikelei and Tuhsi tribes, which later entered into the Karahanid empire. The city existed until the end of thirteenth century, and possibly its destruction was connected not only to the political instability of the second half of that century, but also to one of the area's most destructive earthquakes which took place at that time. At present, the ruins of Talgar represent an elevated rectangular mound, surrounded by the guttered fortress walls and a moat behind them. The area of the fortified citadel is 9 hectares. Towers were located at the corners and on the perimeter of the citadel. Two entrances which led into the city were situated on opposite sides, and were connected by a stone paved road which divided the city into two, almost equal, parts. Different buildings adjoined the fortified part of the city, organized as a kind of trade and handicraft suburb.



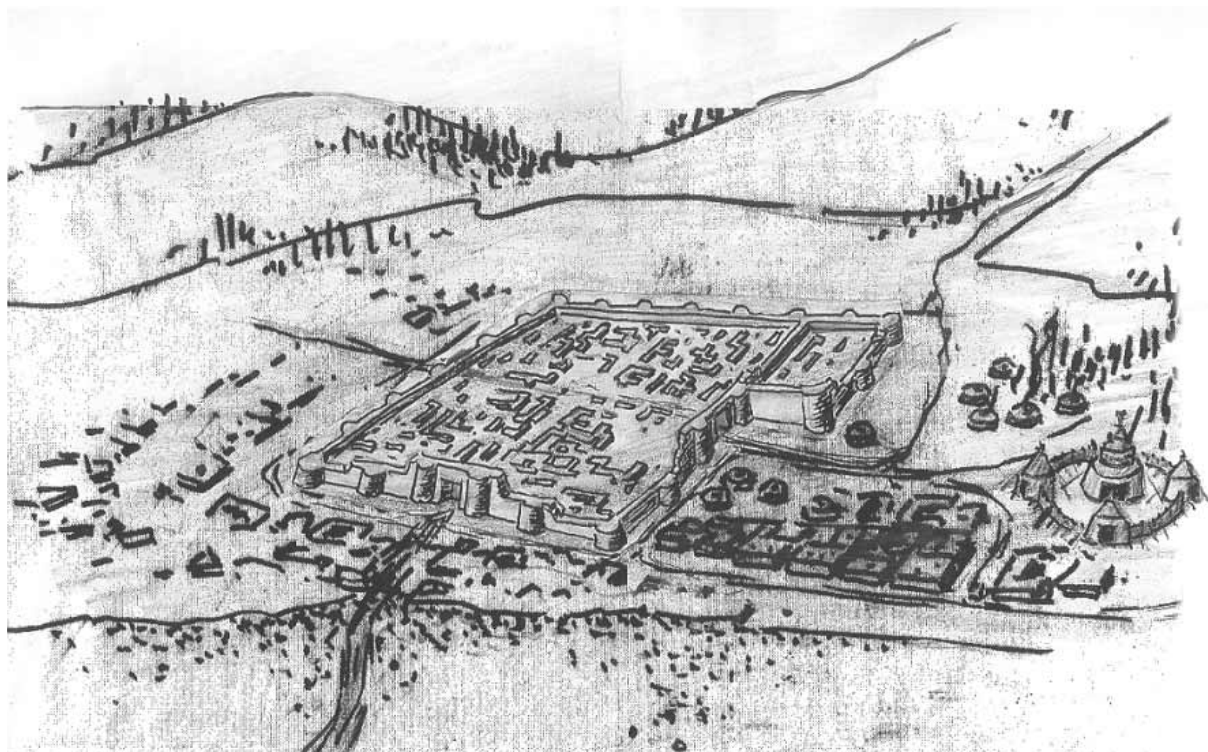
The situational scheme of the settlement



Plans of the farmsteads

In the eleventh and twelfth centuries, the territory of Talgar had increased to approximately 30 hectares. It was built up with houses and farmsteads. Usually, the farmsteads consisted of a part for living, being a house and a big yard, with a nomadic tent or yurt made of felt and wood. Among the

archaeological remains found there in 1968, when excavations first took place, were a dwelling quarter of 18 farmsteads, pottery workshops, a jewelry shop and a bakery. Large amounts of ceramic materials were collected, as well as pieces made of iron, bronze and glass.



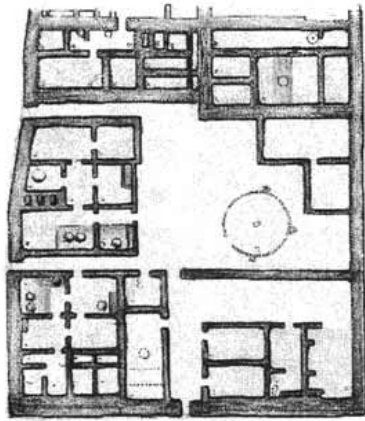
The medieval city of Talgar. Reconstruction.

The development of crafts and the rise of the city's economy contributed to the strengthening of its role as a trading center in the region. Many luxury pieces of art brought from different countries such as China, Japan, Iran and India have been found. Talgar was one of the largest centers for the production of iron and steel articles. Talgar blacksmiths knew the secret of Damascus steel production.

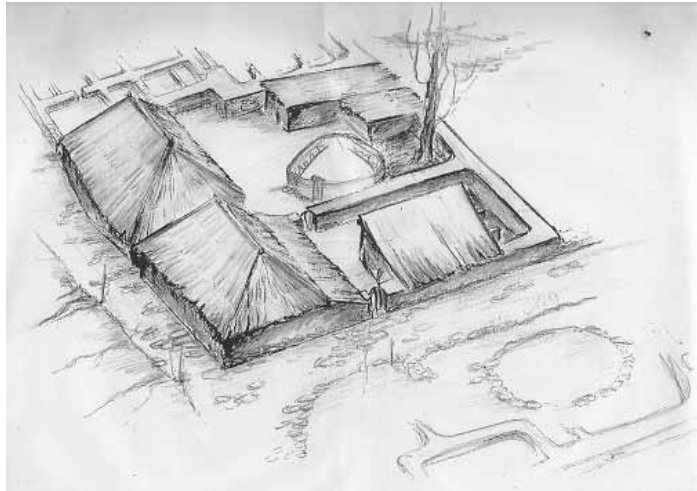
The main works of restoration planned for Talgar, as a capital of a vast region from the eighth to the thirteenth centuries, are as follows:

- Installation of a fence around the citadel territory
- Ceasing of accidental illegal farming and the organization of a park zone along the Talgar river
- Restoration of the excavated dwelling quarter
- Conservation of the main roads with their original pavement
- Conservation of the remains and restoration of the ruined parts of the main entrance to the city in the northeastern part of the wall, and of the two entrance towers

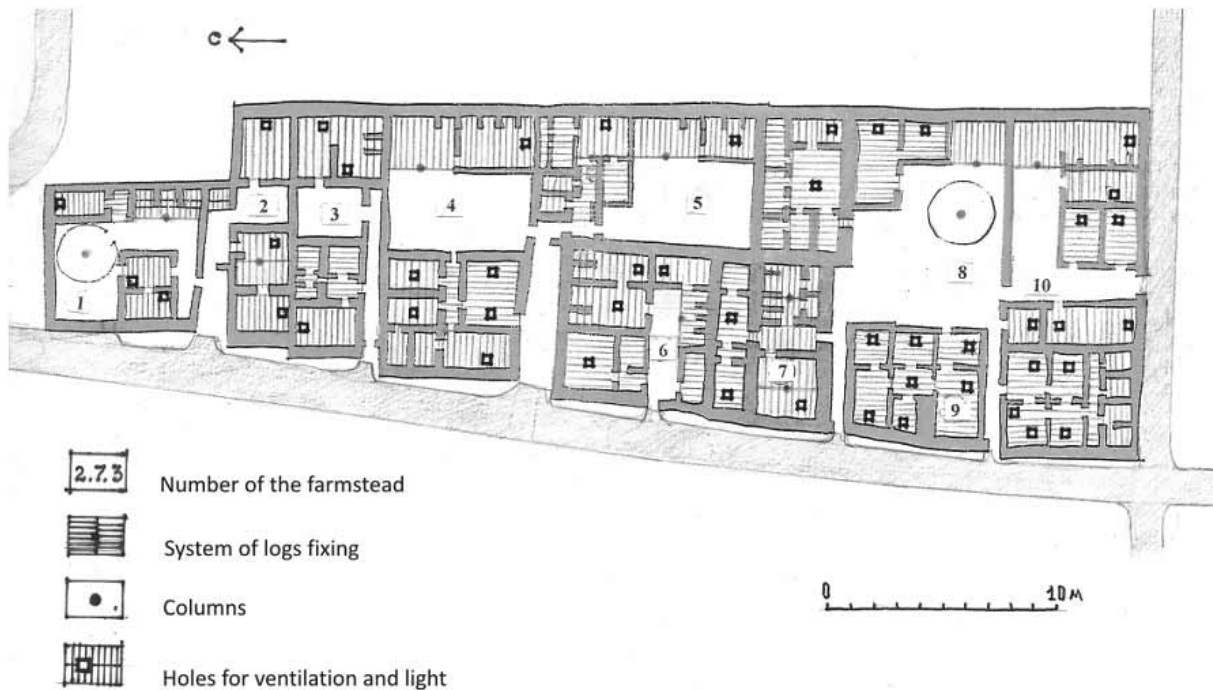
- Reconstruction of the farmsteads with their full interior and exterior decorations, with their later utilization as an ethnographic museum for the culture of the Djikili and Tuhsi tribes
- Restoration of the castle ramparts



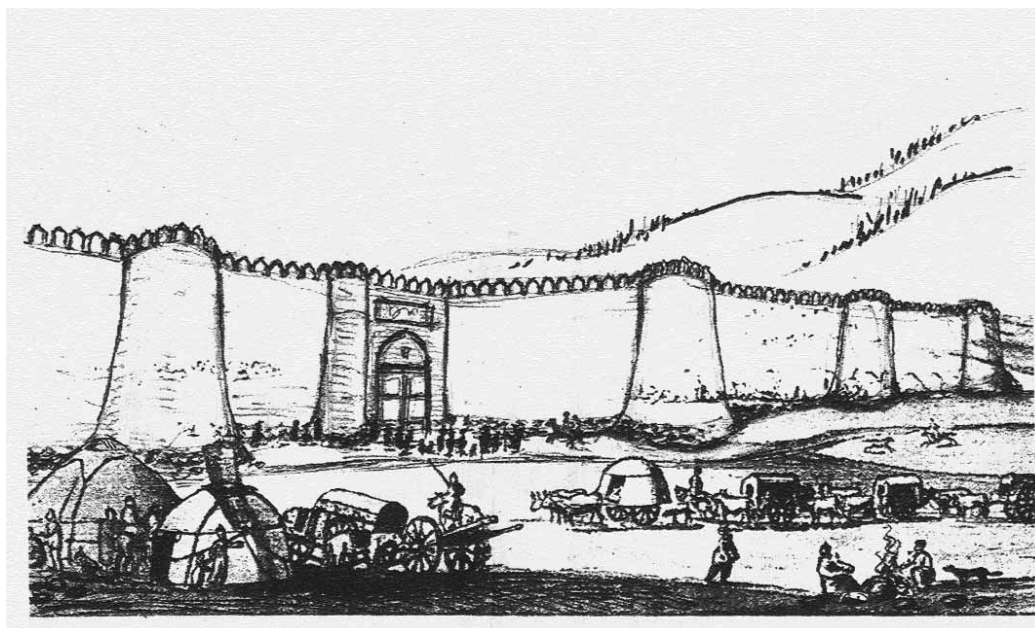
Portion of the reconstructed farmstead.
Plan



General view

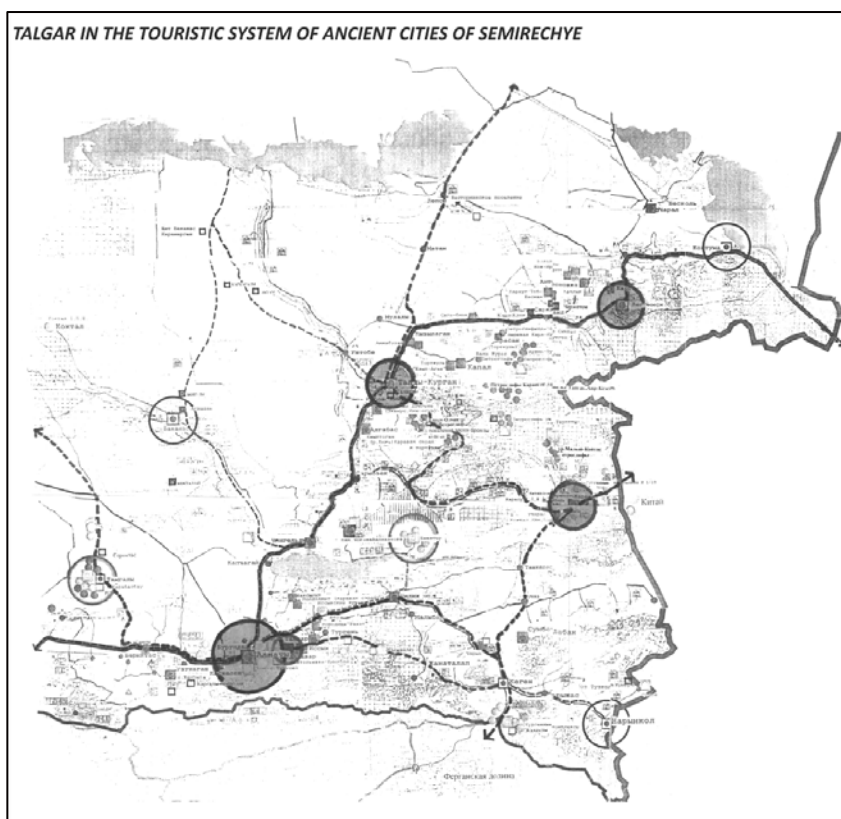


Plan of the farmstead quarter



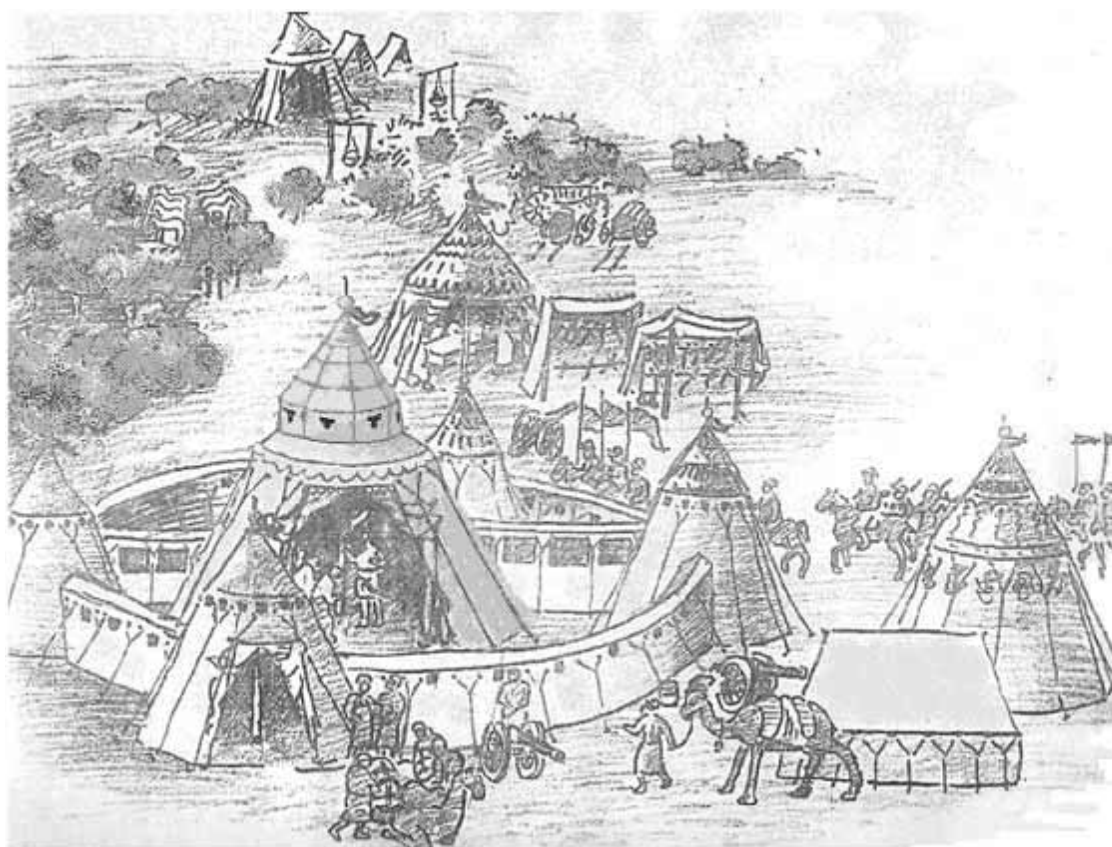
City walls. reconstruction. View from the south

Advantages of the project. The project promises mixed approaches to the creation of ideal conditions for the preservation, presentation and modern utilization of this unique monument of the historic town-planning culture of Kazakhstan. Keeping in mind the cultural and cognitive importance of this monument, as well as its location close to Almaty and its relatively good level of preservation, the settlement of Talgar was included into the state list of touristic sites, and a touristic and ethnographic complex is planned to be organized on this basis.



NOMADIC CULTURE MUSEUM

Important regeneration projects of our center include the restoration and preservation of monuments representing the other focus in the archaeological studies of Kazakhstani heritage: nomadic field settlements, wheeled housing and other means of mobility, along with ethnographically distinct military devices. Due to the non-durability of the materials used by nomads when making such constructions, reinstating them with their particular multiple artistic elements and detail represents quite a complicated process, including analyzing graphic, ethnographic and archaeological materials, as well as written sources.

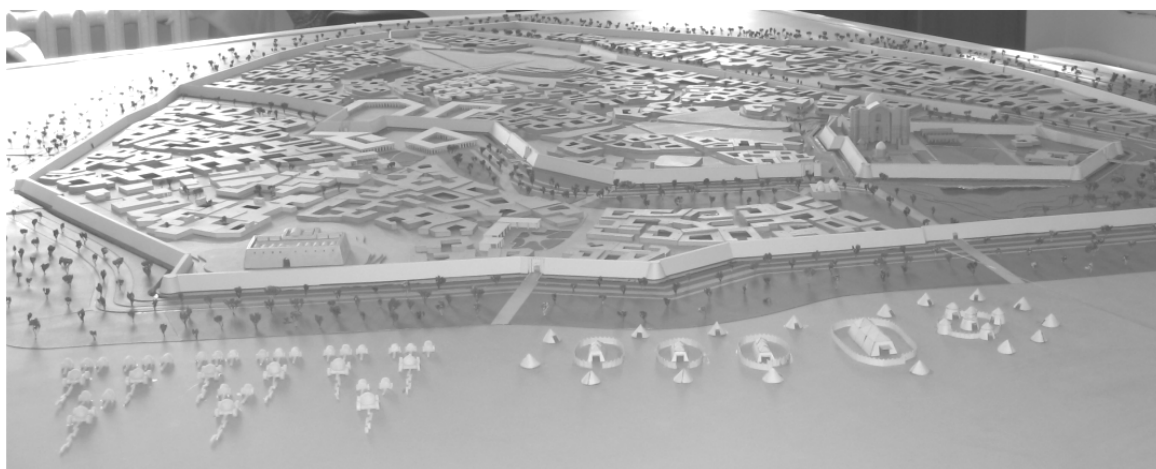


Nomadism, as a specific form of household and community setup of tribes united by commonalities of territory and culture, formed on the Eurasian continent in the second millennium B.C., and existed in separate regions until the twentieth century. The mobile lifestyle fostered in nomads a specific state of mind, their own concepts of world order, their own moral criteria, values, and codes for communal living, as well as their own arts, beliefs, customs, rituals and traditions – in short, their own culture. In the process of the formation of this nomadic culture, which occurred sometimes through interaction with settled populations, values at a panhuman level also emerged. These values first of all include the mythology of the nomadic peoples, reflected in the sacred writings of the Indo-Aryans, the Rigveda

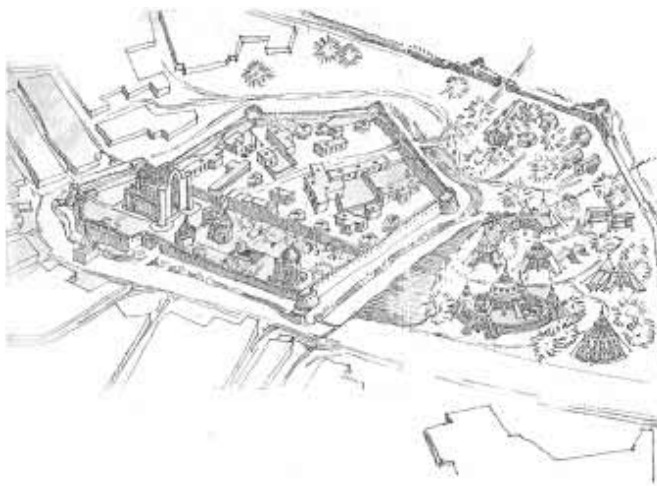
and the Avesta. They are also embedded in the imagery of the language, its sayings and proverbs, and in traditions, rituals, games, and the depictive arts, which all represent forms of intangible heritage.

While looking at the significance of nomadic culture in the formation and development of global civilization, it should be noted that increased attention is now being paid to studying nomadism as an important cultural phenomenon in itself, and as a valuable source of information. Kazakhstan, as a territorial and ethnic successor of the traditions of the Central Asian nomadic culture, and on whose territory multiple evidences of the Saka-Uisun and Turkic cultures remain, is in a unique position to act as unifier of scientific programs, and organizer of all information relating to nomadism.

Project of the Museum of nomadic civilizations in Turkistan



Turkestan

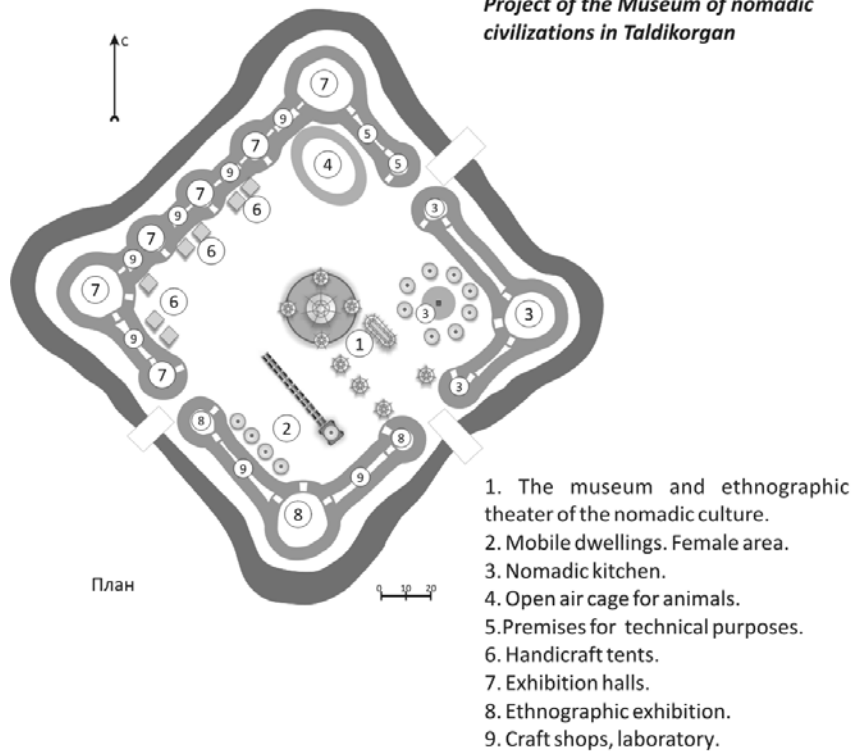


Almaty

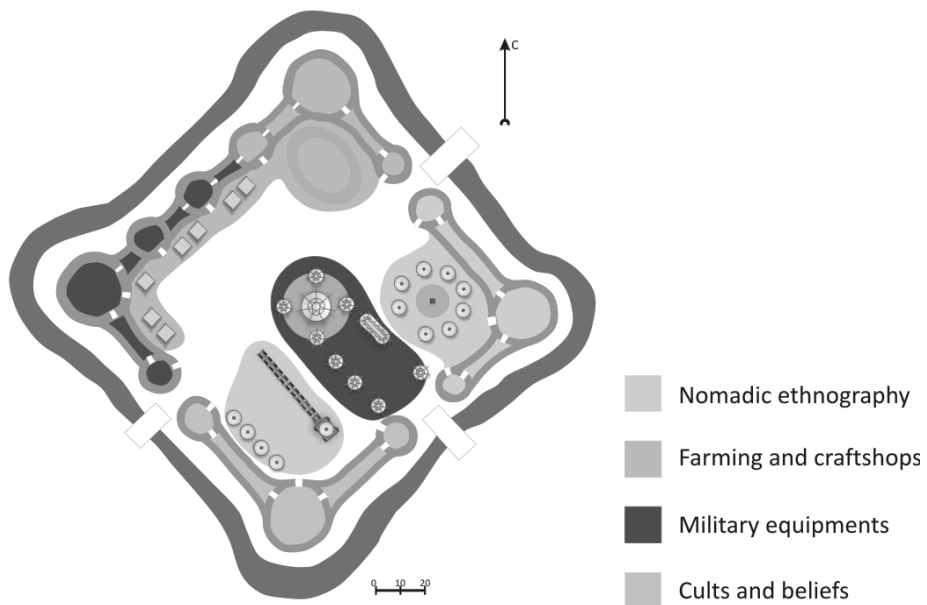


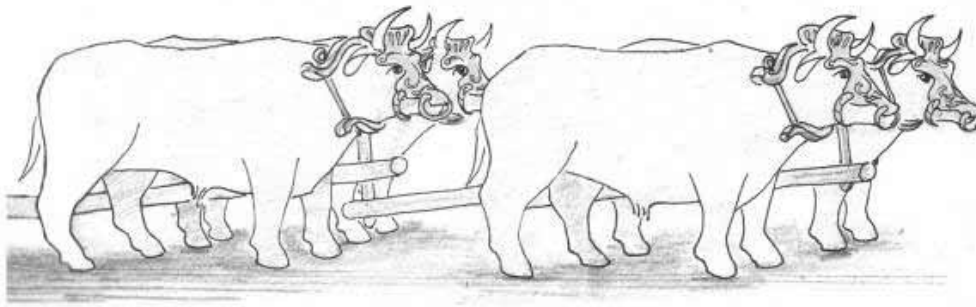
Project of the Museum of nomadic civilizations in Almaty

Project of the Museum of nomadic civilizations in Taldikorgan

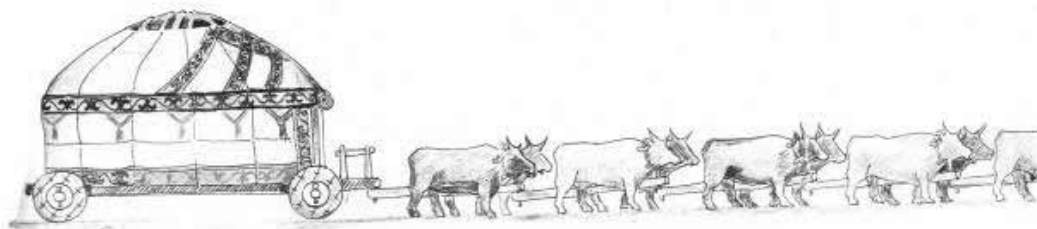


Functional zoning of the territory of museum



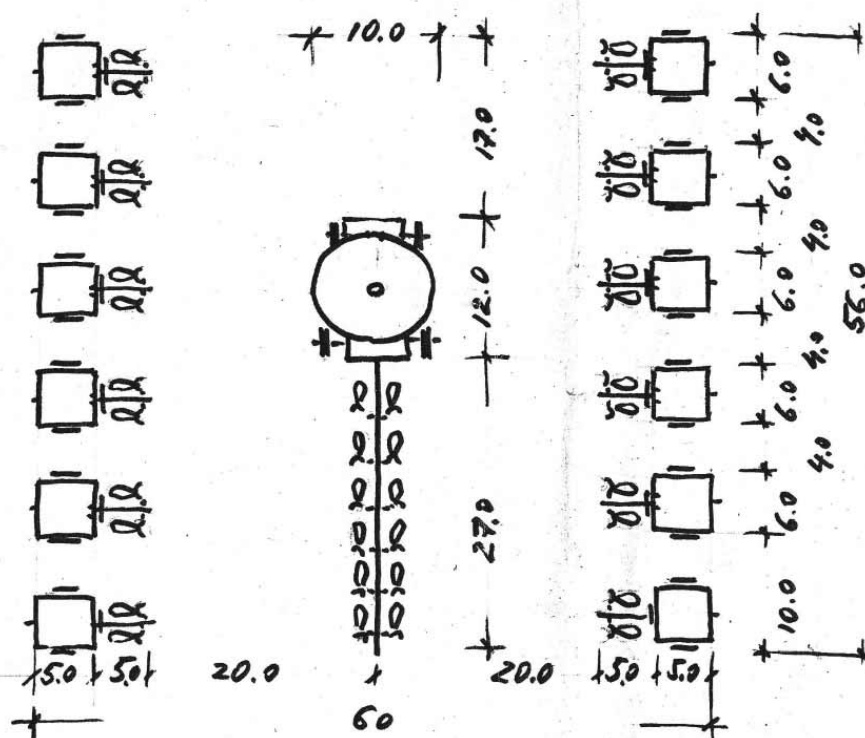


Draught-bulls with golden masks

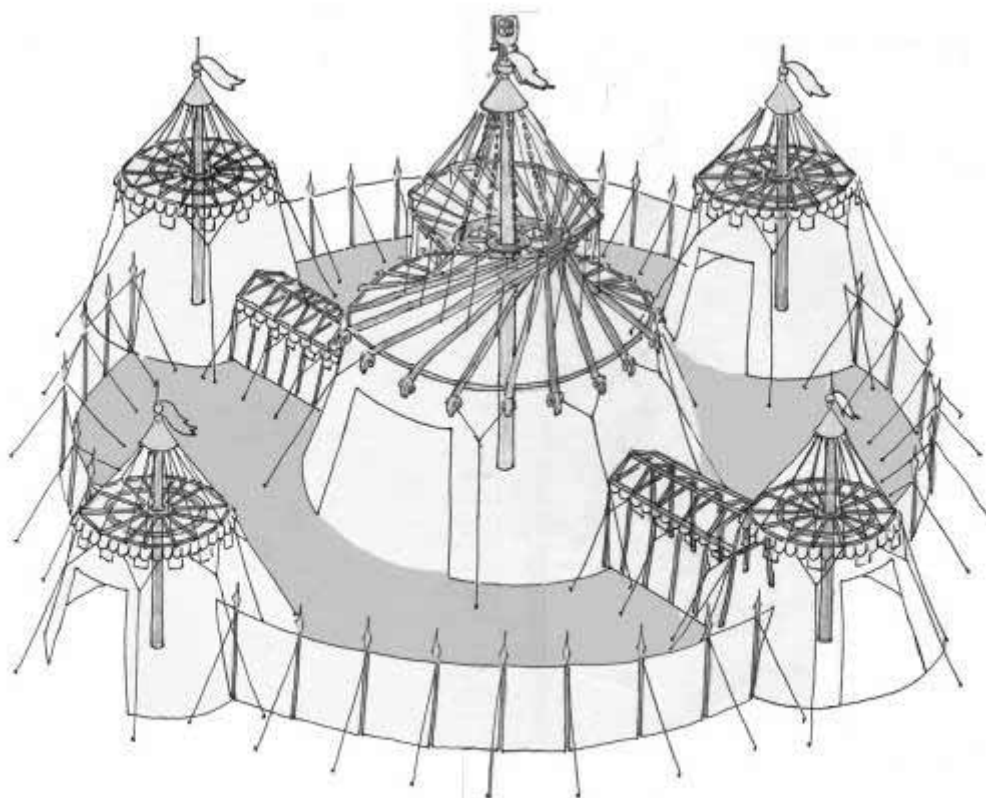


Yurta on wheels

Mobile Constructions



Arrangement of mobile constructions in a caravanserai



The system of column and beam-and-rope frame

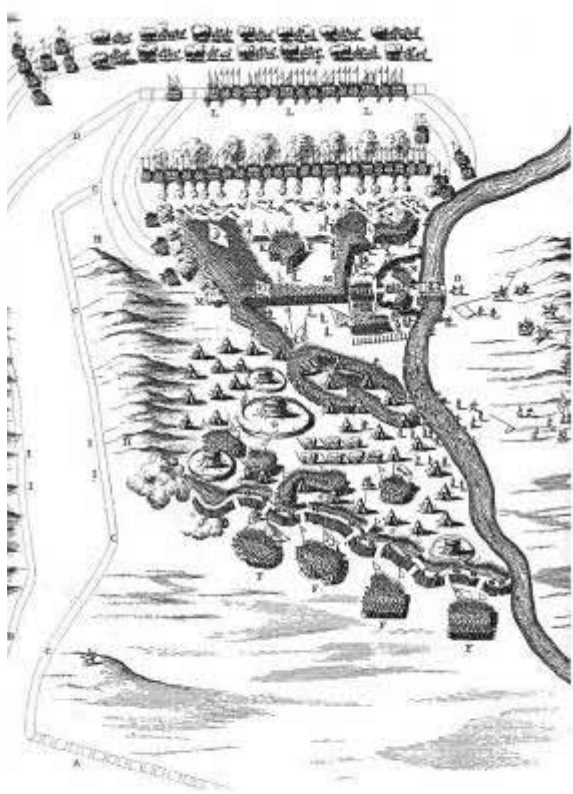
Exhibition of the nomadic headquarters of the Saka general (Khan). In this exhibition, one of five constructions of the mobile headquarters of the Saka general (Khan), representing the nomadic military palace complex of the Saka (Scythian) time, is portrayed.

Its pre-fabricated detachable construction allowed it to be used during migrations and military marches, as well as during stationary periods. The renovation of the complex was conducted by the scientific and producing center, “Historical and cultural heritage,” from investigations based on archaeological and graphic materials, and bibliographic and archival documents. The remains of such sites were found in a northern suburb of Almaty city (Terenkora settlement), and at locations 16 and 200 km east of Almaty (close to Tuzusay settlement and on a ritual site of the river Charyn). Similar settlements of the Saka-Uisun time were also found along the Bolshoy Almaty channel, the cultural levels of which were destroyed during the construction of the channel.

Ceramic remains and stratigraphic materials from these archaeological settlements reveal the existence here of numerous semi-settled sites of the Saka time. The round and oval-shaped plans, single-columned construction, and locations of these headquarters indicate the succession of architectural and decorative traditions of semi-settled Sakas of the Uisun and Turk times. This is why, for the

reconstruction of this complex, both graphic documents and written sources belonging to the Middle Ages were used, which complemented the archaeological data and enabled restoration of lost parts of the architectural and decorative forms of these constructions.

Clearly recognizable representations of these constructions are found in miniatures of the sixteenth and seventeenth centuries, in the archives of the Istanbul National Library, the Institute of Eastern culture of the Uzbek Academy of Sciences, the National Gallery Friar in Washington, the Bodleian Library of Oxford University, the Paris National Library, the Windsor Royal Library, and in several Persian and Indian miniatures, and in those made for Navoi and Babur-name poems, as well as in gravures of Bartholomew from Behen.



*The example of the military dislocation of the Turkish armies quarters
Manuscript laboratory of Suleymaniye
Istanbul*

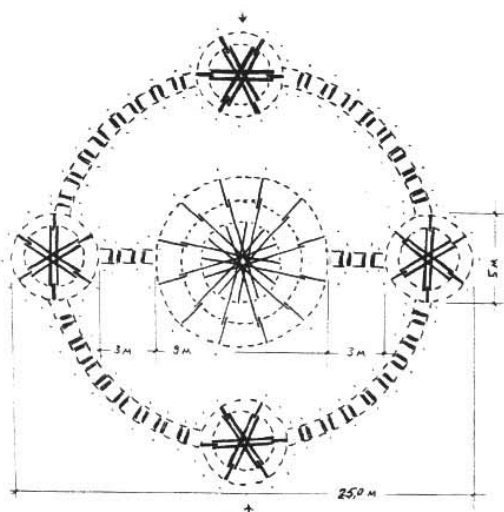


*The military headquarters of the Turkish army at Vienna. Godfrey Goodwin.
A history of Ottoman Architecture
Oxford, 1987*

In order to restore the decorative parts of the marquee, remains were used from different archaeological excavations of burial mounds (*kurgans*) in Issyk, Berel, and Pazyrlyk, where the Saka leaders were buried, and also from the descriptions of these constructions made in accounts written by Plano Carpini and Giloma de Rubruk. Remains of single-columned marquees were also found on the northern side of the Black Sea among the monuments of the Skiff and Saka habitat. Constructions here

reach 9-12 m in diameter. Sockets from pegs which held the ropes of the marquee allow making a parallel between these marquee complexes and those found in Kazakhstan and in the Altay region of Russia. Other archaeological remains and written documents also indicate that ethnic and cultural relationships existed among Central-Asian nomads and peoples inhabiting the northern side of the Black Sea.

Architectural characteristics and decorative elements. The construction is 10 m high and 9 m in diameter. The main carrying elements are the column and beam-and-rope frame forming a junction disk (wheel), which symbolizes a celestial chariot. This wheel with its beams, or rays, spreading out from it, form the internal space of the construction, and serve as basis for the carrying wooden beams which are holding the cupola.

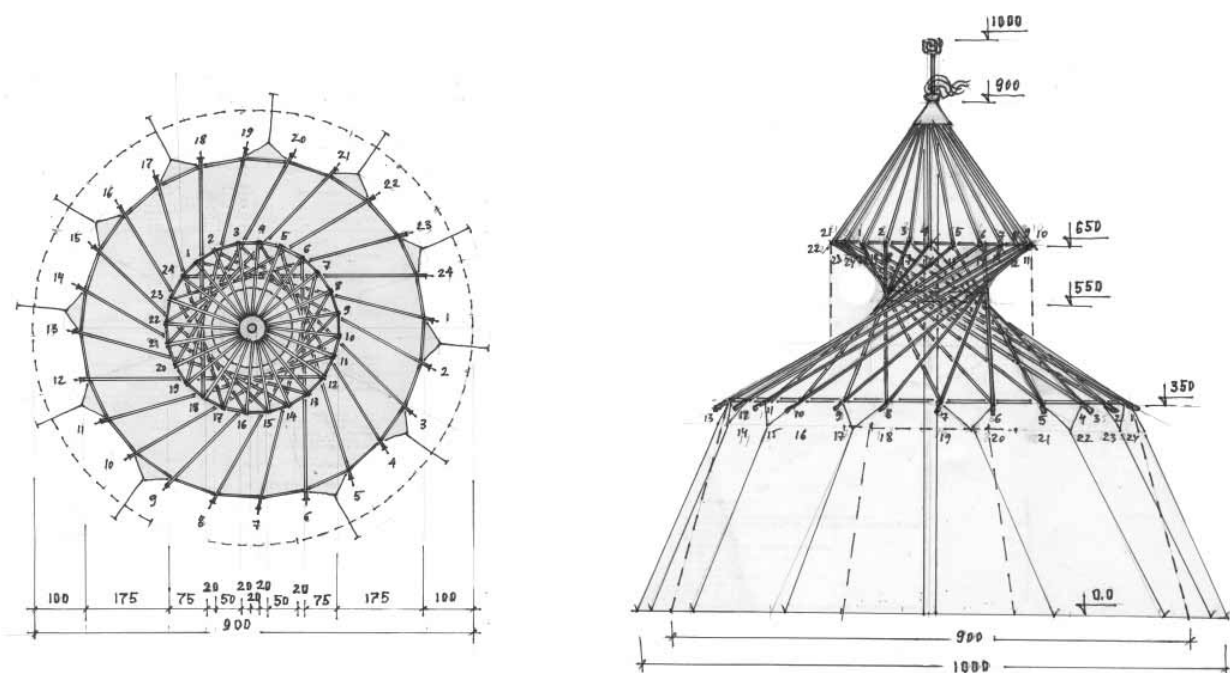


Plan and the model of the nomadic headquarters

From the outside, the marquee is covered with felt decorated with strips of brocade, and with silk from inside. The interior design of the construction was implemented in accordance with the ancient ideology of the Skiffs and Sakas, based on scientific investigations showing the first single-columned marquees belonging to the Skiff and Saka nomadic period.

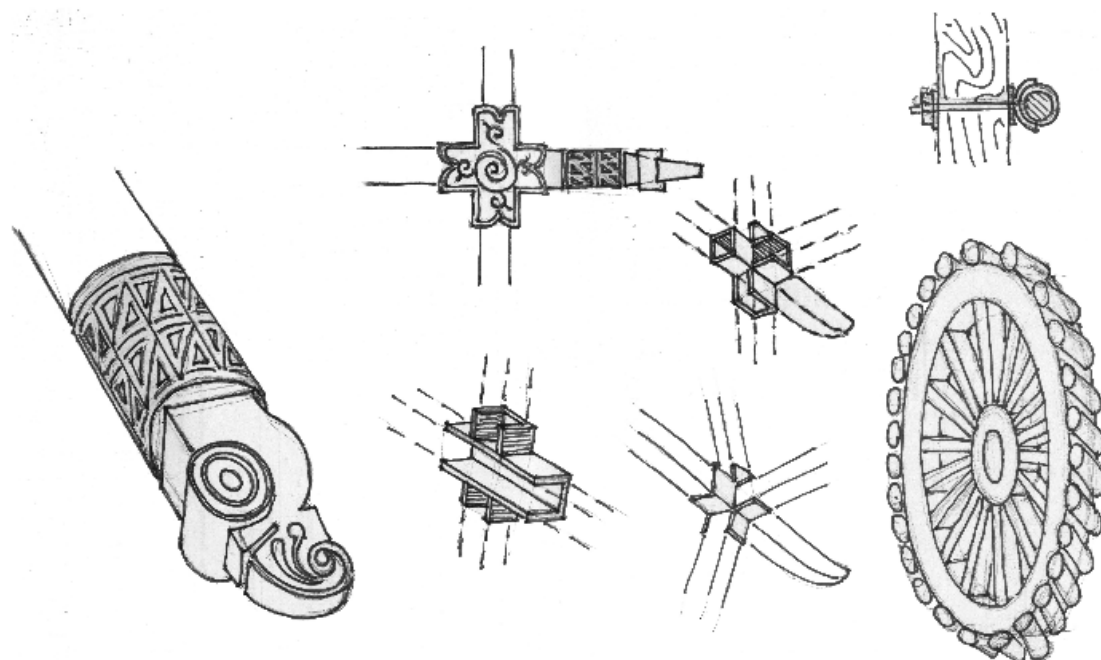
The upper space, the so-called “celestial world,” is separated from the “lower world” by a decorative frieze (*baskur* in Kazakh, meaning a part of headgear). This way of decoration was widespread in the Middle Ages in nomadic and even in monumental architecture, and is preserved until the present day. The façade of the upper, sacred part of the marquee is decorated with bronze gryphon heads, a tradition coming from the zoo-anthropomorphic ideology on which the art and architecture of the Saka tribes were based. Numerous sculptures and graphic illustrations of these creatures are found in archaeological monuments of the Skiff and Saka, the Hun, Uisun, and the Turk periods, pointing out

the stability of these theological notions of the Central-Asian nomads, and on succession of their cultural and decorative traditions.



Plan

Facade



Elements of the nomadic marquee



*The first demonstration of the main marquee
Renee. France. 2003*



The demonstration of the main marquee
Almaty. Kazakhstan. 2006





Fragment of interior construction



Kyrgyz Republic

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Preserving and Restoring Cultural Heritage in Kyrgyzstan

In Kyrgyzstan, monuments of the cultural heritage of farmers and nomads have been recorded for the Neolithic up to the modern period. These include ancient stone-working sites, funerary and memorial structures, settlements, stone sculptures, rock paintings and other artwork.

Many have undergone various kinds of destruction, the reasons for which lie in diverse factors. Furthermore, state policy for the preservation of these sites or structures has not been developed sufficiently until now.

I. A History of Preserving Cultural Heritage

During the Soviet period in Kyrgyzstan, prior to the 1970s restoration and conservation was conducted mainly by specialists from Tashkent (Uzbekistan) and central organizations of the former USSR, who worked on archaeological and architectural remains of medieval settlement sites. The Leningrad Hermitage played an important role, as its workers took an active part in excavating and preserving the architectural complexes of the medieval epoch. Many restorers from research centers and museums of Kyrgyzstan were trained at the laboratories of the Hermitage. The All-Union Research Institute for Restoration of the Ministry of Culture in Moscow was also active, and its staff directly participated in the work of conserving archaeological materials, and provided advisory services to local specialists.

At the beginning of the seventies, a special structure was organized in Kyrgyzstan under the Ministry of Culture in order to implement restoration and conservation activities on historical and cultural heritage. The medieval brick monuments (the Manas mausoleum, Burana minaret and ruins of mausoleums, the Uzgen architectural complex, etc.) and stone monuments (the Tash-Rabat) in all the regions of the country became the major objects of interest.

Towards the end of the decade, a special sector on restoration and conservation was organized at the Institute of History of the Academy of Sciences of the Kirghiz Soviet Socialist Republic, whose workers were trained through practical work in the laboratories of the All-Union Institute. While this organization was short-lived, the experience and skills the specialists received there were quite useful during their work on the sites of the ancient settlements of Ak-Beshim and Ak-Chui (the Chui and Ketmen-Tyube valleys).

In the late eighties, the special "Research and production restoration workshops" (SPSW) were transformed into the Kirgizrestavratsiya, which was designated the Research and Development

Design Institute, with a powerful production base with several divisions in the regions. The sphere of their activity, which nowadays covers various themes, considerably increased as well, to include everything from preparing plans for the preservation of historical cities, up to conserving rock paintings.

In the early nineties, in connection with general economic and political issues of the post-Soviet epoch, the activity of this institute was practically terminated. Its legal successor has become the Research and Development Design Bureau (RDDDB, also Kyrgyzrestavratsiya) under the Ministry of Culture, which, unfortunately, had neither the needed material and technical base, nor sufficient numbers of professional restorers having adequate experience and work skills.

However, even in such conditions, restoration and conservation of architectural and archaeological heritage during independence were carried out within the limits of various national projects, such as Manas-1000 (1993-1995) and Osh-3000 (1997-2000), etc., with the support of international organizations and foreign countries.

In 2002, the conservation activities on the Cholpon-Ata rock-paintings restarted. They were implemented by the RDDDB, with financial and technical support of the Ministry of Foreign Affairs of Germany, including German specialists who worked with staff of the Issyk-Kul Reserve-Museum.

With money provided by the US Embassy in 2003, the same organization carried out the conservation of the cupola of the Shah-Fazil mausoleum in the Safid-Bulan Village (Jalal-Abad Oblast).

A significant role in preserving historical materials and in training local personnel was played by the UNESCO project financed by the Japanese Targeted Fund, and implemented at three medieval sites of ancient settlement of the Chui valley, the Red Small river (the Nevaketa), Ak-Beshim (Suyab), and Burana (Balasagun), in the years 2004-08.

Within the scope of this project, our scientists and specialists had the opportunity to improve our nation's experience through their involvement in the concrete conservation of monuments, and also through education and joint work with international experts. Various methods of conservation were applied on the archaeological materials of these ancient settlement sites, from simple backfilling of the excavated features (the ruins of the medieval Christian complex on Ak-Beshim, P-1, P-7 on the Red Small river), up to building floorings over some of them (the citadel and Buddhist temple on the Red Small river). Among these, the method of preserving ancient walls with overlays of modern partial reconstructions of the destroyed sites (as at Mausoleum 4, Burana) is particularly effective.

The international seminar on the "Conservation of the wall painting of Central Asia" in 2008-09 in Dushanbe, organized by the National Research Institute of Cultural Properties (Tokyo) and the Institute of History, Archeology and Ethnography of the Academy of Sciences of the Republic of Tajikistan, with financial support from the Ministry of Culture of Japan, for the purpose of training the personnel in the field of conservation of wall painting, was also a highly positive event.

It will be apparent from this short survey, on the development of restoration and conservation activities of archaeological and architectural heritage of Kyrgyzstan, that in the Soviet period there

existed a rather effective state system in order to support such activities. Since the 1990s such work has been implemented as part of archaeological excavations, or as one of the components of general restoration activities within the framework of separate national and international projects.

Special efforts have been made on the part of specialists and the public to provide training for personnel in various institutions of the country (the Kyrgyz National University, Manas Kyrgyz-Turkish University, Kyrgyz State University of Architecture, Building and Transport, American University in Central Asia). But although this formal education is available, the small number of graduates do not always have the opportunity to be employed in the profession they have chosen.

We hope that with political and economical stabilization in the country, new national programs on historical and cultural heritage that envisage both the management of cultural properties, and the training of personnel in methods of conservation and reservation, will be established. The step-by-step implementation of such projects is assumed to take place up to 2020.

II. Descriptions of Previously Restored Monuments

In Kyrgyzstan, the first activities aimed at preserving monuments were carried out on two medieval archaeological and architectural complexes, Burana (the Chui Valley) and Uzgen (the Southeast Fergana). The Burana ancient settlement site is uniquely identified with the city of Balasagun (tenth to thirteenth centuries), state capital of the Karakhanids, the first Turk dynasty that officially accepted Islam, and Uzgen for a short time was the center of the Khanate western part, then it was the center of the Fergana appanage of the same state. In these cities, after the spread of Islam, architectural structures were built linked to its religious traditions: minarets, mosques, madrasahs and mausoleums.

Restoration projects dating from the previous century at these and several other sites are described in the following sections.

THE BURANA COMPLEX

The Burana complex (Fig. 1) consists of a minaret, three mausoleums, and an additional structure also provisionally identified as a mausoleum, although regarded by some as a mosque. These separate structures, and the restoration work performed until the end of the twentieth century, are described in the following sections.

The Burana minaret. This is one of the oldest minarets built with kiln-fired brick in the Central Asian region, and dates back to the end of the tenth century (Goryacheva 1983: 32; Goryacheva 2010: 137).

The minaret consists of an infrastructure in the form of a sturdy platform, made of stone and kiln-fired brick, buried in a foundation pit up to 5.6 m in depth, with the length on each of its sides of 12.3 m. The building is made of a recently-added octagonal base, while the re-faced conical tower was preserved up to 22 m in height.

The tower is decorated with six horizontal ornamental belts. The whole of the decoration was built of standard brick that protrudes of 3-4 cm.



Fig. 1 Aerial view of the archeological site of Burana (Renato Sala, 2005)

The mausoleums. In the early seventies, during archaeological work in the vicinity of an ancient settlement site, the lower parts of three mausoleums came to light near the mediaeval minaret. Later, a structure regarded as a fourth mausoleum, also near the minaret but to the northwest, was revealed.

The so-called first mausoleum (to the east of the minaret) was an octagonal structure built of kiln-fired brick (sized 23-26 cm), with the preserved socle (plinth) standing 1.8 m high, having a diameter up to 11 m, and walls 1.7 m thick. The brick was laid mainly with clay mortar, with only in the upper lining using ganch (gypsum) mortar.

This richly decorated mausoleum is reconstructed as having stood more than 15 m high, with its interior decorated with paintings and ornamented borders, and carved terracotta and embroidery bricks on the exterior (Masson and Goryacheva 1985: 53-54, 57; Gorycheva 2010: 138).

The second and third mausoleums, located northeast of the first, are near the east city wall. The uncovered features of both mausoleums were in fact identical, being circular structures having diameters of 10 and 10.5 m, with separate portals (12 and 14.7 m) facing east.

The structural material is square kiln-fired brick, as at the first mausoleum. The portals were flanked by three-quarter pillars and decorated with embroidery bricks and borders, and are more uniform than in the first mausoleum. All the three above-mentioned mausoleums date back to the eleventh and twelfth centuries (Masson and Goryacheva 1985: 57; Goryacheva 1983: 42).

The fourth mausoleum is rectangular in plan, and measures 16.3 x 14 m. It consists of one room with a single exit to the east, located in the middle of the wall. It was also built of kiln-fired bricks measuring 17 x 17 x 5 cm, with clay mortar.

When excavating this mausoleum, it became clear that it had no formed portal and separate pylons at the entrance. The interior had shallow-carved gypsum apparently covering all the surfaces of the walls and floor. Stylized floral motifs, traditional for Islamic architecture, were used (Goryacheva 2010: 138, 239).

In 2005, when cleaning obstructions from the upper part of the northern wall, a small piece of the gypsum decoration, with elements of floral design, was discovered.

V. D. Goryacheva distinguishes four periods in the function of the structure. Its initial construction may have been carried out between the tenth and eleventh centuries, then a second period was from the eleventh to twelfth centuries, when carved terracotta was used for decorating the structure, and the last two stages fall already within Mongolian times (Goryacheva 2010: 138).

When excavating the interior of the structure, some burial places were uncovered. But according to some researchers, this burial place is believed to be a mosque (Goryacheva 2010: 138). However, the dimensions of the structure, the absence of a *mikrab* (arched alcove), and uncovered burial places contradict this interpretation.

Previous restoration work. The first repair and restoration work on the Burana minaret was conducted in 1927. At the time, attention was paid mainly to restoring the lower part of the tower, which had been destroyed by local residents almost up to three meters in height above the present ground level. Twenty new arch girders were inserted into hollows of the octagonal base to replace the lost medieval logs. Evidently, these logs served not only for the horizontal bandaging of rows of bricks of the basic laying, but also for communication with the exterior ornamental lining. The foundation of the shaft was thus restored, and all the preserved parts of the ornamental lining were conserved and carefully fixed. In the upper part of the body of the tower, the most damaged parts were rebuilt with brickwork.

Bricks for restoration bricks were fired in sizes corresponding to the medieval formats, and a special kiln was built on the site.

The next stage of work on restoring this monument came in the 1960s and 70s of the previous century. The design investigations were conducted in the 60s,

but the restoration work only started in the 70s through the efforts of the SPSW. The archeological and architectural investigations were carried out in two directions: the lower parts of the minaret were



Fig. 2 Minaret of Burana, before and after restoration

investigated and possible constructions links were sought for a mosque that had not been preserved; all the territory of the major part of the site of ancient settlement was investigated, for which excavation was conducted at various sites. As a result, three more monuments of monumental architecture, attributed to the dynasty as mausoleums were discovered (these being the first, second and third mausoleums described above).

During the restoration, the destroyed parts of ornamental compositions of the octagonal base and the upper shaft of the minaret were restored (Fig. 2).

For the archaeological remains, including features of all the mausoleums, conservation work was carried out consisting of partial laying of the walls and portals, up to the maximum level of the height of the monuments at the time of discovery.

Special restoration brick was used for the work, corresponding to the medieval dimensions, and manufactured in production workshops in Frunze (now Bishkek). Technological analysis of the compositions of bricks and binding mortars had been previously carried out.

THE UZGEN COMPLEX

The Uzgen complex consists of a minaret and three mausoleums. These separate structures, and the restoration work performed until the end of the twentieth century, are described in the following sections.

The minaret. In its form as a result of restoration in 1920, this structure consists of an octagonal base on a square platform, topped by a cone-shaped shaft and lantern platform, preserved to a total height of 27.4 m (Fig. 3). The entry to it is in the southern part of the base, on the side of the mausoleums. The minaret was built of kiln-fired brick, sized 25 x 12 x 4.5-5 cm, using gypsum mortar. The steps were built of kiln-fired brick as well.

The shaft of the minaret is divided horizontally into twelve ornamental belts, alternately wide and narrow.

In the opinion of the majority of specialists, the Uzgen minaret dates back to the eleventh century (Nusov 1963: 41; Bernshtam 1997: 337; Goryacheva 2010: 137).

The mausoleums. The three mausoleums are arranged in a row, standing next to one another (Fig. 4). The earliest and largest of them is the middle mausoleum, measuring 11.28 x 11.44 m externally and 8.4 x 8.4 m internally, and 13 m high. It is built of oblong bricks, 30 x 15 x 4 cm, and stands on a foundation of 4-5 layers of stone fixed with clay mortar. In all four outer corners there are three-quarter columns with diameters of about 96 cm.

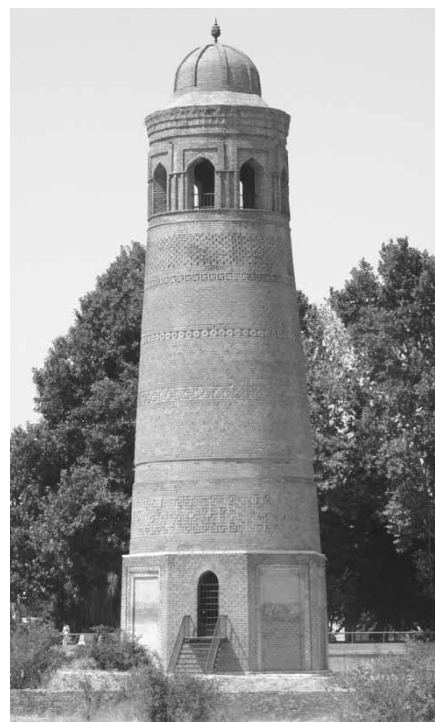


Fig. 3 Uzgen minaret, after restoration

At the corners of the entry alcove there are also three-quarter columns. The facade wall decor includes a carved layer of plaster and a set of carved polished bricks. The square room of the plan was covered with a cupola, sitting atop an octagonal drum with arched alcoves on the sides. Under the tier of the arches a carved gypsum frieze was located with lancet and semicircular arches. The walls were built with a lining of brickwork, coupled with small bricks and plastered with gypsum.

There is no common agreement on dating this mausoleum, with some placing it in the tenth century, others in the eleventh, and still others to the period between the eleventh and twelfth centuries or entirely to the twelfth century.

The northern mausoleum was added in 1152, as indicated by the inscription on the portal arch. In plan it has the form of a square, with outer dimensions of 12.2 x 10.2 m, and measuring 7.53 x 7.57 on the inside, and is 12 m high. It is built mainly of bricks, sized 28-29 x 14-14.5 x 4.5 cm. On the southwest or front part, there are powerful pylons supporting the forward facing portal. The brick pillars at the corners of the portal alcove are placed in a casing of blocks of carved terracotta. The ways of



Fig. 4 The Uzgen mausoleums, before restoration

decoration used for the portal are very diverse. The mausoleum has a simple interior. The inner space represents a cubic volume roofed by a cupola sitting atop a small octagonal drum. The door openings are on the western and southern walls. A deep alcove is located in the northern wall.

The portal of the northern mausoleum is considered to be an example of the classic Central Asian style for this type of item (Zasyrkin 1930; Bernshtam 1997; Nusov 1963; etc.).

In 1186, one more mausoleum, the southern structure, was attached to the southeast side of the middle mausoleum. The width of its portal is 8.7 m, the diameter of the cupola 6.4 m, and the height is about 11 m. It was built of bricks of various sizes, but the 27-28 x 13-14 x 4-4.5 cm dimensions predominate.

The composition of the main, or western front of this mausoleum also consists of a deep entry alcove, edged with scotia molding and ornamental ribbons. The portal corners are flanked with powerful three-quarter columns. The interior of the square room is simple, roofed by the cupola, atop a belt bearing alcoves with lancet arches, and in the corners are located sills with three small arches. There are three door openings, no windows, and a shallow alcove arranged in east wall. The laying of

the walls was done on the shell auger system. The monochrome terracotta casing of the portal of the southern mausoleum is the richest ornamental treasure of the twelfth century, in which there are about fifteen different motifs. From the historical inscriptions on the portal, preserved fragmentarily, two dates are seen reporting on the burial place within the mausoleum of two representatives of the Uzgen branch of the dynasty of Karakhanids: July 17, 1185 and February 27, 1187.

Restoration work. The first restoration project known at the complex was in the 1920s, when local residents repaired the base of the minaret, and built the lantern which still crowns it in the present day.

In 1924-28, the mausoleums of Uzgen were studied from the perspectives of architectural and artistic value, as well as their archaeological aspects, within the framework of the repair and restoration activities implemented by the Central Asian Committee on the matters of museums and protection of monuments of ancient times, art, and nature, and again by the Central State Restoration Workshops of the Glavnauka of the People's Commissariat of Enlightenment of the RSFSR in 1928-29. These studies were carried out by specially invited experts from Samarkand (Goryacheva 1983: 70).

The restoration works started in the mid-seventies, and they were conducted by the SPSW of Ministry of Culture of the Kirghiz Soviet Socialist Republic, before the end of the decade. As a result, the cupola and the upper part of the portal of the middle mausoleum were restored, the terracotta casing of the portals of the northern and southern mausoleums, and portions of the interiors of all three structures were also restored. The minaret underwent similar restoration, both on the base, and in the ornamental parts of the basic shaft (The historical ... 1979: 6-9).

SHAH-FAZIL MAUSOLEUM

The mausoleum of the Shah-Fazil is a monument of the eleventh century. It is located in the settlement of Safid-Bulan of the Jalal-Abad Oblast.

The monument represents a building with a cupola-centric composition consisting of a single-chamber structure (Goryacheva 2010: 143). The squat, square base tier (with outer dimensions of 11.7 x 11.1 m, and measuring 7.84 x 7.84 inside) stands on a stone rubble platform 36 cm high, and is roofed with a lancet-shaped cupola, placed atop a high octagonal drum. The total height of the mausoleum is 15.5 m. It is built mainly of bricks (two sizes, 27 x 15.5 x 35 cm and 32 x 32 x 5 cm), using loess-based mortar connecting it to a layer of gypsum (Nusov 1963: 47-48; Imankulov 2005: 102-3).

The main northwest front of the structure has three openings onto the yard side. The window is in the southwest wall. In the southeast wall, there is a *mikrab* alcove.

Ornamental compositions covered all the surfaces of the interior and the cupola. The ornamentation is represented by floral, geometric, and epigraphic motifs (Nusov 1963: 50).

Restoration work on the complex began in the late seventies of the previous century, and has proceeded, with significant breaks in time, up to the beginning of this century. The major restorations

are concentrated on the cupola and the mausoleum interior. In the course of restoring some of the gypsum decoration, serious deviations were admitted from the recommendations contained in the restoration project.

In 2003, with a grant from the US Embassy, the RDDB of the Kyrgyzrestavratsiya Institute attempted to repair areas of improperly restored decoration, and conducted restoration work on the cupola as well.

MANAS MAUSOLEUM

Another monument, from the Mongol period, is a mausoleum known among local people as *Manas kumbez* (mausoleum). The monument is located southeast from the city of Talas, near the southwestern side of the Manastyn-Chokusu mountains. The building consists of a cubiform body covered with a double top, spherical inside and in the shape of a ribbed-pyramidal roof and wall on the outside. Walls are built with kiln-fired bricks, 23 x 23 x 5 cm, over a clay mixture. A double layer of plaster was put on the inside surface of the walls, the bottom one made from clay, and the upper one from gypsum. An arch, a trumpet arch, and the inside of the top are made with brick and alabaster.

The floor is covered with kiln-fired bricks atop layers of clay and adobe. The artistically formed portal, in the south wall, is faced with architectural and terracotta tiles. The decor is varied, and has harmonious proportions of floral, geometric, and epigraphic patterns. Key elements of the portal composition are two equal ribbons with religious and historical inscriptions, the last of which was read by V. Bartold in 1899 and M. Mason in 1925. A. Belinitiskii is thought to have decoded it. Nowadays the most acceptable date of death for a woman buried in the mausoleum is the first day of Ramazan of the year 734 (6 May 1334 in the Gregorian calendar), as considered by researchers.

In planning earlier restoration work, it was noted that remains of a multi-faceted, ribbed drum covering part of the spherical top of mausoleum were seen in old pictures published by Mr. M. Masson and Mrs. G. Puganchenkova. Besides, during the cleaning of the mausoleum, facing brick was found, which was probably from the facing of walls under a hip roof. According to this evidence, Mrs. G. Pugachenkova implemented a reconstruction of the mausoleum with its covering as a pyramid-ribbed top (Masson and Pugachenkova 1950).

The accuracy of this reconstruction was confirmed by work of the Ministry of Culture of the Kirgiz Soviet Republic conducted in 1968-70. Part of the west wall of the structure was opened as a

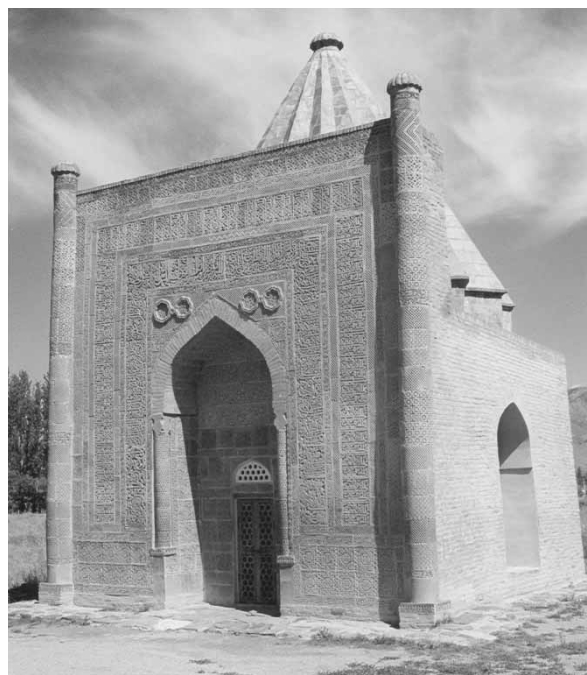


Fig. 5 Manas mausoleum, after restoration

control for earlier surveys in 1945, revealing evidence for a hipped roof (Pomaskin 1972: 30). Also found were bricks with ornamented wooden paving blocks, used for a transitive fascia between the drum and hipped roof. Therefore, restoration of the monument was implemented on the basis of the scientific analysis of these original materials (Fig. 5). However, a hipped roof covering the dome of the monument is to this date considered unacceptable by most population of the valley. In mass consciousness, the *kumbez* mode was roofed with the inside spherical cupola, without an outside cover. That is why an appropriate organism of the country should give its proposal on changing the surface of the monument.

TASH-RABAT CARAVANSARY

Another monument on which earlier restoration work was carried out is the high-mountainous caravansary of Tash-Rabat, located in the Inner Tien-Shan, in the western part of the At-Bashi valley. It is square in plan, measuring 32.4 x 35.1 on the outside, built with colliery shale extracted in the same area. The front part is flanked by ornamental towers (Fig. 6). Inside there is a central corridor, a square hall, and a number of smaller rooms roofed by one large and



Fig. 6 Tash-Rabat caravansary, before and after

eighteen smaller cupolas. The ornamental design of the interior is represented by fragments of gypsum-faced plaster in some of the rooms, graphic carvings, and bas-reliefs (Peregudova 1989: p. 25).

The building was constructed in the Karakhanids epoch, in the eleventh to twelfth centuries, and it functioned up to the Timurids time and performed as caravansary servicing a distance of the Great Silk Road, which went through the Tash-Rabat and Torugart passes and led to Kashgar.

As a result of the restoration work carried out by the SPSW under the Ministry of Culture in 1978-80, the cupolas and portal upper part were restored.

III. Conservation Work on Burana Mausoleum 4

In 2005, conservation work was conducted at one of the mausoleums of Burana complex, known in the reports as “Mausoleum 4,” within the framework of the UNESCO/Japan Trust Fund project,

“Preservation of Silk Roads Sites in the Upper Chui Valley in Kyrgyzstan: Navikat (Krasnaya Rechka), Suyab (Ak Beshim) and Balasagyn (Burana).

Two groups worked on this heritage site, consisting of local specialists and experts from foreign countries (Kazakhstan, Italy and Austria). One group focused on documentary issues, and the other on maintenance. There were specialists of all types, including chemists, architects, and archaeologists. Managers of these groups were foreign experts such as Dr. Enrico Fodde (University of Bath, UK) and Mr. Tarsis Stevens. Several of the participants in these groups were researchers in training.

Major threats and evaluation of damage. Evaluation of the general condition and destruction of Mausoleum 4 until the time of conservation was documented by making descriptions and taking photos of the general appearance of the mausoleum, while devising a system for dividing the building into designated parts.

Before the work began, the ruins of the building and the nearby square were covered by high grass and long-lived plants, such as shrubs of the genus *Ephedra*, wormwood, etc. Whole bricks and fragments lay scattered around. Most of these items had fallen from the upper parts of nearby walls, which were revealed after archaeological work began.

Cleaning. Vegetation was cut to the level of the roots, and the dispersed bricks were collected. The surviving surfaces of features were cleaned from rubbish using dustpans, shovels and brushes. This work was carried out under the supervision of archaeologists at the most important sites, such as the three *sufa* (offering platform) niches (Fig. 7).

Inside the building, superficial cleaning without penetrating to the cultural layer was carried out, as the ancient floor level of the mausoleum had not been studied completely.



Fig. 7 Southern wall of Mausoleum 4

Selection of the material for wall conservation. For the conservation of the mausoleum walls, materials were selected that are necessary for strengthening the layers of kiln-fired bricks, and for plastering the upper parts of walls with a fluid clay solution.

The manager of the conservation group, Dr. E. Fodde, and the chemist, Mrs. N. Sitnikova, developed a special technology for making a complicated solution for the layered bricks. The composition consists of clay, mixed with the following (in proportion, by weight): lime putty (11),

gypsum (1), soil (13), sand (60), and *chamotte* (15), the latter being pounded fragments of medieval kiln-fired brick from the mausoleum (Fodde 2008: 85).

In order to produce the clay for the mixture, clays were selected from different parts of the surrounding area, such as the Burana ancient settlement site, some open mines, and places where clay was extracted by local inhabitants outside of the monument.

After clearing the overlying material, the top rows of the walls were smeared with a thin layer of the liquid clay solution, to a thickness not exceeding 3-5 mm. This procedure was repeated several times, as soon as each layer dried, to prevent the coat from cracking. As a result, it provided a cover that protected the walls from natural precipitation and deterioration of their surface. The coating may be repeated at least once a year.

Monitoring of this conservation method showed that it is not expected to last for a long period. After a period of rain, the newly created clay cover dissolved and flowed down the walls, and after they dried up there formed a thin crust covering both brickwork and the joints between them.

In this case, this method of protection was recommended to use as a temporary measure, for instance for brickwork that had become exposed to the air, and for which this treatment should be repeated twice per year. It is presumed that this work may be conducted as part of the activities of the museum's employers, after adequate short-term training.

Documentation, evaluation of damage, and proposals for reconstruction. The group working on documentation completed a full topographic survey of the mausoleum. All of the data were entered for computer manipulation.

After completion of the survey, the conservation group made a partial surface cleaning of the side walls in order to create a photo documentation of the physical condition of the features prior to the start of conservation work.

The main damage to the walls was visible just after cleaning overlying materials from the upper parts. Those parts that were thus covered over were in satisfactory condition despite being exposed thirty years ago in an archaeological excavation. Compared with the upper parts, the foundations and other wall parts suffered more.

With the participation of both groups, as well as that of local and foreign experts, proposals were discussed for a reconstruction of the mausoleum. The best plan proposed to reconstruct a part of wall in the southwest sector. This proposal was detailed in written documents that contained descriptions and photo materials.

Each group participating in the maintenance selected a specific area for work. All of these were marked and indexed on a topographic plan of the site.

The work cycle began with cleaning the seams between bricks, blowing off dust with the help of a bulb-type blower. The seams were then rinsed with water and again treated with a blower. A conservation solution was applied using specially produced metal sticks with desalinated heads.

Strongly crumbled bricks were removed by splitting off with the help of a knife and a narrow trowel. In their place were put sound bricks matched in size. Each conservation replacement of archeological bricks was marked by a hole made with manual drill.

Most of all, the brickwork on the surface of a *sufa* and the top part of a wall suffered. Therefore, the most cracked and crumbled examples were replaced. In some places, seams with insignificant width were filled with a conservation solution. The applied layers did not exceed 2-3 cm limit that was necessary for drying out quickly, after which this procedure was repeated until achieving the necessary volume.

All these procedures were implemented taking into account a direction from top down. After completion of the work, a photographic record was taken of each part, and pictures printed out noting all types of conservation measures, using appropriate conventional signs.

Preparation of the conservation solution was made in batches, several times per day based on the volume of work. This process was usually conducted by an expert chemist. Sometimes this work was entrusted to participants of the project and workers under obligation to observe the procedure.

After completion of the conservation of the side surfaces of walls, material overlaying the horizontal surfaces was removed. Cracked and fragmentary bricks were also removed. Protective layers were applied to these places, sometimes in multiple layers. Moreover, this was applied to the horizontal surface on the top part of walls, to protect them from adverse factors (Fig. 8).



Fig. 8 A protective layer on the surface of the top part a wall, Mausoleum 4

Subsequent monitoring of the remains has shown that this work was successful, and an optimum conservation method which might be used for features built with kiln-fired bricks. The same opinion was shared by both the experts and the representatives of the Kyrgyz community.

IV. Conservation Work at Other Archeological Sites

THE CHRISTIAN COMPLEX AT AK-BESHIM

A Christian complex was investigated by the Kyrgyzstan-Russian Expedition in 1996-2001 on the territory of the ancient medieval settlement Ak-Beshim (tenth-eleventh centuries), located 10 km southwest of Tokmok town in Chui valley (Semenov 2002: 11-43).

The complex was partially subterranean, and is built from large blocks of bricks (*pahs*, with a height up to 85-90 cm), with high cornices and domes, in 6-7 rows of brick, with passages and niches, overlapped with dome-shaped arcs of different types. The monument is dated to the tenth and eleventh centuries (Semenov 2002: 44-114).

In 2003, the first measures were taken in the Christian complex for conservation of the temple walls made from adobe bricks, by backfilling with soil after covering the features with a layer of porous material (geofabric).

The same method has been used in conservation works at other archeological sites.

KRASNAYA RECHKA

The ancient settlement of Krasnaya Rechka, dating from the sixth to the beginning of the thirteenth centuries, is located 35 km to the east of the city of Bishkek in the Chui valley. It consists of a central complex of ruins – a citadel, two *shakhristans* (town territories), and a necropolis – and is surrounded by two rings of walls. A citadel, and several structures in a *shakhristan*, being a Karakhanid house and buildings, and a Zoroastrian necropolis have been excavated. Suburban manors of the eleventh and twelfth centuries, a suburban palace of the ninth to twelfth centuries, and two Buddhist temples, provisionally named the “first” (eighth to ninth centuries) and the “second” (seventh to eighth centuries), were located to the south of the central ruins of the ancient settlement.

Second Buddhist temple of Krasnaya Rechka. The second Buddhist temple was discovered in 1938 by A. N. Bernshtam, and in 1961-63 investigations were continued by P. N. Kozhemyako. From 1978 up to the present, V. D. Goryacheva has been involved in this monument’s investigation.

The temple was erected on the remains of an earlier monumental structure made from adobe bricks. A part of the temple consisted of a sanctuary, square in a plan (dimensions 5.5 x 5.5 m) with a surrounding corridor having four bends and unequal in width, changing from 2.5 m before the entry to the sanctuary and widening to 3.15 m at the back, where a *sufa* with a sculpture of Buddha in nirvana was located.

The interior included sculptures, fresco painting on loess surface and stucco decor on the walls and ceilings. Rebuilding of the temple took place not later than the middle of the eighth century, resulting in a three-way bypass corridor around the sanctuary. The entry to the cella (inner chamber) was emphasized by the extension of the portal with a dome-shaped niche and five-stepped stairs, and figures of Bodhisattvas were placed on platforms along the lateral walls before the entry. After rebuilding, the fresco paintings on the walls and ceilings were renewed (Bernshtam 1952: 37-46; Kozhemyako 1989: 12, 18-19; Goryacheva and Baipakov 1989: p. 73).

Conservation works. As there are no specialist restorers in Kyrgyzstan, when work at the second temple terminated the excavated sectors were fully backfilled. A sculpture was covered with a layer of paper and a roofing of felt.

In 1962 a group of restorers from the State Hermitage under the leadership of P. I. Kostrov was invited for continuation of the work. A western corridor-shaped room was opened again. A sculpture was subjected to cleaning and impregnation with strengthening compounds, divided into parts, taken from its place and sent to the Hermitage for further restoration work (Kozhemyako 1989: 22-24, 38). At present it is available in the vaults of this museum. Work on its restoration has not been carried out yet.

In 1983-84, N. A. Kovaleva carried out conservation work on excavated areas of the site, and brought back some fragments of the architectural decorations and other items for exhibit (Kovaleva 1989: 129-38).

Further conservation work has been carried out within the framework of the UNESCO/Japan Trust Fund project, “Preservation of Silk Roads Sites in the Upper Chui Valley in Kyrgyzstan,” in 2004-07.

Walls of the cella were covered from both sides with conservation walls, and coated with adobe-clay plastering. Small spaces were left between the medieval and conservation walls, partially filled with sand in order to avoid direct interference.

The conservation walls were strengthened from the outside by several pillars. A middle part of the northern wall of the cella was protected by modern walls of around 0.7 m in thickness, up to 1 m in height, and coated with plastering. They used adobe bricks, produced locally.

Preserved parts of the southern and northern walls of the bypass corridor were conserved by backfilling over layers of geofabric.

A shed supported by poles was erected at that time above the temple. Such a structure was needed to protect the temple from adverse natural factors (Fig. 9). After erection of the shed, a historical wall was exposed, released from a previously built conservation wall. Clay with underlying geofabric was used for backfilling the outside of the southern and western walls of the bypass corridors of the sanctuary.



Fig. 9 Shelter over the second Buddhist temple

After exposure of the southern wall of the corridor, partial conservation was made inside, because that side has been damaged most of all. It was infested with a number of bird nests and small animals. We described the conditions and made photos of the damage, then cleared out the largest damaged portions and flushed them with water. After that, clay mortar was prepared from conservation bricks. Before filling the pits with mortar, a thin layer of geofabric was placed inside, to delineate the conservative mortar from the medieval brickwork.

Metal fencing was arranged along the perimeter of the structure, which serves as protection against undesirable anthropogenic and any other interference. Kyrgyzrestavratsiya RDDB was involved in its design and implementation. Monitoring of the monument's condition shows that the established goals have not been fully achieved.

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Abbreviations

RARIPS - The Russian Association Research Institute of Public Science

SSRPW - Special Scientific Restoration Production Workshops

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Country Report on the Preservation and Restoration of Sisaket Temple, Lao P.D.R.

I. INTRODUCTION

Vientiane is an ancient city whose history has been recorded largely in its temples, including Vat Sisaket, which was built from 1818 A.D. by King Anouvong, the last king of the Vientiane kingdom. It is located in the former yard of the king's palace, inside the first Vientiane city wall. During the 1827-28 Siamese invasions, all the temples and houses in Vientiane were completely destroyed except for Sisaket, which continued to function as a monastery throughout the nineteenth century, despite the fact that most people had fled the city. The reason the temple was not destroyed was because Siamese troops were using it as a base. It had a reputation as being sacred and protected by spirits. They believed that if it was destroyed, they would lose the war, so they chose to preserve it.

The first restoration, of the structure of the *sim* (ordination hall) and the cloister, was conducted in 1924 by Prince Phetsarath.

After the war was over the Lao people set about rebuilding and preserving their style of architecture. In 1935, Vat Sisaket was restored on a large scale to the form we know today.

Vat Sisaket comprises a *sim*, surrounded by a walled cloister similar to that of That Luang. The *sim* is the main attraction of the museum, where visitors can learn of its history. The four entranceways to the cloister create four L-shaped galleries with a bronze Buddha statue in each corner. Niches in the gallery walls house a total of 6,840 silver and ceramic Buddha images. On the end walls, fragments of murals, depicting stories like that of Kalaket and his magical horse, are still visible. The black and red lacquered columns of the cloister galleries still retain some of their original stylized stenciled gold leaf decoration. The Sisaket wall paintings are not true frescoes, in that they were painted onto dry stucco rather than wet plaster; this makes them fragile and over time the drawings have flaked off. The murals have been partially repainted, but this is occasionally substandard and characterized by the use of brighter primary pigments. The architectural detailing, however, is frequently superb. Murals are a

tradition in most Theravada Buddhist temples in East Asia. Popular stories, legends, and moral tales are usually illustrated.

In 1993 the library was restored by the Lao Government.

In 2004, physical and digital conservation was done with the support of the American Embassy in Vientiane. The purpose of this project was to support on-site, hands-on conservation training workshops in theory and practice, beginning with wall paintings and masonry repair of the museum building.

From 2009 to the present, a large-scale project of restoration supported by the Lao Government has been started, to mark the 450th anniversary of Vientiane as the country's capital.

II. PROBLEMS FACED BY THE TEMPLE

1. Natural Causes

Because the site is located in a country with hot, humid weather, it is exposed to considerable moisture and a high water table during the rainy season. This is one of the major natural sources of the problems facing the temple, which can be listed as follows:

- Insects and animals. Several species of beetles (order Coleoptera), ants, termites, and other insects burrow tunnels inside wooden structures, eventually causing the members to break. Bat droppings deposit oxalic and other acids on exposed surfaces. Bird droppings are also acidic, causing chemical changes on pillars and other wooden members, and droppings that become extremely hard can cause obliteration, detachment, loss, etc. of portions of a structure.
- Plants. The spread of plants, both low-growing (mosses) and taller ones (trees), can cause breakage and disintegration of wooden structures.
- Dust. Soil particulates moved and deposited by the wind can obliterate features of protruding and especially upper areas of structures.
- Smoke. Produced by the combustion of oils, waxes, fatty substances, hydrocarbons, etc., smoke can discolor the surface of structures.
- Grime. Dirt and dust, mixed with smoke or greasy substances, can also discolor.
- Water. The many ways in which water can penetrate wooden structures, causing discoloration and rot, or otherwise bring damage can be enumerated as follows.
 - Infiltration. Rainwater percolates into structures from their upper parts.
 - Driving rain. Water infiltrates through walls, due to rain driven by strong wind.

- Capillary rise. A source of dampness associated especially with the rise of the water table in the subsoil during the rainy season.
- Dispersed water. Resulting for example from a defective drainage system, excessive rainwater, or other sources, leading to stagnant, standing water that finds its way inside structures.
- Erosion. The partial loss of constitutive material, which is washed away (as, for example, by water runoff) from higher sitting areas, and often results in unwanted deposits found at lower areas, such as the exposed area at the base of a wall.
- Mud deposits, due to water runoff. The infiltration of water, which carries dissolved dust or mud, leaves deposits accumulating along its way in lower areas.

2. Structural Causes

Due to the age of the structures and the materials which were used for the temple, it is faced with a variety of problems stemming from structural causes, such as the following.

- Settlement of foundation. The subsoil has subsided irregularly under the buildings, causing differences in level and the formation of structural cracks.
- Earthquakes and tremors. The movements of continental plates, resulting in displacement along geologic faults, produces local tremors that periodically threaten the structures.
- Load. The weight of superstructures, exerted on the walls of buildings, threatens to exceed their ability to bear, especially as the walls weaken with age, etc.
- Changes in composite elements. Masonry (in walls, floors, and roofs), etc., made with a combination of construction materials, weakens as some portions change, such as with the crumbling of mortar.
- Weakening of wood. All of the structures of the monument are made basically of wood, which even when covered by earthenware tile is affected over time by the sun and rain water, etc.

III. RESTORATION PROJECT

Under direction of the Department of Heritage, the Ministry of Information and Culture, a project for restoration work at Sisaket temple has been underway from 2009 to the present. The main areas of focus for the project are as follows:

- *Sim*. Due to the condition of the temple, the restoration of this part is focusing on the wooden structure, mainly the structure of the roof, to replace some of the wooden members and tiles which are infected by termites. Restoration work is being extended,

however, to parts of the wall plaster, staircases, doors, windows, and decorative images as well.

- Cloister. The restoration work on the cloister is being done mainly on the roof structure and tiles, but it also includes the restoration of Buddha images and wall paintings of the structure.
- Drainage systems. All internal and external drainage systems are going to be rebuilt, to avoid future infiltration and dispersion of water, which could cause damage to the wall paintings.
- Library and *kuti* of Prince Phetsarath. Due to the condition of the building and according to the project plan, the restoration of the library has been started in order to restore the roof structure and walls.

All restoration work at this temple is base on original techniques and using local materials. For example, the lime mortar used for plastering the wall of the temple is made with traditional components: lime, sand, buffalo skin, sugarcane, and rice straw. The tiles of the temple are ceramic items from Luang Prabang, etc.

Marshall Islands

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The Role of the Historic Preservation Office for Cultural Heritage Protection in the Marshall Islands

1. Background

GEOGRAPHY

Located in the central Pacific between 4° and 14° north latitude and 160° and 173° east longitude, the Republic of the Marshall Islands consists of 29 low-lying coral atolls and five coral islands (Figure 1). Twenty-two of the atolls and four of the islands are inhabited. The atolls and islands are situated in two almost parallel chain-like formations. The eastern group is the Ratak (Sunrise) Chain and the western is the Ralik (Sunset) Chain; together they extend about 700 miles (1,130 km) north to south and approximately 800 miles (1,290 km) east to west. Isolated by the ocean, the Republic is more than 2,000 miles (3,230 km) from the nearest trading centers, Honolulu and Tokyo. Its nearest neighbors are Kiribati to the south and the Federated States of Micronesia (FSM) to the west.

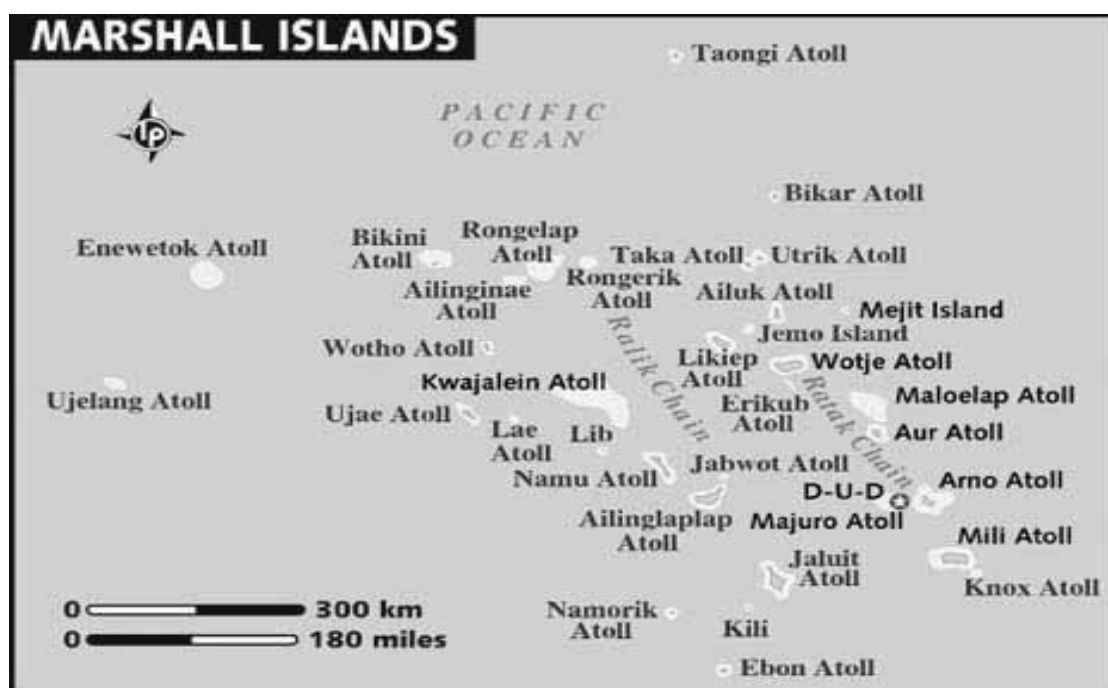


Fig. 1 Republic of the Marshall Islands

There are approximately 1,225 islets spread across an area of over 750,000 square miles (1.2 million square km). With a total land area of 70 square miles (110 square kilometers), a mean height above sea level of about 7 feet (2 meters), and soils which are nutrient poor, the nation's agricultural base is limited. The marine resource base is extensive, however. The combined lagoon area totals 4,037 square miles (6,511 square km). Coral reefs fringe the atolls and serve as the only defense against the ocean surge. The clearance over the reef in the sections that are covered by water is usually no more than a couple of feet (Permanent Mission of the Republic of the Marshall Islands to the United Nations, 1992). Generally speaking, an atoll consists of a series of low-lying islets and submerged reefs arranged about a central lagoon, which mixes with the open ocean via one or more channels and/or shallow passes. In the Marshall Islands, the islets composing an atoll usually form an oval shape around a central lagoon of 150 feet (45 m) average depth. The surrounding ocean depth plunges to over 5,000 feet (1,525 m) within two miles (3 km), and to 10,000 feet (3,050 m) within ten miles (16 km) of the typical atoll (Forsberg 1990; Wines 1962).

LAND TENURE

Marshallese society is generally matrilineal and is composed of a number of matrilineal clans (*jowi*). The most important descent group is the lineage (*bwij*). The *bwij* is the matrilineal system in which all land rights are passed down through the mother's side. Therefore, the whole group is descended, mother to daughter, from a common ancestor or a *jowi* (clan). There were at least forty-four clans spread over the atolls, and though no one remembers how members of any single *jowi* were related by blood, members considered themselves related. The lineage head (*alap*), usually the eldest male of the senior line of the lineage, is steward of the lineage land holdings. With slightly less than 70 square miles of land in the entire archipelago and prime settlement areas being extremely limited, land has long been the most highly prized possession in the Marshall Islands and control of land is the central theme of Marshallese culture. The basic land division of the Marshall Islands, *weto*, is a strip that runs from the lagoon to the ocean side of an island. One or more *weto* are held and administered by a matrilineage line. Title is divided and shared by several levels of the society. In the pre-Christian era, the Marshallese social system distinguished between two major classes: *irooj* (chiefs) and *kajur* (commoners). The *irooj* held title over an island or atoll. Among the *irooj*, the *iroojlaplap* (paramount chief) were the ones with the most power while the *iroojerik*, the lesser chiefs, shared the power and many of the privileges, but to a limited degree. Today, the term *kajur* is not used so often as the class has been divided into the *alap* (land managers) and the *rijerbal* (workers). The *alap* organizes and directs lineage activities and allots lands for use to different descent lines within the lineage. The *alap* and the *rijerbal* make up the subjects or *kajur* and render services to the *irooj* in exchange for land use. The *irooj* managed the land in a way that not only provided themselves with food but also provided for the *kajur* (*alaps* and *rijerbals*). The *kajur* in return cultivated the land, harvested the waters surrounding the atoll, and performed *ekkan* (tributes) to the *irooj*. The procedure is a cycle that has been repeating for hundreds of years. The common members of a lineage have land rights, although

the *alap* and *rijerbal* change land ownership. The *iroojlaplap* is the only individual with permanent land rights, unless defeated in war. Historically, one *iroojlaplap* (paramount chief) was able to extend his control over most of the Ralik Chain (except Eniwetak and Ujelang). Periodically the *irooj* visited these islands to collect tribute. The Ralik Chain was subsequently divided into two districts, one including Namu and the north islands, the other Jabat, Ailinglaplap, and the islands south. Although all of these islands were owned by the *iroojlaplap* he rarely visited those further north than Kwajalein and Ujae because they were isolated and somewhat impoverished (Alikire 1977). Within the northern atolls, stratification was less elaborate in comparison to those in the south.

OTHER INFORMATION

The weather in the RMI is tropical all year round, except from May to November which is considered the wet season. The population is around about 61,000, excluding Marshallese living abroad. The primary languages used are Marshallese and English. Everything basically follows US standards.

2. Historic Preservation Office

The Historic Preservation Office (HPO) is an office dedicated to preserving and recording everything Marshallese. Dances, oral stories, traditional sites, fishing methods, canoe building and so forth are all considered very important parts of Marshallese culture. Our office is also in charge of overseeing earthmoving projects, which might harm our traditional sites. We do not just monitor projects in Majuro, the capital, but also projects from USAKA (United States Army Kwajalein Atoll). Every earthmoving project must come to the HPO to be reviewed, and once approved applicants usually go ahead with the project. The office also provides funding for a variety of local projects, and so far some local projects have been completed while others are ongoing. What we basically do in the office now is work on previous grants and assist third party projects. We also help with paperwork, including land modification permits, research permits for both archaeological and anthropological projects, and diving permits. Since we still lack the capacity needed, we have yet to do many surveys other than the Wotje Rice Plantation on Wotje Atoll. Other than surveys, there have been one repatriation survey conducted by a Japanese team and several interviews have been done regarding third party projects.

GOALS OF THE RMI-HPO

From my own perspective the RMI-HPO strives on maintaining Marshallese culture and heritage through preservation. This is the sole purpose of the RMI-HPO, to protect all the heritage that we have, both tangible or intangible, through surveys, project funding, and etc. Although the RMI-HPO has maintained some parts of the heritage, both tangible and intangible, there are certain problems that the office faces while making such achievements. These problems, involving private land, the isolation of islands/atolls, climate change, etc., conflict with what we do, and are the biggest issues that we in the

office face. Although we face these problems in the office, we still manage to get things done by finding alternatives to each problem.

METHODOLOGY FOR CONDUCTING SURVEYS

Before conducting a survey on the outer islands, the RMI-HPO office must set up a meeting with the Chief and Mayor of the islands. It is also important that representatives of the local government attend to the matter. The reason for this meeting is to achieve mutual understanding of what will be done on the survey and to ask permission from the Chief to conduct the survey. It is very important in Marshallese culture to ask permission from the chief and to notify (the chief and mayor) of our daily activities so that they can arrange everything with the locals. Once approved, our office can move about freely; we also present a report on our activities to the mayor and chief.

3. Problems of Cultural Heritage Protection

Problems faced by the RMI-HPO involve aspects of traditional culture (land tenure), the physical environment (isolation, climate change), and heritage management (looting, loss of traditional knowledge, etc.).

LAND

One of the biggest issues that the RMI-HPO office faces is land. Although the government has all the money, the land managers (*alap*) and paramount chief (*iroojlaplap*) own the land. Land tenure is a matter between the *iroojlaplap*, *alap* and the workers (*rijerbal*), and the government has no part for any of the land. The government does not own the land. In fact, the government offices are owned for the most part by the chiefs and land managers, and the government rents off these lands from the latter. In some cases that confront the HPO, land owners sell off the land to the highest bidder. This was the case in our recent survey, on a Japanese rice plantation (Figure 2) located in Wotje. The Marshall Islands Marine Resources Authority planned on making extensions on the patio area and use the plantation as a fish market. It is stipulated in our legislation that historic properties must not be touched, however, but left alone. So the plan to rebuild or make extensions was not approved, and another site found. There are some incidents where applicants for land modification permits have applied for a specific site, but after their permits are approved they change the site. Since the land is owned by the locals, they just set up their homes within the old WWII structures. The HPO has very little power over land usage, but we feel it significant that some locals have called in and reported on some sites located in their back yards. Another example would be the Kaiuiu, an underground tunnel used long ago to prepare breadfruit. It has not been used for long period of time, but the shortage of HPO staff has thus far prevented us from restoring this site.



Fig. 2 Rice polishing plant

ISOLATION

Since the Republic of the Marshalls is so spread out, it is difficult to monitor every island and atoll, unlike our neighboring sister countries of the FSM, Guam, Saipan, Yap, and Palau, where there is either only a single island, or the islands are only several miles apart. At the same time, we face transportation issues due to our national airlines, Air Marshall Islands (AMI), often having mechanical problems. Even when it is possible for a plane to take us to our destination, it is not guaranteed that AMI will be able to make the return. Of course, some islands are not too far off, like Mili and Arno Atoll, which are visible during the day. Boats are often the best solution, but are also expensive. The only way that you can catch a ride is either rental or by round trips. Round trips are when boats travel from island to island, in either the Ratak Chain or Ralik Chain. Boats are not so much of a problem for traveling to nearby islands. But some islands lie further out, and can take a least a week to reach.

SEA LEVEL RISE

The recent sea level rise caused by global warming, triggered by the “greenhouse effect,” is a critical threat to the Marshall Islands. The rising of the sea during the last two decades has overwhelmed the low-lying atolls not just culturally but economically as well. Scientists predict the archipelago of the Marshalls is among the Pacific nations that will be affected by the rising of the sea level within the next fifteen to twenty years. For many years, the Marshall Islands Government has been concerned with the issue, since the Marshalls lie in open ocean, and the islands are very close to sea level. We are situated about 2 feet above sea level, with our highest point the Majuro Bridge being at 14 ft. The RMI is also vulnerable to waves and storms, but we have not been hit seriously by any as yet. Even though the islands have by no means been completely free from weather extremes, they are frequently referred to in legends as “*jolet jen anij*,” or gifts from god. The Marshallese believe that god gave them refuge from the harshness of the world. “However, given the physics of wave formation and the

increasing frequency and severity of storms, the Marshall Islands will likely be at even greater risk of total inundation. The relative safety that the islands have historically provided is now in jeopardy. The impacts are not limited to the Marshalls and its immediate neighbors.” (Permanent Mission of the Republic of the Marshall Islands to the United Nations, 1992).

LOOTING (TAKING ARTIFACTS)

Another cause for concern is the inability to watch over everything that happens in the outer islands, such as looting, which is taking artifacts without the HPO’s consent. This happens often in the RMI, mostly on the outer islands. Foreigners come to apply for permits to travel to the outer islands for recreational purposes, e.g. diving, snorkeling, and wind surfing. Before approving the permit, the HPO briefs applicants on the legislation and on what to do and not do. The office even supplies applicants with a copy of the restrictions regarding the “Taking and Removing of Submerged Artifacts” from the HPO Legislation. But we have had several incidents where applicants would take submerged artifacts, either as a souvenir or to sell. The islands applicants target are mostly those with WWII wrecks, such as Mili, Maloelap, Jaluit, and Wotje.

RESEARCHERS

Researching is not a problem here, but some researchers are. In Marshallese culture, it is very hard to give out information about the past, especially to outsiders. The problem is some researchers come in to take information, and take it with them. They do not donate anything to the Marshalls as a token of their gratitude, but they take information away with them and sell it. The old way of passing down knowledge here is by word-of-mouth, and while nowadays writing and recording are practiced, previously everything was passed down only as oral tradition.

LOSS OF CULTURAL KNOWLEDGE

Cultural knowledge is the most vital part of Marshallese culture. Cultural knowledge is nearly gone in Majuro and Ebeye, where most residents are accustomed to a Western style of life. Almost every site in the islands has a story behind it, such as Limodrel’s well (Figure 3). When a typhoon struck Majuro sometime in the late 1900s, this became a source of water for the inhabitants. It is said in legend that a bird discovered it, descending from the sky and eventually discovering it. Another example would be the Kaiuiu (Figure 4), an underground tunnel used to make *bwiro* (breadfruit). This tunnel was used to prepare *bwiro* in the past but has not been used since then. Without cultural knowledge, Marshallese legends, myths, chants, and so forth will be lost. Cultural knowledge is passed down by word of mouth, so nowadays we in the office try and record every possible bit of cultural knowledge that we can. Youth in the Marshalls are now more interested in Western culture than in their own. This makes it difficult for them to appreciate their own traditions. Our office has done some recording in the past, and we preserve old chants and proverbs that are scanned and recorded in booklets. But right now we have not actually accomplished very much, though with the help of our new archaeologist and

anthropologist we can start the recording and writing process. Almost all the elders in the Marshalls have knowledge about past culture, but some of them have passed away. But there are still some who know about the culture, though most can be found in the outer islands where the culture is still alive.



Fig. 3 Limodrel's well



Fig. 4 Kaiuiu

4. Recommendations for Improving Cultural Heritage Protection

The following are recommendations in the most significant areas where improvement for cultural heritage protection is needed in the RMI.

PUBLIC AWARENESS

The RMI should get to know the HPO. Right now we are not well known around the RMI, although there are some who recognize us. But others do not know who or what the HPO is or what we do. Applicants who apply for land modification permits do not know where the HPO is located. The process of applying for earthmoving permits goes to the Environmental Protection Agency (EPA) first. EPA then sends them to the HPO office, and this is where applicants get confused. In response to this situation, the HPO has started radio programs just to let people know that we are here. We are determined and we want to protect everything Marshallese, both tangible and intangible heritage. The radio programs revolve around information beginning with the RMI-HPO Legislation, and sometimes we even tell Marshallese proverbs and stories just to let people know who we are and what we do. Overall, the radio program itself has helped gained some recognition for us. Right now we want to do school outreach programs, but we lack the resources needed to fulfill this mission. Now with our archaeologist coming in, we might get a start on this project.

CULTURAL RESOURCE MANAGERS (CRMs)

Since our office is stationed in the capitol of the RMI, we do not know what is going on in the outer islands. The office needs someone who can help us out, and this is where Cultural Resource Managers (CRMs) play a big role in helping the HPO. A CRM is someone who is knowledgeable about his/her island. Someone who knows where the sites are and knows the stories related to them. These CRMs can be our eyes and ears, they can act on our behalf and monitor what is going on within their islands. Although there is an old CRM listing from the 1990s, we need an updated listing. This is still an ongoing project; we have already consulted with the mayors of each island and atolls to nominate a least one or two from their districts. The RMI-HPO is also waiting for funding from the National Parks Service to go ahead with the project. Once the money comes through, the HPO will bring these CRMs to Majuro to be trained in resource management. After completion of the training, these CRMs will return to their islands and report back on daily activities. The office needs these CRMs, as we cannot be in two places at once, but with their help we can accomplish surveys quickly and efficiently.

BETTER TRANSPORTATION

Improvement in transportation is necessary to get everything back on track. Right now, our airline service has gotten a boost. With both airlines now working better, travel to the outer islands will be smooth. Before there was only one plane that provided service from Majuro to the outer islands. And while fuel prices have gone down now and have remained constant for the time being, our office can rent boats to go to the outer islands. It may be hard to believe, but gas prices have affected the transportation system in the RMI. Now that transportation has improved significantly, we can go to islands and atolls that have not been surveyed. In order for our office to accomplish our goals, transportation must be consistent.

PASSING ON TRADITIONAL KNOWLEDGE

Passing down traditional knowledge is the best way to keep the culture alive, either by word of mouth, or just by recording and writing. The best way possible is to get all the young Marshallese involved in their culture. Get them more involved, show them the importance of Marshallese culture and why it makes us different from the rest of the world. Our office must on the other hand come up with ways to get the community involved, to promote Marshallese culture and teach our youth its importance and values. Another way of doing this is for the HPO office to teach the youth its cultural and historical findings after outer island surveys.

5. Summary

The historic and traditional sites in the Marshall Islands are valuable resources. As such, they deserve an active preservation effort. The best approach for the HPO seems to be raising public awareness and to actively involve local governments in their preservation efforts. Those preservation efforts should also be directed towards possible sources of income for outer island residents through tourism. The majority of these sites recorded on Majuro and in the outer islands should receive preservation measures along with the recording of the stories behind them. The primary goal of every preservation action should be the proper stabilization of sites being threatened by natural forces or human impact. This is especially true for sites that have been determined as significant to Marshallese history.

Myanmar

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Ministry of Culture

Problems and Needs for Cultural Heritage Protection and Restoration Activities in Myanmar: Focusing Mainly on Archaeological Sites and Remains

INTRODUCTION

Myanmar is a country located in the Southeast Asia region. It lies between latitude 09°32' and 28°31' north and longitude 92°10' and 101°11' east. Myanmar shares territory with the People's Republic of China on the north, with Laos and Thailand on the east, and Bangladesh and India on the west. The total area is 261,228 square miles (approximately 677,000 km²). There are four main categories of regional topography in the country: mountains and valleys, plains, plateaus, and coastal regions. Owing to their geographic and climatic conditions, the cultural heritage of each region has some differences, but the national identity is quite distinct.



Location of Myanmar

CULTURAL SEQUENCES OF MYANMAR

The land was established before the country named Myanmar was born. The land of Myanmar has passed through geological periods lasting millions of years. Among the legacy of these geological periods, at the Pondaung area in central Myanmar fossilized remains from about 40 millions years ago have been found. Based on such evidence, it is known that there were living species on the land millions of years before human beings appeared.

Regarding human occupation, based on archaeological evidence Myanmar has a cultural outline that can be broken down into three major segments: prehistoric, protohistoric, and historic culture. These will be examined in turn in the following sections.

PREHISTORIC CULTURE

Researchers assume that human presence in Myanmar extends back into the Pleistocene of the Quaternary Era. Although clear evidence for settlement patterns is lacking in human remains, stone tools have been found in early contexts in Myanmar. It is assumed therefore that people bearing culture have been present since the history of Myanmar began. Cultures relying on stone tools can be divided into three ages, based roughly on technological innovations: Paleolithic, Mesolithic, and Neolithic.

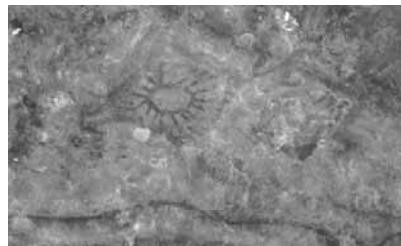
Early stone age tools, from the Lower Paleolithic, have been found in the Ayeyawaddy valley in upper Myanmar (Anyar region). Foreign experts have named this stone age culture of Myanmar the Early Anyanthian, said to resemble the early stone age remains in other locations in Asia, such as Java, China, and Northern India. Better made Pleistocene stone tools, also excavated from the banks of Ayeyarwady valley, are called the Late Anyathian.

Among subsequent stone age finds in Myanmar, not only more delicate stone tools but also cave paintings made by early men have been found. A well-known site of such finds is Padalin Cave, situated in the Shan state in Myanmar. The Padalin prehistoric cave was first discovered by a geologist during exploration of this region in 1960. U Aung Thaw, the late Director General of the Department of Archaeology, led and excavated with an organized team at Padalin Cave in 1969. Based on the evidence of stone tools and rock paintings, Padalin Cave revealed a culture that can be compared with the Hoabinhian and Bacsonian cultures of Indochina. The rock paintings are seen in the eastern cave or rock shelter (Cave No. 1). Designs can be identified as human hands (one with concentric circles and the other with what looks like a human skull), the sun between two converging irregular lines (perhaps a setting sun), and animal figures including bulls, bison, a deer, the hinds of elephants, and a huge fish.

Entrance view of
Padalin Cave No. 1



Cows and calves



Setting sun



Mutilated hands



Application with preservative
coating on painting



Cleaning of lime whitewash
with chemical solution



View of the fencing

According to the radiocarbon dating of materials collected during excavation, the culture associated with this site dates from around 13,400 BP. There is some evidence for the use of hematite (red ochre) as a pigment. Therefore this prehistoric cave represents significant material for Myanmar and the Southeast Asia region. With regard to conservation measures, the following risk factors can be identified for Padalin Cave.

1. Padalin is a limestone cave, and is situated far from any village.
2. During the rainy season, rainwater can seep over the mural paintings.
3. Chemical conservation work is done only rarely, and there is insufficient provision of funding and manpower.

PROTOHISTORIC CULTURE

The cultural sequence of the protohistoric period is very important but also very confusing, though scholars generally divide it into two levels of study, one of Bronze and Iron Age sites, and the other of urban culture at city sites in Myanmar. These will be looked at here in turn.

Studies of Bronze and Iron Age Sites

The study and collection of bronze artifacts has been carried out since the early twentieth century. But the task was not conducted regularly and most of the collections of bronze artifacts are surface finds, with systematic excavation rarely performed.

In 1998, with the discovery and excavation of the Nyaunggan burial site, the presence of a Bronze Age in Myanmar was confirmed, a significant development for understandings of the cultural transformation in Myanmar and its cultural chronologies. The Department of Archaeology of the Union of Myanmar conducted the excavation as part of its exploration of Bronze and Iron Age sites throughout the territory of Myanmar. Under the Three Age System, cultural transformations can be broadly divided into those of the Stone Age, the Bronze Age, and the Iron Age. This sequence of cultural evolution has been generally accepted in many nations. Myanmar is therefore also concerned with these cultural stages. The Department of Archaeology has been mainly involved in the study of the Bronze Age, and the departmental report for this burial site concluded that the tools and artifacts belonged to a transition period from the Bronze age to Iron age. Sites of all of the three ages of stone, bronze, and iron are now known to have existed in sequence in central Myanmar.



Conservation work at Bronze Age burial sites in central Myanmar

According to the results of excavations, the artifacts found in central Myanmar are as follows:

1. Skeletal remains.

2. Pots, jars and vessels of various designs and sizes, earthen containers for fermented drink, circular trays with stems, distillation pots.
3. Polished stone axes, with and without shoulders.
4. Stone and glass bracelets.
5. Multiple beads of materials such as stone, talc, quartz, agate, and carnelian.
6. Bronze axes, adzes, arrowheads, spearheads, etc.
7. Shallow cones, stylized female figures and bronze floral sheets, supposedly used as coffin decorations and grave offerings.
8. Iron implements:

Regarding factors that are relevant for conservative and preventative measures, it should be noted first that all of the excavated bronze burial sites were on cultivated lands. They can be discovered and disturbed by digging, including that for making drainage, etc. The problems for the sites are as follows:

1. Most of the burial sites exist in cultivated fields. Accordingly, harrowing, digging, installing drainage facilities, etc., can destroy the sites.
2. Lack of public awareness of the importance of the sites.
3. Insufficient provision of funding and management.
4. Most of the burial sites are located in fields subject to erosion by rainwater and river flooding.

Studies of Urban Culture in Myanmar

Studies of archaeological evidence on ancient cities are one of the major tasks for the Department of Archaeology. These are being conducted through the collection of all types of surface evidence, plus exploration and excavation at particular sites, and conservation of exposed structures and existing monuments.

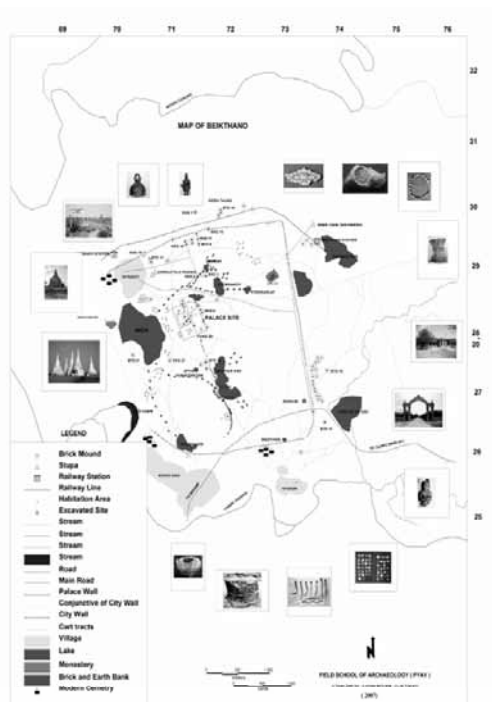
To trace the earliest cultural evidence for ancient cities or the formation of urban centers, an examination can be made of Beikthano, a Pyu ancient city. There are many ancient cities in Myanmar like Beikthano, including Hanlin, Maingmaw (Pinlay), Waddi, Taguang, Kyaikkatha, Thagaya, and others. These ancient cities are attributed to the Pyu culture of Myanmar before the historic period. They flourished from the first to the tenth centuries AD.

Before independence, the Department of Archaeology (A.S.B) conducted work in the ancient cities of Beikthano, Hanlin, Taguang, and Bagan. Those studies mainly emphasized the collection of inscriptions, the conservation of existing monuments, and a few test excavations. After independence, the Department of Archaeology was reformed under a new organizational scheme, and systematic excavation was conducted both at those ancient cities studied previously, and at further new ancient

cities. In the archaeological studies of such ancient cities, it is important to investigate the cultural transformation of protohistoric culture to historic culture.

Among the city states of Pyu, I would like to describe Beikthano and Sri Ksetra and their respective problems.

The ancient city of Beikthano. This ancient city is located in Taungdwingyi Township, Magwe district in central Myanmar. The city wall of this city is rectangular in shape. The brick fort walls are now reduced to an average height of about six feet. The eastern side is two miles long while the north and south is one quarter mile shorter. The western wall had been eroded by the floods of the Yan Pe stream and two lakes, Ingyi and Gyogyia, situated close to the low-lying western wall which edges the city area.



Map of Beikthano



Monastery remains exposed at site No. 2, Beikthano



North view of gateway exposed at site No.13

In Myanmar, historic cities can be grouped into the three categories of early, medieval, and late historic cities. The ancient city of Beikthano is the earliest Pyu ancient city and is included in the early historic cities category. It flourished between the first and fourth centuries AD.

Altogether over 50 mounds have been systematically excavated at the site by the Department of Archaeology between 1967 and 2008. As a result, early structural remains such as the city gate, the palace site, two-storied brick monasteries, stupas and religious buildings can now be observed. All of these structural remains belong to early Pyu period.

Some of the plans of the structural remains closely resemble the typical stupa base of Nagarjunakonda in south India. Other interesting structural remains are the gateway of the city wall,

the palace site, etc. The Beikthano archaeological site museum is situated at the northeast corner of the city wall. Most of the objects displayed in the museum were collected during excavations. The objects consist of different types of pottery, semiprecious stone and clay beads, burial urns, stucco carvings, store figurines, iron objects, etc. According to analysis by radiocarbon dating, the Beikthano ancient city dates back to the first century AD. Some archaeologists and other scholars suggest an earlier date for its beginning, however, as far back as the second century BC.

The specific problems related to the conservation of this site are as follows:

1. Structural remains and the city wall have suffered damage due to weathering and vandalism for over one thousand years.
2. Most of the mounds within and surrounding the city wall were covered with brick debris and growths of vegetation.
3. Insufficient provision of funding and manpower.
4. Popular pathways are a great problem in this area. People use pathways as shortcuts instead of the main roads.

The ancient remains of Sri Ksetra. Another ancient Pyu urban site of Myanmar, Sri Ksetra, lies about 8 km southeast of Pyay on the east bank of the Irrawaddy and about 290 km northwest of Yangon. Discoveries indicate a chronology in which this city attained its height of prosperity between the fifth and ninth centuries AD.

Sri Ksetra is one of the most thoroughly explored sites in Myanmar, with intermittent excavations conducted since 1970 and intensive digging carried out from 1964 onwards. Archaeological discoveries indicate that this city attained its height of prosperity between the fifth and ninth centuries AD.

Most of the ancient ruins lie in the southern sector of the city and also outside the fort walls, while burial mounds are to be found scattered throughout the locality. Among the conspicuous monuments are three tall stupas, named the Bawbawgyi, Phayagyi and Phayamar, lying respectively to the south, northwest, and north of the city wall.

The Bawbawgyi, 153 feet high, assumes a cylindrical shape above five low circular terraces, of which two are buried under the debris. This type apparently evolved from hemispherical mounds such as the Sanchi and Amravati stupas of India. The cylindrical body is hollow up to about two-thirds of its height, and has one opening at the base and another aperture high up in the opposite wall. On the evidence of the clay votive tablets and epigraphic finds recovered, the Bawbawgyi may be assigned to the sixth or seventh centuries.



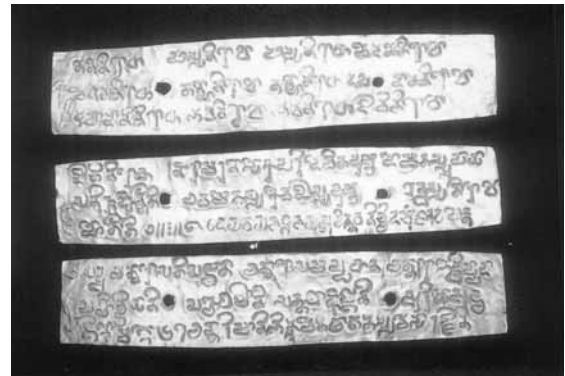


Bawbawgyi stupa



Laymyatnhar temple

Among the artifacts recovered at Sri Ksetra are the earliest inscriptions found in Myanmar. There are two gold plates from Maung Kan's field in Lebaw village, and another find of a manuscript from Khin Ba's mound, inscribed on twenty gold leaves and datable to the fifth century, which consists of excerpts from the Abhidharma Buddhist formula *yedhamma hetupahara*.



Also among the finds from the relic chamber in Khin Ba's mound is a gilded silver casket, cylindrical in shape. It is embossed with the last four Buddhas of the present world cycle seated in the earth-touching attitude of the Gupta style. Between the Buddhas are four standing disciples, also in relief. The trunk of a banyan tree rises from the center of the flat lid. Originally it was adorned with twigs and leaves. Around the top of the rim is a line of Pyu-Pali inscription in south Indian characters, which identifies in the Pyu form of writing each Buddha by name: Gautama, Konagamana, Kakusandha, and Kassapa.

Also, Chinese annals mention the visit of a Pyu mission, including a musical troupe, to their capital around the year 802. As concrete evidence supporting this possibility are figurines of Pyu performing artists, found during the excavation of Sri Ksetra by the Department of Archaeology. These five bronze figures are a drummer, a dancer, a clown, a flutist and a cymbalist. Together with



those bronze figures were unearthed five bronze Buddha images and an ornately molded bronze bell, eleven inches in height.

The specific problems found at this site are as follows:

1. Popular pathways are a great problem in this area. People use shortcut pathways instead of the main roads.
2. The tendency of smugglers to take valuable antiquities with the help of local people.
3. Loss of authenticity and integrity of the brick structures of monuments.
4. Insufficient provision of funding for conservation and management.

HISTORIC CULTURE: THE BAGAN KINGDOM

The historic culture of Myanmar will be introduced here through the example of Bagan (also written Pagan). The ancient city of Bagan is known as one of the first city states of Myanmar, and was ruled by kings of the Bagan Dynasty. During the reign of King Anawrahta, the first strong and integrated state was consolidated which included regions that later came to be known as Myanmar. Theravada Buddhism flourished throughout Myanmar in the reign of King Anawrahta. For that reason, symbols of Theravada Buddhism such as pagodas, temples, monuments, monasteries, zayats and other religious buildings are found everywhere in Bagan, and were built starting from Anawrahta's day.

In ancient Bagan, more than 4,440 pagodas and temples are assumed to have been built, but only 2,230 pagodas and the ruins of 892 mounds are now known. Due to natural disasters, some of the thousand-year-old pagodas and temples have been destroyed and have collapsed to the ground. At present, the renovation and preservation of the ruined Bagan temples and pagodas are being carried out by the Department of Archaeology.

Adopting traditions of art of architecture handed over from the Pyu and Mon, the Bagan people were superior and more artistic in building religious temples suited to the flourishing of Buddhism. The addition of elements of art and architecture obtained through relationships made with India and Ceylon can be seen in their works.

The high standard of Myanmar architecture is demonstrated in the architecture and the various Myanmar traditional arts used in their religious buildings. Moreover, the fresco paintings on the walls of these buildings and stone inscriptions show that not only architecture, but also the performing arts, were developed as they had been in the Pyu period.

After the fall of Bagan, the kings of the Pinya, Ava, and Konbaung periods came and repaired the old pagodas built by their ancestors, and added more religious buildings as works of merit in the Bagan area.





View of the ancient city of Bagan

The problems of this area its monuments are as follows:

1. In the Bagan area, most of the ancient monuments are located on the banks of rivers and creeks that are being eroded by river water and rainwater.
2. Some erosion of the river banks also threatens the ancient monuments. We have to check the ancient monuments which are located on the river or creek banks, and we should build up the embankments if urgently needed.
3. Everything is impermanent, and because they are more than one thousand years old, many of the monuments are coming to decay gradually. So we need to conserve them very carefully.
4. Some binders of plaster and mural paintings consist of molasses. That is why insets eat and destroy mural paintings. They also scratch the paintings with their legs and wings.
5. Some birds eat the fruit of banyan trees and drop the seeds on the monuments. Banyan trees then grow on the ancient monuments, their roots penetrating into the brickwork causing wide cracks to open. Then rainwater flows into the cracks and further damages the walls.
6. Usually the mural paintings on the surface within reach are damaged and faded due to oil from people's hands. Accordingly, we attached frames with glass over the surface where it is within reach.

CULTURAL HERITAGE PRESERVATION IN MYANMAR

MAJOR LAWS CONCERNING THE PRESERVATION OF CULTURAL HERITAGE

In Myanmar the cultural heritage of ancient monuments and antiquities has been protected since the passage of the Burma Antiquities Act of 1957. The Government of the Union of Burma subsequently

amended this Act in 1962. A new law entitled the “Protection and Preservation of Cultural Region Law” was promulgated in September 1998. It consists of nine chapters, namely: (1) Title and Definition, (2) Object Culture, (5) Protecting and Preserving the Culture Heritage Regions, (6) Applying for Prior Permission, Scrutinizing and Issuing, (7) Prohibition, (8) Offenses and Penalties, and (9) Miscellaneous.

PROBLEMS AND NEEDS FOR CULTURAL HERITAGE PROTECTION AND RESTORATION ACTIVITIES

Myanmar historical sites and Myanmar ancient monuments are the heritage not only of Myanmar but also of the world. Although we know that everything is subject to decay and therefore impermanent, we nevertheless have the duty to conserve the heritage, and must act in time before there is irreparable loss. Most of the ancient monuments have been damaged due to natural disasters, weather, human beings, insects, etc. Some sites have unique problems, though they are few. Here I have tried to figure out some recommendations for solving the common problems.

1. For some archaeological sites and remains in Myanmar, archaeological surveys have been conducted by the government. Many ancient sites and remains are still not included in the archaeological surveys, however, and it is highly necessary for them to be surveyed soon.
2. Because of frequent earthquakes, many ancient monuments are badly damaged. The more flexible structures using brickwork in mud are not as badly damaged.
3. Many ancient monuments collapse due to the heavy rains. Accordingly, during rainy periods we check around the monuments for rainwater leakage, and for water flowing on the mural paintings which can cause the paintings to become faded and destroyed.
4. Because everything is subject to decay and therefore impermanent, the thousand-year-old monuments are coming to decay gradually. So we need to conserve them very carefully.
5. Erosion of river banks is also dangerous for the ancient monuments. We have to check the ancient monuments which are located on the river banks, and we should build up the embankments if urgently needed.
6. Problems of illumination often need to be solved by providing a curtain or bamboo screen to shield heritage from the light.
7. Some ignorant people whitewash over beautiful paintings which have darkened with old age. When we remove the whitewash, the layers of the paintings are spoiled because of the lime. Usually the mural paintings on the surface within reach are damaged and faded due to oil from people’s hands. Accordingly, we attached frames with glass over the surface where it is within reach.
8. Promotion of closer coordination is needed between different organizations of the government and the Department of Archaeology.

9. Creation of links between the Department of Archaeology and the universities are needed to boost the work of research, restoration and conservation through close communication.
10. It is necessary to make higher training from foreign countries available for Myanmar archaeologists and conservators.
11. Insufficient allocation of funds from the state budget is an obstacle to implementing heritage projects. It is necessary to enhance budgetary allocations sufficiently to cope with the Herculean task of reforming, restoring and developing the archaeological sites.

CONCLUSION

This report has touched on the cultural sequences of Myanmar and the main problems and needs for cultural heritage protection and restoration activities in Myanmar. Currently, I am carrying out my duties with the Cultural Heritage Division in Mandalay. As for my career, I will mostly be conducting the exploration and excavation of Bronze and Iron Age burial sites, as well as participating in primate studies. As I am attending this training course, I strongly believe that I will be able to apply the results to the conservation of heritage sites in Myanmar, as well as to my archaeological studies in Myanmar. I will also share to my with my colleagues and the younger generation of heritage workers my experience and knowledge gained from Japan.

Thank You

New Zealand

Kathryn HURREN

Regional Archaeologist

New Zealand Historic Places Trust

Problems and Needs for Cultural Heritage Protection and Restoration in New Zealand

1 Introduction

New Zealand/Aotearoa was the last land mass in the world to be colonised and this colonisation happened quite late in terms of world history. Settlement predominantly occurred along the coastline and this is where the majority of archaeological sites in New Zealand are located. Coastal archaeological sites face pressures not only from people and development, but also from the environment. Archaeologists consider New Zealand's archaeology unique because of the age and type of sites. However due to the country's relatively young history, many New Zealanders do not view the cultural heritage of New Zealand as significant compared to that of other nations. Unfortunately, this view adversely affects how archaeology is treated and protected by a wide sector of the population, including developers, local authorities, central government, and even Maori and professional archaeologists.

This report will look at the history of New Zealand, the types of archaeological sites that can be identified in the landscape, as well as the organisations and legislation that manage archaeological sites. It is important to look at these first as they set the scene, and help to understand the challenges that are presently found in New Zealand. Lastly, the problems and needs facing the preservation and conservation of archaeological sites will be discussed.

2 Location and Description of New Zealand

New Zealand is located in the south West Pacific 1,500 km east of Australia. New Zealand has three main islands: the North Island, the South Island and Stewart Island. Surrounding these main landmasses are a number of smaller islands and island groups, such as the Chatham Islands 850 km to the east of New Zealand, the Campbell Islands 600 km south east of Stewart Island which is sub-Antarctic, and further away still, the Kermadecs which lie 1,000 km to the northeast of New Zealand.

New Zealand has a land area of 270,534 sq km and has an extensive coastline which totals more than 15,000 km. It is 1,600 km long but only 450 km wide. Due to the New Zealand positions spanning several climatic zones, the climate varies greatly from north to south; the north can be subtropical while further south the climate is generally more temperate.



Figure 1. Location of New Zealand in the southwest Pacific



Figure 2. Map of New Zealand

3 Colonisation of New Zealand

Scientific analysis has determined that the human occupation of New Zealand occurred from about the thirteenth century AD (Higham *et al* 1999, Wilmshurst *et al* 2008, Schmidt 1996). The first people to make New Zealand their home were from Polynesia. In New Zealand these settlers encountered a land completely different from their homeland. Despite this, they quickly adapted to the new environment which they found to be abundant in wildlife and other resources. Settlement occurred mostly along the coastline in order to exploit the abundant resources such as fish and shellfish.

The archaeological record shows a clear transition from early Polynesian settlers to the Maori that were encountered when the first European explorers came to New Zealand. The first of the new arrivals was Abel Tasman who sighted New Zealand in 1642. However it was not until 127 years later, in 1769, as part of James Cook's journeys in the South Pacific to find the Great Southern Continent, that the first European people set foot on New Zealand soil. After Cook's voyages, several other major European expeditions came to New Zealand and gradually colonisation of New Zealand by Europeans began, firstly through coastal settlements of whalers and traders.

These various phases of occupation, starting with the early Polynesians who then forged a new culture which became Maori, followed by the nineteenth century colonisation of New Zealand by Europeans, is clearly articulated in the archaeological record. The occupation and settlement happened rapidly in comparison to the rest of the world. The archaic period is from the time of settlement in New Zealand which is ca 1280 until ca 1500 AD. The classic period is from ca 1500 until the arrival of Europeans in 1769. The historic period in New Zealand dates from 1769.

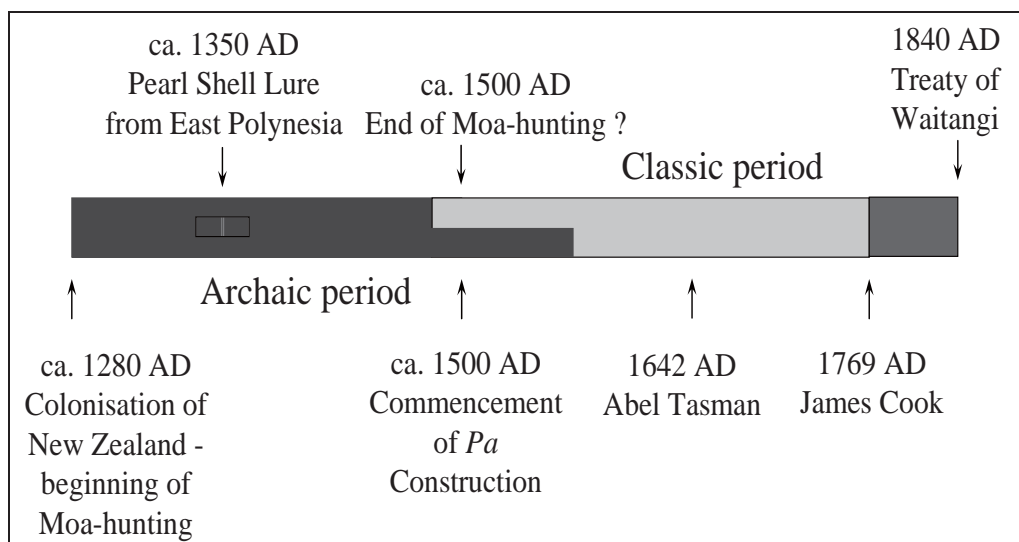


Figure 3. Timeline of New Zealand Archaeology (Schmidt nd: 5)

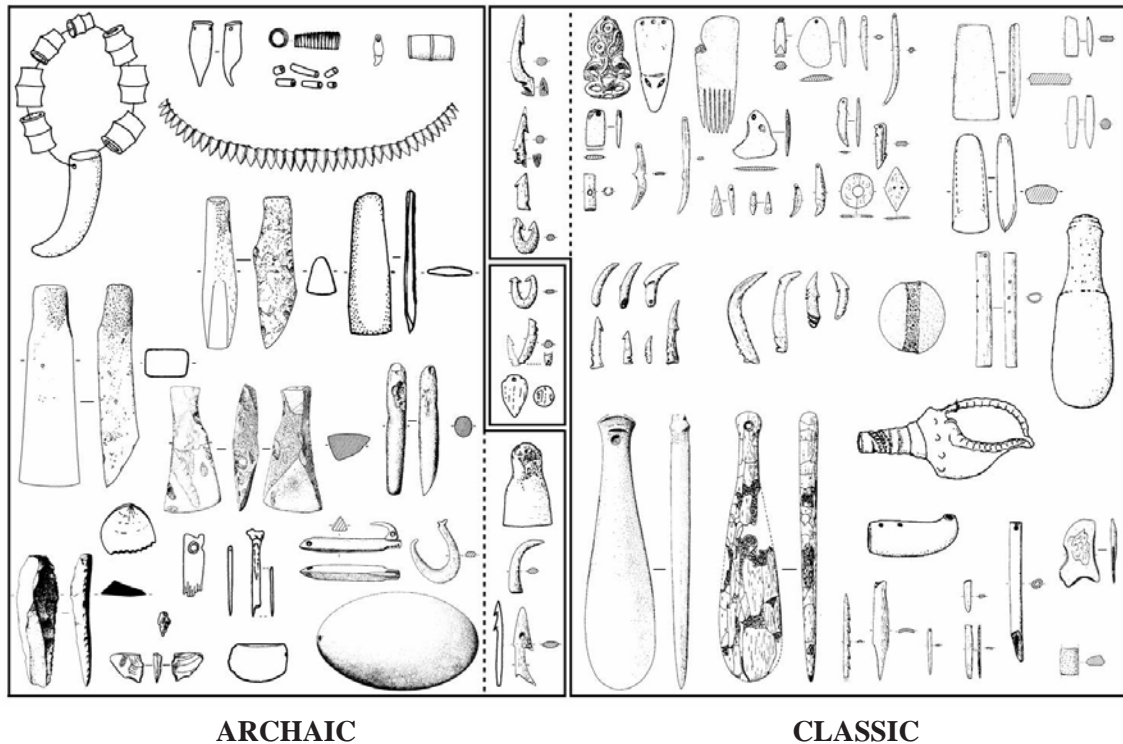


Figure 4. Artefacts found in Maori archaeological sites from the Archaic Period and Classic Period (from Davidson 1987)

4 Archaeological Site Types found in New Zealand

New Zealand's environment, isolation, and climate combine to create a unique archaeological record, which is predominantly located along its extensive coastline. This section will describe the various types of archaeological sites found in New Zealand.

4.1 Midden Sites

The most common archaeological site in New Zealand is also its most threatened. Middens are found throughout the archaeological record along the coastline. Middens are debris from cooking and everyday activities so they mostly consist of the shells from a range of different shellfish, but also fish bones, *hangi*/cooking stones, as well as artefacts such as adzes, chisels, flake tools, fish hooks and lure shanks. Other items commonly found in



Figure 5. Midden (photo NZHPT)

middens are fern root beaters, *patu* (club) and obsidian fragments. Middens are particularly significant because they tell us about subsistence economies, as well as sourcing of material and exchange.

4.2 *Pa*

Pa are Maori fortifications that are believed to have been used in times of conflict and warfare to protect the local population from invading or threatening tribes (*iwi*). *Pa* are associated with the classic period of Maori settlement in New Zealand and radiocarbon dating has established that the earliest *pa* date to about 1500 AD (Schmidt 1996). These structures and their associated buildings continued to be built and lived in until the early nineteenth century, which is why at present there are about 6,000 *pa* on record.

Pa were typically located on naturally defendable high points such as ridges, coastal headlands, and isolated hills. However, on rare occasions *pa* were also located next to swamps and in some cases on flat land. The basic plan of a *pa* includes a flat platform with artificial terracing down the slopes. It is believed that important people lived on the platform and the terraces were created to provide flat areas for the general population to build shelters and live. Because people sometimes had to live in *pa* for extended periods storage pits are also a common feature, as indicated by rectangular or circular depressions, and were most frequently used to store kumara (sweet potato) which was a staple food of the Maori. Defensive features of *pa* sites include wooden palisades, banks, and ditches, which are usually found on the outer side of the living areas. Archaeological material that may be encountered on *pa* include middens, bone, flake tools, chisels, *patu* and fern root beaters.

While *pa* were places of refuge in times of conflict, it is also believed that they had other functions. It is not known whether *pa* were occupied permanently, but they were among the most secure places to store food, as well as for the chief, and his family, to inhabit. *Pa* were important centres of learning and activities such as horticulture and crafts were undertaken there. When not specifically used as defensive strongholds, *pa* were most likely only occasionally occupied by the general populous, and this would have also been dependent on seasons as groups were frequently absent in order to undertake tasks essential to their *iwi*'s survival, such



Figure 6. Kauri Point *pa* (photo: Kevin Jones)

as fishing, hunting or tending to gardens. It is believed that people lived mostly in undefended settlements and only went to *pa* during times of conflict. These undefended villages are known as *kainga* and were present in both the archaic and classic periods.



Figure 7. *Pa*, Papamoa, Tauranga (photo: Kevin Jones)

4.3 Horticultural Sites

The first Polynesians travelled to New Zealand in ocean-going canoes which not only transported large groups of people but also a number of cultigens. Because of the vastly different climate in New Zealand it is possible that a large proportion of these failed. It is not known how many cultigens were initially introduced to New Zealand, but at the time of European settlement six were identified as not being native species, and of these kumara (sweet potato or *Ipomoea batatas*) was the dominant crop (Furey 2006: 10). Kumara could not be grown south of Banks Peninsula, in the upper half of the South Island, and below this line Maori continued to hunt and gather. The colder climate and inability to grow crops led the population in the south to be fewer than in the north.

Evidence of horticulture exists in the form of pits, modified soils and stone rows. Modified soils are often indicated by the presence of mixed and disturbed soils and evidence of charcoal. Stone rows are believed to be boundary markers as well as evidence of clearing land of large stones and rocks in order to be able to grow plants. The most common indicators of horticultural activity are kumara pits.

Horticultural sites are often associated with *pa* because as Maori began to overexploit traditional resources such as seals, and moa and other ground-based birds became extinct, horticultural resources began to take precedence. Crops therefore became extremely important and required protection, so were gradually integrated into the standard format of *pa*.



Figure 8. Waikekeno Pa and stone rows (photo: Kevin Jones)



Figure 9. Karaka Point raised rim pit (photo NZHPT)

Gun Fighter *Pa*/Redoubts

Gun fighter *pa* or redoubts were *pa* that Maori adapted to be defensible against muskets which were introduced by Europeans. Gun fighter *pa* demonstrate the high level of innovation and resourcefulness of Maori when faced with a new technology and style of warfare that diverged greatly from the hand to hand combat that they were used to prior to European colonisation. The traditional type of defensive systems at *pa* was vulnerable to musket fire because the guns could be fired down the line of ditches and banks causing increased casualties and damage. For Maori the solution was in constructing *pa* with a system of zigzagging trenches and underground tunnels running between ditches and banks. This design was successful because it allowed for the movement of people while mitigating losses from musket fire. In addition to the trenches and tunnels, palisades of tightly packed wood that absorbed the shock of muskets were also constructed. Archaeological artefacts found on gun fighter *pa*/redoubts include musket balls, ammunition cases, and cannon balls.



Figure 10. Ruapekapeka, a Maori gunfighter *pa*/redoubt built in 1845. The picture above shows the site as it is today while the bottom picture is an artist's reconstruction of the *pa* in 1845 (bottom) (source: Department of Conservation).

4.4 Historic Sites

Once New Zealand was rediscovered by James Cook in 1769 the first Europeans began to come to New Zealand. Settlement picked up from the 1830s and then after the signing of the Treaty of

Waitangi in 1840 a flood of settlers from around the world began to come to New Zealand. The Treaty of Waitangi was New Zealand's founding document, which was signed between various Maori and Queen Victoria. Most settlers were from the United Kingdom directly or via Australia, but a number of other ethnicities also made the journey. Among them were Chinese who came to New Zealand in increasing numbers from the 1860s to try their luck at gold mining and then moved into areas such as market gardening. Therefore the variety of archaeological sites in New Zealand goes beyond that of early Polynesian and Maori. The archaeological record also documents the creation of New Zealand's modern multi-cultural society, encompassing early industry and technology such as mining and reclamations areas, transport developments such as roads, railways, tramways and causeways, as well as numerous shipwrecks. Of course buildings also feature in the record like those at early whaling and sealing stations, and urban facilities such as gas and brick works.



Figure 11. *Left*, Cuba Street, Wellington (photo Kathryn Hurren); *right*, Te Aro Railway Station (photo Emma Brooks)

Depending on the material and environment archaeological sites dating from the period of early European settlement in New Zealand and after the signing of the Treaty of Waitangi can be well

preserved. Artefacts associated with this period of settlement commonly comprise nineteenth century bottles, ceramic stone wares and sometimes metal and bone objects if the conditions are dry. In damp conditions leather items such as shoes, hats and purses, timber in the form of wharf piles, wooden causeways and building piles may also be encountered.

5 The New Zealand Historic Places Trust and Its Role in Protecting and Managing Cultural Heritage in New Zealand

New Zealand's lead heritage agency is the New Zealand Historic Places Trust (NZHPT) which advises and advocates for cultural heritage protection, preservation and restoration. The NZHPT manages the *Historic Places Act 1993* (HPA). The regional archaeologists of the NZHPT administer the statutory sections of the HPA regarding the protection of archaeological sites. The HPA will be discussed below under legislation. In addition to the Regional Archaeologist other people working at NZHPT such as the heritage planner, Maori heritage advisor, and heritage advisors for registration and architecture, work together to identify and protect cultural heritage.

One such tool under the HPA that NZHPT utilises to identify significant cultural heritage in New Zealand is registration. The NZHPT register is the national schedule of New Zealand's treasured heritage places. Registration means that a place or area is included on the Register. Registration is established under the HPA and compiled by the NZHPT. Registration identifies and informs owners, the public, local communities organisations, governmental agencies and local authorities about significant heritage and assists heritage to be conserved and protected. While being on the register does not provide regulatory protection under the HPA, most places on the NZHPT Register are listed on district plans by local councils in accordance with their obligations under the *Resource Management Act 1991* (RMA). However, if the registered place or area is archaeological in terms of the definition in the HPA then it is automatically protected by law.

Recent NZHPT registrations of archaeological sites include two shipwrecks: the *Tasmania Maid* and the *Alexandra*. Another registration that is being pursued is the Nelson Boulder Bank in Nelson at the top of the South Island. This registration will encompass the pre-European Maori, pre-1900 European sites, as well as post-1900 European sites. The Maori sites consist of midden and occupation sites dating from as early as the archaic period to those still in use until the historic period. As the Archaeologist in the Central Region Office of the NZHPT I organised the archaeological field work that is a key part of the heritage assessment of the Boulder Bank, and I have subsequently been overseeing how this is incorporated into the registration report. The field work was undertaken in February 2010. The field work relocated previously recorded archaeological midden sites and identified new Maori and European sites.



Figure 12. Nelson Boulder Bank Warf, house and winch foundations, Lighthouse and Military Barracks (photos Steve Bagley)

Proposed future registration work involves reviewing the current registration of the Moa Hunter site on Wairau Bar in the Marlborough Sounds, recognised as one of the most important archaic sites in New Zealand. Extensive archaeological work has been undertaken at this site, with the most recent work occurring in January 2009. This excavation involved archaeologists from the University of Otago, NZHPT, local *iwi* and the Department of Conservation, and its purpose was to identify suitable repatriation sites for a group of human remains (*koiwi*) that were removed from Wairau Bar in the 1940s and 1950s. Until this year those remains had been in the collection of the Canterbury Museum in Christchurch. After the completion of the excavations they were able to be returned to the local tribe, Rangitane, who re-interred their ancestors at Wairau Bar.

Aside from registration, another form of heritage protection for New Zealand's archaeological sites is a covenant. Covenants are legal agreements between the NZHPT and a land owner who wishes to put protection over a site in order that it is not damaged or modified in the future, and also managed

appropriately. Covenants place protection over sites in perpetuity and govern appropriate activities and boundaries around sites. This means that covenants are the most effective way of protecting sites, but because of the encumbrances on owners they are less commonly entered into.

Gazetting is another tool used by NZHPT. Gazetting a site means that legal protection is placed over the site and an archaeological authority is required before any works that will affect the site can be undertaken. For example, important turn of the twentieth century gold mining sites, as well as those relating to World War I and II activities are presently not protected.

6 Local Government

Local Governments are the regional and local councils (also known as regional or local authorities) that deal with issues relevant to local decision making about local issues and services taking into account local needs. In New Zealand there are 12 regional councils; 16 city councils and 57 district councils. The city and district councils are collectively referred to as territorial authorities of which there are 73 in total. The regional and local councils manage the RMA and a resource consent from council is a management tool in which the use of natural or historical resources is regulated.

7 New Zealand Archaeological Association (NZAA)

Another important group in helping preserve and assess New Zealand's archaeology is the New Zealand Archaeological Association (NZAA). The NZAA does not have a legislative role in the protection and management of archaeological sites in New Zealand, but it plays an extremely important role by pulling together archaeologists and archaeological information in New Zealand. The NZAA advocates, promotes and fosters archaeological research in New Zealand as well as advocating for the protection of archaeology and cultural heritage in New Zealand by lobbying Government and councils. The NZAA provides a number of important tools and facilities, one of which is the NZAA Site Recording Scheme. This is a database which documents all of New Zealand's recorded archaeological sites. The Site Recording Scheme was begun in 1958 and is being continually updated. Presently there are 60,000 recorded archaeological sites in New Zealand. Recently the NZAA launched a publically accessible digital site recording scheme, ARCHSITE, which allows live streaming of all the NZAA site records. In addition to facilitating the distribution of archaeological information to archaeologists and the general public, the NZAA also organises yearly conferences and publishes a quarterly journal called the *New Zealand Archaeological Association Journal*, which are forums for presenting new ideas and research.

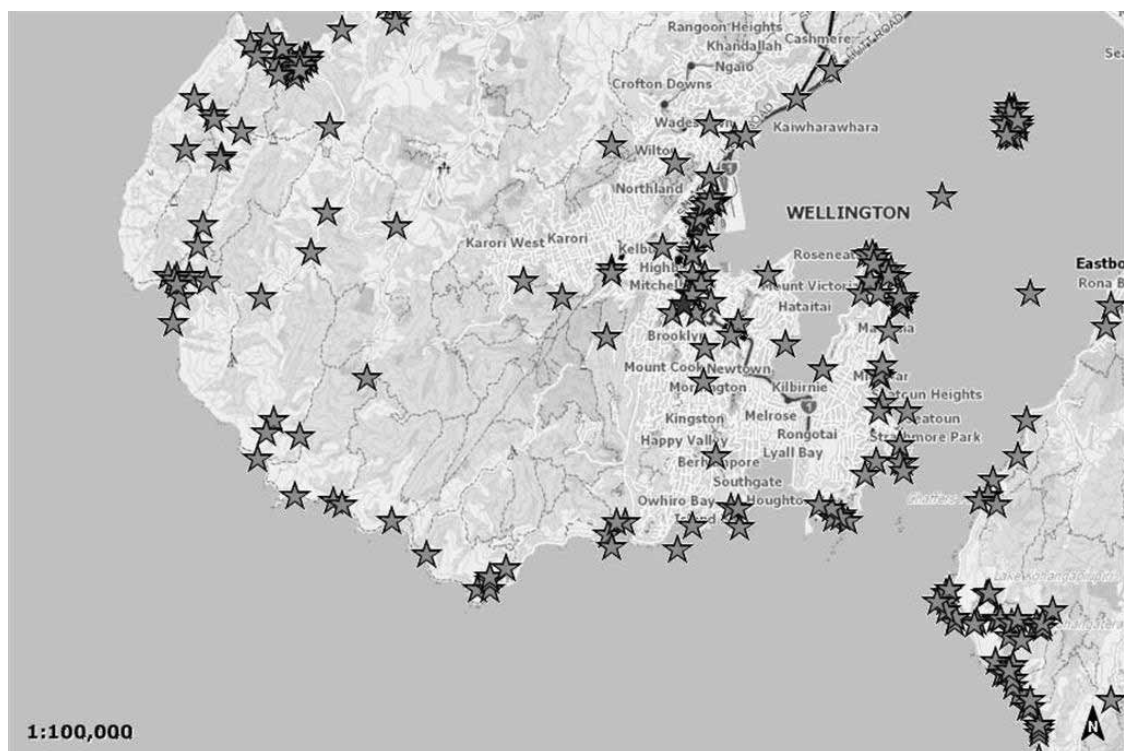


Figure 13. Map of sites in Wellington and around the immediate coastline (map generated from ARCHSITE)

8 Legislation in New Zealand that Protects Archaeological Sites and Remains

In New Zealand there are two main pieces of legislation that directly affect the preservation and protection of archaeological sites: the *Historic Places Act (1993)* (HPA) and the *Resource Management Act (1991)* (RMA). There is also the *Protected Objects Act (1975)* (POA) which ensures no person shall illegally possess *taonga* (treasures) or export artefacts from archaeological sites.

8.1 *Historic Places Act 1993* (HPA)

In the HPA an archaeological is defined as “any place in New Zealand that

- (a) Either –
 - (i) Was associated with human activity that occurred before 1900; or
 - (ii) Is the site of the wreck of any vessel where that wreck occurred before 1900; and
- (b) Is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand.”

Under section 10 of the HPA all archaeological sites are protected. In this section it states that it “shall not be lawful” to damage, modify or destroy an archaeological site “knowing or having cause to

suspect that it is an archaeological site”. The HPA confers blanket protection over all archaeological sites in New Zealand regardless of whether they are previously known about or recorded.

In order for a person to damage, modify or destroy an archaeological site an archaeological authority (consent) is required from the NZHPT before work can be undertaken. Conditions fitting the type of site and the proposed work are placed on the authority letter by the NZHPT Regional Archaeologist. There are penalties for unlawful damage to archaeological sites under section 99 or 100 of the HPA which include a criminal conviction and a fine of \$40,000 for damage or modification or \$100,000 for destruction. Section 99 pertains to damage, modification to an archaeological site without an Archaeological Authority in place, while section 100 pertains to breaches of conditions of an Archaeological Authority.

8.2 *Resource Management Act 1991 (RMA)*

The RMA has a wider scope than the HPA. The role of the RMA is to ensure that any impacts on any natural or physical resources (including historic) by a proposed activity have been assessed. Under section 5, 6 (e), 6(f) and 8 of the RMA, councils must manage historic resources and take into consideration the effects of any proposal on these in order to mitigate any actions which could undermine the values which have been identified as making them important.

Councils play an important part in the management of archaeological sites as it is often during the resource consent stage that the impacts on archaeological sites are identified. How archaeology is managed in this process plays an important part in the management and preservation of sites.

8.3 *Protected Objects Act 1975 (POA)*

The POA protects Maori *taonga* from illegal possession and trafficking and ensures that these items, when found are deposited with the rightful Iwi (Maori tribe) or Runanga (Maori council). This rightful possession is determined by the Crown through the Ministry of Culture and Heritage. European or other non Maori artefacts are the property of the landowner.

9 Problems with Cultural Heritage Protection and Restoration Activities in New Zealand

While the current legislative measures and work of various agencies in New Zealand aim to preserve archaeology, there are limitations in their effectiveness and there are still problematic areas which I will now address.

9.1 Legislation Issues

The two main pieces of legislation which deal with archaeology, the HPA and RMA have problems which affect the management and preservation of archaeological sites in New

Zealand. While the legislation in relation to the RMA and HPA are excellent tools, the way they are managed and used has serious implications for the future of archaeological sites in New Zealand.

As discussed, the HPA is the legislation which provides protection for archaeological sites in New Zealand. The HPA is managed by the NZHPT, which is where a fundamental problem lies because this organisation struggles to fund the staff to do this. The NZHPT is a Crown Agency which means that it is partially funded by the New Zealand government, but also has to rely on donations and bequests in order to function at its current level. Presently, there are only 11 archaeologists employed at the NZHPT to cover the whole of the country, which means they are often stretched to the limit of their capabilities and, reluctantly, tend to be reactive. In the interest of preserving archaeology, the NZHPT archaeologists would prefer to be proactive but instead have to rely on archaeological consultants, councils, *iwi* and other contacts to keep them informed of what is happening around the country.

The HPA is not well known by the general public and it often comes as a surprise to land owners, developers, and consultants such as planners or architects that archaeological sites are protected by law and that there is an authority process they must go through in order to damage/modify or destroy an archaeological site. There are widespread misunderstandings about the NZHPT, its role, and also a general lack of knowledge regarding New Zealand's history and the provisions of the HPA. Therefore, because of this lack of knowledge, damage of archaeological sites is often not considered serious, even though the legislation makes it an offence, and many people when faced with the consequences of site damage maintain they have done nothing illegal. This situation is perhaps not helped by the fact that very few site damage investigations make it to court. This makes the NZHPT's lack of resources evident to local *iwi*, archaeologists and developers, and it also shows that the NZHPT cannot necessarily enforce the HPA to its full extent.

The final legislative issue is that the definition of an archaeological site in the HPA only protects places dating prior to 1900. This causes confusion because while the HPA defines the parameters of what is considered archaeological under law, this does not necessarily mean the post 1900 sites cannot be considered archaeological sites, it simply means that they are not protected. There are extensive and important sites dating after 1900 that are extremely important to the history of New Zealand, but these cannot be protected unless gazetted. While the NZHPT advocates for the protection of these places, it is at the landowners' or developers' discretion to implement our recommendations and therefore protection depends on whether they are sensitive to heritage values.

Despite having a regulatory role under the RMA, local councils see it as the NZHPT's role to manage archaeological sites under the HPA. As such, some councils ignore archaeology completely and

situations have arisen where people have been granted consent to build a house on top of a midden or put a fence through a pit and terrace site. Once a resource consent has been issued it is hard to change it and this places the NZHPT in the difficult position of granting an archaeological authority that will unnecessarily damage an archaeological site simply because the potential for archaeology was not identified at resource consent stage – the stage when through consultation with the NZHPT and NZAA alternative plans could have been made to avoid damage and protect the site.

A common issue that I face as Central Region Archaeologist are developers or their consultants dismissing any possibility of encountering archaeological material. The most common reason for ignoring the possibility of encountering archaeological material is because there are no recorded sites on the subject property or there has been subsequent development on the property. In centres such as Wellington where there has been development activity both before and after 1900, the possibility cannot be ignored as it is common to find remnants of archaeological material, for example Te Aro Pa (see below) or wells beneath post 1900 buildings.

9.2 Issues of Age, Significance and Ignoring Archaeological Potential

As New Zealand is a young country in terms of human settlement its archaeological record is not as substantial or as long as in Europe or the Americas. By comparing New Zealand's archaeological record to Europe, the Americas or Egypt many people then perceive that New Zealand's archaeology is less significant.

In particular, middens are commonly disregarded and thought dispensable because they do not contain objects which are recognisably archaeological to a lay person. Among those slightly better educated about archaeology there is also a common belief that because middens are our most abundant type of archaeological site, and because superficially they all look the same, that they are not as important as, for example, a *pa* site. Therefore, while middens may be the most prevalent form of archaeological site in New Zealand they are the most disregarded and threatened and this is enhanced further due to other factors such as coastal development and erosion.

9.3 Restoration and Preservation in New Zealand.

In my position of Central Region Archaeologist I have not been involved in any restoration activities, which perhaps reflects the fact that restoration of archaeological sites is not widely undertaken in New Zealand. One such recent restoration project is that of Plimmer's Ark, a late nineteenth century wharf structure and ship that were found under a central business district building, the Old Bank Arcade, on the corner of Lambton and Customhouse Quays in Wellington. Plimmer's Ark was a wrecked ship which had beached and was used as a floating market in the 1840s. The wrecked ship was subsequently built on in the 1860s and forgotten about. It was not until renovations were undertaken

on the building in 1997 that it was rediscovered. Some of the remains are preserved inside the Banks Arcade building while others were taken off site for ongoing timber conservation treatment.



Figure 14. Remnants of Te Aro Pa (photo Bruce McFadgen)



Figure 15. Conservation of Te Aro Pa (photo Dean Whiting)

Another recent Wellington example involved a Maori *pa* site which was located beneath a twentieth century building in the central city. The early twentieth century building was removed to make way for an apartment building that was to also have an underground car parking. When the remnants of Te Aro Pa were encountered NZHPT went into discussions with the developer and Wellington City Council, as well as local *iwi*, to ensure the preservation and retention of the remains. Preserving the site was expensive and in lieu of underground car parks Wellington City Council allowed the developer to add more floors to the apartment block.

Both these of examples represent sites that were preserved due to the developers realising the importance of the sites and working with the NZHPT and their consultant archaeologists to develop an appropriate heritage solution. Restoration and preservation are expensive and often there are not the funds or even the skills to undertake such projects.

9.4 Coastal Erosion/Climate Change and Development

The majority of New Zealand's archaeological sites are located on the coast and coastal development and the coastal erosion associated with climate change pose serious problems.

In my role there are three particular coastlines where I have seen development occur which has seriously impacted on the archaeological nature of the area. The first area is the Kapiti Coast on the West Coast of the lower North Island just north of Wellington. The Kapiti Coast is made up of extensive dune systems with a large number of recorded midden sites. In recent years coastal development of lifestyle blocks has seriously compromised the integrity of the archaeological landscape the dune systems.

In the last couple of years subdivision and development have also started to occur along the Wairarapa coast. The Wairarapa is located on the opposite coast to Kapiti and the two areas are very different. Unlike the Kapiti Coast the Wairarapa's landscape is made up of steep ridges, large gullies and thin coastal strips of flat land. The area is characterised by its large isolated farms, is extremely rocky and the topography is steep. The Wairarapa has some of the most important horticultural sites in New Zealand including Waikekeno, which is a *pa* and horticultural site.

Evidence of *pa*, pits, terraces, garden features and middens can be identified along this coastline. In recent years many of the farms along this Wairarapa coast have started to be subdivided and sold off. A high number of archaeological sites are located on the flat lands or lower hills where the majority of subdivisions are proposed, meaning that the effects on archaeology will be high. Unlike the Kapiti Coast, the Wairarapa sites are obvious in the landscape. Often landowners will make an effort to avoid known archaeological sites, but the issue lies in the fact that the subdivisions will introduce more people into these areas, and it is the actions of people which most often adversely affect archaeology.

For example, a larger population requires increased facilities, such as roading and services, in order to make the area more accessible. The situation in the Wairarapa highlights the prospect that as New Zealand's population grows the demand for places to live will also increase. This will undoubtedly place pressure on New Zealand's coastline and severely impact on coastal archaeological sites.

Golden Bay, Pohara and Tata Beach on the Tasman Bay Coastline, at the top of the South Island, have a history of extensive Maori occupation. Like the Kapiti Coast this area also has extensive dunes and many marine resources that Maori would have utilised. The difference between the two coastlines is that the Tasman Bay coast features many small settlements consisting of holiday homes, and parks, which are popular summer holiday locations. Many of the post 1900 settlements along the Tasman coast correspond with archaeological sites consisting of middens, occupation material, burials and horticultural soils. Therefore, every time a person wishes to do ground works at their holiday property they need an archaeological authority to damage, modify or destroy the archaeological site that their house is on. This creates another issue in the fact that not only are the archaeological sites damaged by people living on top of them the information retrieved from the archaeological work undertaken on these sites are very piecemeal. This issue will tie with the issues between research archaeology and consultancy archaeology which will be discussed below, but first I wish to discuss coastal erosion and sea level rise.

In relation to New Zealand's coastline a second threat to archaeological sites are the phenomena of coastal erosion and climate change. Erosion has been an identified problem for years but it has only been recently that the issues of erosion and sea level rising have started to be fully addressed. In a recent article Campbell and McGovern-Wilson (2009) note that possibly up to 10,000 archaeological sites in the coastal zone are under threat if the sea level starts to rise. A sea level rise of 1 m will destroy dunes systems such as those found along the Kapiti Coast and Tasman Coast, while a sea level rise of 5 m will destroy all early period Maori archaeological sites, as well as affect those associated with early European settlement.

In Southland, located at the bottom of the South Island, a project known as the Southland Coastal Heritage Inventory Project (SCHIP) is presently being undertaken to record and note the effects of erosion and identify appropriate steps to manage archaeological sites being affected by erosion (see Brooks *et al* 2008, Egerton and Jacomb 2009, and Jacomb and Walter 2005 for an in-depth description of the project). SCHIP also actively carries out the proposed management for each of the archaeological sites identified in the project. In my region there are two sites which have been identified as being actively eroded away. One site is a midden in Ngawi in Palliser Bay (recorded as S28/187 under the NZAA site recording scheme) and the other is a registered *wahi tapu urupa* (burial) and midden (recorded as Y19/109 under the NZAA site recording scheme) located at Mahanga Beach in Wairoa. Recent site visits along the Wairarapa coastline have also identified archaeological sites

suffering from active erosion as well as sites that have completely been eroded away. Further research into the issue of erosion and sea level change and its impact on archaeological sites in New Zealand needs to be undertaken. The threat to our coastal sites due to environmental impacts needs to be understood and decisions made on how to manage the situation and loss of cultural heritage.



Figure 16. S28/186 eroding midden (photos Kathryn Hurren)

9.5 Research Archaeology versus Development Archaeology and the Issue of Standards

The final item that I wish to address with regards to New Zealand is a long standing issue that has to some extent been addressed by the NZHPT through the creation of a National Research Framework in 2007. Based on a difference in the driving agent, there are two types of archaeological work in New Zealand. One is the research driven archaeology, usually directed from either the University of Otago or University of Auckland, while the other is development driven archaeology. The difference between the two is that with research driven archaeology there are clear aims, methods and research questions to be answered. The excavation is clearly thought out, planned, and undertaken in a careful manner.

Development driven archaeology is in response to developmental pressure. Archaeological work undertaken in developmental driven circumstances usually involves working under rough conditions with a digger and construction crew waiting, not always patiently, for the archaeologist to do their work. The archaeological work is usually undertaken quickly and without any forethought on what may be encountered and how the archaeological material should be excavated. Reports that come from development driven excavations are sometimes nothing more than a description of what was encountered, with minimal interpretation. These types of excavations, and the reports generated from them, provide little information of value. Therefore because in most cases these reports are the only record of what was once there, valuable information on the past of New Zealand is being lost. There is also to a degree an issue of standards of some archaeologists work.

This is obviously of concern and NZHPT has taken steps to regulate the level of information that consultant archaeologist and developers should be providing. Research archaeology excavations are usually financed and budgeted for, however, developmental archaeology faces the problem that developers do not want to spend any more money than necessary and there is constant discussion on what is reasonable for a developer to pay for and what is the bare minimum of archaeological work that is acceptable. Many developers do not see why they need to pay for the archaeological work and are constantly disputing it. They believe that because the government is imposing these rules and it is considered a public good then the government and the public should pay.

In relation to standards of archaeological work there is no professional archaeological organisation to govern and manage archaeological work in New Zealand. Even though the archaeological community is small there is a varying degree of work ethic and standards. The standard of work can reflect the skills and knowledge of the archaeologist or the type of job being working on. In relation to skills and knowledge today few students are coming through the universities with the practical skills they need to obtain work in archaeology due to limited field opportunities or because they are not able to take advantage of opportunities due the necessity of working to fund their education during university holidays. And the professional agencies, such as the NZHPT, are not providing formal on-site training as would be expected with any other professions, such as medicine, architecture or law.

10 Measures Needed to Combat Problems of Culture Heritage Protection and Restoration Activities in New Zealand

Funding for the preservation of archaeological sites is a key issue that needs to be addressed. Often archaeological sites are preserved by the grace of the developer or landowner understanding the importance of the site enough to bear the cost of preserving the site by relocating their development. This is not often the case if the developer is not sympathetic to archaeology or heritage in general. The issue of funding is a critical one and ideally the New Zealand Government should put money forward to help fund the restoration and preservation of sites of national significance.

Another key to addressing the problems being faced in New Zealand regarding the restoration and preservation is to better educate people in New Zealand about its history and the significance of what we have in order that they gain an appreciation for its importance. This can be achieved with more education via the school system, by council initiatives, as well as through the NZHPT. In this way attitudes may change, and archaeology might begin to be widely recognised as a public good and asset, and not merely as a hindrance to development.

Another way to help protect archaeology is through the introduction of more incentives for landowners who have archaeological sites on their property. Currently the NZHPT has an Incentive Fund, however this is targeted towards Category I historic places. While a number of archaeological sites are

registered many of them are not Category I and thus are not eligible for funding. Even for archaeological sites that are Category I applications for funding are low. An incentive fund set up for only Category I archaeological sites would undoubtedly motivate and aid owners to preserve these places.

The RMA needs to tighten its provisions regarding heritage and councils need to be more active in the identification and assessment of impacts from development on heritage. An alignment of RMA and HPA processes needs to take place with the RMA linking to the HPA. Councils need to list important archaeological sites in the District plan and incorporate “alert layers” in their GIS systems for archaeological sensitive areas. Councils should have heritage advisors who can act as a link between NZPT.

A rolling date of 50 years should be applied to archaeological sites as opposed to having a cut off date of 1900. This means that important heritage and archaeological sites that post date 1900 will be protected under law without the need of gazetting and the issues surrounding proving whether a site is pre or post 1900 will no longer occur.

In my opinion the protection and restoration of archaeological sites in New Zealand would benefit greatly from a professional archaeological organisation being formed. Such an organisation could regulate the standard of archaeological work by accrediting archaeologists based on their skills and education. Mentoring for students entering the archaeological field could be a stipulation of accreditation, as well as attending archaeological workshops, such as those run by the Profession Development Cell.

11 Conclusions

My discussion has demonstrated that while steps have been made, there are clearly problems that need to be addressed in order to improve cultural heritage protection and restoration in New Zealand. I argued that the problems in the restoration and preservations of archaeological sites in New Zealand have to do with two major issues. The first is the perceptions and attitudes of many New Zealander’s towards archaeological sites and the second is the implementation of the legislation. Archaeology is a finite resource and once it is gone then it is gone. It would be a shame for New Zealanders to only realise the importance and uniqueness of our heritage when it is too late. The many issues surrounding cultural heritage protection in New Zealand are not easily solved and the biggest hurdle is the lack of knowledge and understanding of New Zealand’s history feeding into attitudes of the general public, councils, as well as the New Zealand Government. If people’s understandings were changed so that heritage and archaeology were looked upon as cultural assets, then better protection, as well as funding, would be more forthcoming, and I have tried, based on my experience, to point to ways through which this could be achieved.

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Pakistan

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Problems and Needs for Cultural Heritage Protection and Restoration Activities and Our Experience in Pakistan

Introduction: The Archaeological Heritage of Pakistan

Pakistan possesses a rich cultural heritage extending back in time to one of the earliest known manifestations of urban civilization. Its immovable cultural property comprises prehistoric burial sites, Buddhist settlements, monasteries and stupas, and Hindu temples, while the Islamic period is represented through grand mosques, tombs, graveyards, forts, palaces, gardens and *baolis* (step wells).

The archaeological sites and monuments represent landmarks in the progress of human civilization and constitute an invaluable heritage of mankind. Pakistan is one of the most ancient lands with early advanced civilization in the world. It is also the birth place of advanced and famous cultures and enjoys a long and almost uninterrupted history of splendid culture. The traces of human activity during the Paleolithic period in the Soan region of the Pothwar Plateau, the remains of the Neolithic period at Mehargarh in Baluchistan and of protohistoric urbanization in the Punjab, Sindh and NWFP, bear eloquent testimony to the habitation of Pakistan by ancient man. The early historic and medieval periods also witnessed the growth of many civilized peoples who inherited this region. The ancient civilizations that flourished here have bequeathed the country with valuable historic monuments and rich archaeological sites, which form the heritage of Pakistan.

The soil of Pakistan is very fertile for the promotion of tourism as its cultural heritage is rich and varied. Here flourished one of the oldest civilizations of the world, known as the Indus Valley Civilization. It was followed by the culture of Gandhara, flourishing here from the first century BC to the seventh century AD, and concrete impressions of man and civilization, and then by the Mughal's rule during the sixteenth to eighteenth centuries.

Due to extensive archaeological surveys, as well as excavations and exploration, a large number of cultural materials have been unearthed which testify to the uniqueness of cultural tourism in our country.

At present 402 historical and archaeological sites/monuments are declared “Protected Antiquity” under the terms of the Antiquities Act, 1975, by the Department of Archaeology and Museums, Government of Pakistan.

The following are archaeological sites and monuments inscribed on the World Heritage List maintained by UNESCO.

1. Archaeological ruins at Taxila
2. Archaeological ruins at Moenjodaro
3. Shalamar Garden and Old Fort at Lahore
4. Takht-e-Bahi and Sahra-e-Bahlol, near Mardan
5. Islamic period monuments at Makli Hill, Thatta
6. Rohtas Fort, Jhelum

There are ten monuments declared as “National Monuments” under the same Act, for their importance to the nation, and these are as follows:

1. Allama Iqbal’s Tomb, Lahore
2. Mausoleum of the Father of the Nation, Karachi
3. Ziarat Residency, Quetta
4. Wazir Mansion, Karachi
5. Khaliq Dina Hall, Karachi
6. Javaid Manzil: (Allama Iqbal Museum, Lahore)
7. Prof. Dr. Abdus Salam’s House at Jhang
8. Islamic Summit Minar, Lahore
9. Quaid-e-Azam House Museum, Karachi
10. Mohatta Palace, Karachi

The Cultural Heritage of Ghandara

Pakistan is the country where the world famous Gandharan art originated and developed in the region of Khyber Pakhtunkhwa province and the city of Taxila. Even today, it retains its charm and attraction for people from all parts of the world. Lying on the west of the mighty river Indus, the ancient land of Gandhara comprises the Peshawar valley and areas in modern-day Swat, Dir, Buner, Malakand, and Bajaur, and it has been one of the most celebrated holy lands of Buddhist piety and excellence. At times, it also included the area now situated around Rawalpindi and Taxila to its northwest, and extended up to the south of modern Kabul. Due to its geographical position it had an important link with the ancient caravan route which served as a commercial and cultural medium between China and

the West. A renowned French art historian has described Gandharan art as a “Greek Buddhist art” created by artisans of Greek and Buddhist parentage.

Archaeological interest in the investigation, research, and preservation of Gandharan sites was initiated in the nineteenth century when a number of stupas or monasteries were excavated. Sir John Marshall excavated at Taxila where he unearthed dozens of Buddhist stupas and monasteries. The excavations not only brought to light various Buddhist monastic establishments, but also resulted in the discovery of thousands of beautiful pieces of Gandharan art. With the establishment of Pakistan, interest in the study and investigation of Gandharan art and archaeology intensified, mainly due to the research work of two foreign archaeological missions, one Italian and the other Japanese. While the Italian Archaeological Mission worked mainly in Swat (a region in northern Gandhara), the Kyoto University Archaeological Mission from Japan carried out archaeological excavation at Shahbaz Garhi, Chaneka Dehri, Maeka Sanda, Thareli, Ranigot, etc., in the Mardan District (the central region of Gandhara) from 1983 to 1995.

The area of Gandhara is the veritable homeland of the Indus period sites and Buddhist art and cultures. During the early centuries of the Christian era they were virtually filled with Buddhist establishments in the shape of stupas and monasteries representing the finest phase of Buddhist architecture. These religious establishments were adorned with statuary as well as innumerable panels and friezes depicting various types of Buddhist imagery. However, the art disappeared first due to the revivalism of Hinduism, and later due to the onslaughts of the White Huns. The stupas and monasteries were turned into mounds. Since the latter half of the nineteenth century these mounds have been subjected to excavations for the purpose of research and collecting statues, friezes and panels. These antiquities have filled the galleries of various museums both in the country and abroad. We have several museums in Pakistan dealing with this aspect of Pakistani art culture.

Gandhara, although already well known, is still an object of amazement and admiration for people today. It was the cradle of the Buddhist civilization in ancient time, which gave birth to the famous Gandharan art in its fertile plains and mountains. This Greek-Buddhist art in stone, terra-cotta and bronze has attracted many pilgrims, scholars, students, and tourists from all over the world. The ruined Buddhist shrines, which stand as memorials to the bygone splendour of the region, are numerous and varied in their composition, spreading over a vast area of the bewitching land of Gandhara. Unfortunately, the tides of time, the indifference of man, the abuse at the hands of invaders and treasure seekers have all damaged and destroyed these cultural remains of the glorious past of the region. However, a large number of Buddhist sites still exist in this area. Sirkap, Julian, Mohra Moradu, Bhir Mound, Pipplan, Dharmarajika Sirsukh and Jandial are the most important sites in the ancient Gandhara region (Taxila section).

Taxila: Showcase of Ghandaran Culture

Taxila is one of the oldest living cities on the subcontinent. Its origin lies buried in the mysteries of the Neolithic Period. Ever since then it appears to have a continuous history of waxing and waning importance during various stages of its existence. Even today, Taxila is a flourishing town surrounded by numerous ancient abandoned settlements representing its earlier periods. It is perhaps the only ancient city which finds favourable mention both in the earliest oriental literature – *Mahabharata* and *Ramayana* – and in western sources, namely the works of Greek historians and geographers.

Nevertheless, full light on the history of Taxila did not emerge in just one day, one year or one decade. Human labour and scholars' sweat of more than three quarters of a century have gone into making the name of Taxila glow once again as it did during the first millennium BC, if not earlier. The history and cultural richness of Taxila Valley during the early historical period (sixth century BC to the fifth century AD) is well known to the world through the excavations of Sir John Marshall, carried out between 1913–1934. R. E. M. Wheeler resumed the work of Marshall for a single season in 1944. However, it was left to Marshall's successors in Pakistan to take up further investigations in the 1960s with renewed vigour and zeal. Whereas excavators like Dr. M. Sharif, M. A. Halim and G. M. Khan unravelled through their excavations a hitherto unknown antiquity of this city, scholars like Dr. A. H. Dani, Dr. M. Nazimuddin Ahmed, and Dr. Saifur Rehman Dar have contributed through their writings much more on various aspects of it. These efforts and attempts of excavators and scholars have pushed the history of Taxila back to at least four thousand years and placed this city at the threshold of civilization. Traces of history of still earlier periods are also coming to light. At that time, small but permanent human settlements were being established and early forms of social organization had begun to emerge.

The Taxila Valley is on the World Heritage List because of the numerous monuments that lie in the Margala-Taxila region dating from the Neolithic to the seventh century AD. In isolation, many of the individual sites are not particularly significant, but it is the interrelationship between them all that makes Taxila such an important area.

Taxila has been inscribed on World Heritage List for its potential of cultural heritage scattered over an area of about 10 kilometres along the Taxila Valley. These remains range from the third millennium BC to the eighth century AD. There are two prehistoric sites (Sarai Khola and Hatial), the first city of Taxila (Bhir Mound, 600–200 BC), a Greek city (Sirkap 200 BC–200 AD), and the Kushan city of Sirsukh (200–500 AD). Besides these cities there are numerous religious monuments of the Jain cult, Buddhist stupas and monasteries, and a unique Greek temple.

Since these remains were uncovered under Sir John Marshall's guidance in 1913–34 and later that of Sir Mortimer Wheeler, Pakistani researchers (Dr. M. Sharif, Mr. M. A. Halim, Mr. M. Bhadur Khan, Dr. Ashraf Khan) have also carried out large scale excavations in the area. Besides these archaeological excavations, more recently there was a South Korean mission headed by Prof. Moan (Julian II, 2003–2004), but after the remains were exposed their maintenance became more and more difficult, for various reasons.

It is necessary to know the actual methods of construction adopted in Taxila during ancient times. These can be divided into the following two phases.

1. **Phase I.** Houses and structures of all types were built of rough rubble masonry in mud, with a facing of mud or occasionally lime plaster to strengthen the surface. Such structures possessed little stability and when shaken by earthquakes readily collapsed. This tradition was dominant locally, but after the invasion of the Greeks the style and shape changed. At the top level (VI) of Bhir Mound, an early style of Greek structure was found that came into use after the destruction of Bhir in the second century BC.
2. **Phase II.** When the Greeks established themselves they introduced more dependable and sturdy masonry at Taxila, especially during their first experience at Sirkap city. They began by casting around for a more stable kind of masonry, and since the local limestone was too flint-like and intractable to be chiselled into squared ashlar, they had recourse to a type of construction, fashionable on the other side of Indus and proved by experience to be far more durable than ordinary rubble, in which limestone blocks were dressed on the outer and perhaps under surfaces only, and once set in place, their interstices filled with smaller bits of stone. Secondly they reduced the height of buildings and took special precautions to make their foundations secure. Their dwelling houses were limited to two stories only, the lower one of which was in the nature of a basement buried to more than half its height underground.

Cultural Heritage Protection Issues Illustrated at Taxila

Here we can summarize the primary problems confronted by the exposed remains at Taxila. These are very common, but have not been properly studied and adequately sorted out. Due to their simplicity, researchers have not been motivated thus far to conduct such study, and accordingly no proper and realistic actions have been taken.

1. **Open air remains.** All the archaeological remains of Taxila Valley are open air, scattered in mountains and some on plain areas. These are directly affected by climate and natural agents. The city sites like Bhir Mound and Sirkap were so large they could not be provided with

proper measures for safety, and only a few stupas such as Dharmarajika, Julian, Pippla and Mora Moradu have been provided with wooden roofs for this purpose and saved. Mainly, remains are exposed to the heat in summer and heavy rains and moisture in winter. Especially in the monsoon season when heavy rains fall on open air sites like Sirkap, rainwater runs through the main streets of the city and washes out the protective layers of the remains, so after such rains archaeological remains in Taxila valley are badly in need of more care.

Large-scale remains, especially in Sirkap and Bhira Mound, collect heat in summer. Temperatures at the sites increase more than in the surroundings, because of the limestone used exclusively for construction in Taxila valley in olden days. When the sun's rays strike the limestone boulders, it raises their temperature and badly damages the material, causing it to crumble and crack. Because of the openness of the sites, the temperature ranges required by the archaeological remains cannot be maintained. This also causes a cycle of expansion and shrinkage of the walls in summer.

2. **Deterioration of the structures.** When archaeological structures are buried under the soil for hundred of years, relatively stable temperature and climatic conditions are maintained, but once exposed through excavation they become open to the air and sky, and are directly hit by heavy sunshine and rains. The exposed walls after some time became weaker, as piles inserted to adjust the boulders loosen and fall out, boulders disintegrate, and walls start to crumble and fall down. Also, as mud was mostly used for mortar within the interior parts of the walls, when the heavy rains start, rainwater slowly washes out the inside mud layers that were used to maintain and balance the structures. Once the mud layers wash out, the structure becomes hollow from the inside and become weaker.
3. **Authenticity.** When visiting the archaeological remains in Taxila valley, generally people assume what they are seeing, such as different styles of masonry, are the forms as originally built and used. This hypothesis is incorrect, as actually what is left is the inner core of the structures. Roofs have collapsed, and the plaster applied on the walls has perished, with only rare patches of the original plaster still existing at different sites. Mud was mixed with chopped straw in order to bind it together. On Bhira Mound, traces of lime plaster were not found. It is most likely that use of lime plaster started after the advent of the Bactrian Greeks in Taxila valley. Stucco was composed of coarse river *bajri* and lime (as described for Sirkap by John Marshall in *Taxila*, vol. 1, Cambridge University Press [1952], p. 179). It was applied on a thick coat of mud at the Block K palace. Signs of red and black paint were also visible. It was one of the reasons why so much stucco had fallen off, but at Julian and Mora Moradu it was directly applied on the core of the walls and remained preserved. For economical

purposes stucco was applied on mud plaster to save the extra use of stucco for the rough facing of walls to level up the inequalities in the walls before the lime plaster was applied.

Accordingly, most scholars did not recommend the re-plastering of walls as originally done in past. They prefer to keep the wall structures as exposed, without plaster that was the only safety measure against the natural agents like rain and scorching heat. In their original state, the present walls of archaeological remains had thick layers of plaster mixture of lime plus kanker applied. It was a layer protecting against all kinds of natural agents such as rain and heat.

For these reasons we have lost a lot of cultural heritage and are depriving our future generations from experiencing the actual heritage remains. In developed countries of world like Japan, cultural heritage is mostly reconstructed and consists of reproduced versions of the structures initially made. We can preserve and present remains better than at present by applying similar types of plaster which will not only save the structures from climatic affects, but also provide opportunities for developing new techniques.

4. **Uncontrolled plant growth.** In the early days, layers of mud were applied after excavation over the top level of the exposed structures to maintain their look and colour. Later this speeded the growth of natural vegetation in and around the structures. This growth included wild grass locally known as *dab*, having roots penetrating up to several meters into the soil and the remains. This penetration of *dab* into the structures expands the external surfaces of the remains and causes dangerous deterioration. The growth of trees was at first overlooked for the sake of the shade provided for the open-air sites, but later these trees grow large and get out of control, directly damaging the archaeological remains. The roots of the trees penetrate the structural features, defacing and damaging them.

Measures to Alleviate Heritage Protection Problems

A few suggestions for measures to help counter the above problems of heritage protection are as follows:

1. **Strategic limited covering.** It is understood that we cannot cover large open air sites like Bhir Mound or Sirkap, but we can protect the existing original plaster layers locally by provision of appropriately designed sheds. Such sheds should be translucent to permit the passage of light and brighten the view. They will save the structures from the wind, rain and other outside agencies. Such sheds should not dominate the surroundings and main body of the monument.

2. **Appropriate applications of plaster.** We must apply plaster at the exposed structures using material similar to the original in specific areas and structures. In the future, this will help keep the original core safe and wild growth and deterioration processes will be slower than at present. Especially structures of *kanjur* stone need more attention for the softer and more porous nature of this material. The beautiful carvings and their detail can be highlighted by such applications of stucco layers as originally done in past. This will save the structures from wild growth, and their inner cores will remain safe as originally built. In Sirkap, Stupas in Blocks A, D, E, and F can be adorned with such kinds of plaster and preserved in their original forms.
3. **Drainage systems for rainwater.** Open air sites, especially in cases like Bhir Mound and Sirkap, might be provided with hidden drainage systems, because in winter and the rainy season the heavy rains hit the entire site and develop flood-like conditions in the main streets when the rainwater has only a limited means for escape, such as through the northern main gate of Sirkap city. The resulting heavy flow of rainwater badly damages the structures. In Sirkap, Main Street is the best space for laying this kind of drainage system. Bhir Mound, Dharmarajika, and many other archaeological sites need such drainage systems, and where this is difficult the site may be given an evenly level surface, so that the rainwater can drain away slowly and naturally without eroding the remains.
4. **Compacting the ground.** To stop natural plant growth on the floor levels, compaction is the only way to resist wild growth especially of grass. The present surface level is actually the deposit of years of dust and soil, so it may be removed and an appropriate layer of lime mixture also utilized before compaction of the floors. To preserve the current sense of aesthetics, only controllable growth of grass may be allowed on the site.

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Problem and Needs for Cultural Heritage Protection and Restoration Activities in the Philippines

1 Introduction: The Heritage of Archaeological Sites

Heritage is defined as a ‘description of a physical entity, broadly shaped by human action’ (Skeates 2000:9). It can also mean an ‘expression of meanings, values, and claims placed on that material, particularly as an *inheritance*’ (Skeates 2000:9). The National Commission for Culture and the Arts in the Philippines has defined cultural heritage as ‘all the beliefs, values, practices and objects that give a place its own specific character’ (NCCA 2007:1). Cultural heritage can be intangible or tangible. For this paper, I want to focus on tangible non-movable objects such as archaeological sites, landscapes, and built heritage. Built heritage includes ‘buildings, clusters of related buildings, and towns’ (NCCA 2007:1).

Heritage is a concept that is difficult to comprehend unless there is corresponding evidence that easily reflects the associations of a particular group of people. For some, heritage is an aspect of culture that gives identity to a population. This could be a custom or tradition that continues to be practised by the population in the present because it promotes the survival of their group’s socio-cultural identity. Heritage can be a structure, monument or object institutionalising the group’s identity. It can even be a belief whose significance has been lost yet still serves as a symbol of a group’s glorious past. A country’s heritage is difficult to qualify for reasons such as inhabitants having diverse ethnolinguistic and religious affiliations, shifting political boundaries, and past and present political conditions creating and establishing social divisions. Friction or violent clashes may sometimes erupt if a symbol of one’s heritage is literally or figuratively stolen, vandalised or destroyed.

Since my background is in archaeology, I will be discussing the heritage of archaeological sites. In archaeology, heritage may include a site, a monument, or an artefact that stands as a testament to a people’s antiquity, origin, or history. Cultural and natural events threaten archaeological heritage. An effective archaeological heritage management is imperative in order that the present and succeeding

generations may have the opportunity to experience and appreciate their past. The sites and artefacts considered in this paper are part of research projects that I am or have been a member of or headed. The issues I will discuss here will not dwell on the familiar problems of funding, lack of technology in preservation, conservation and protection of sites and artefacts. I am very much aware that these are important in heritage management. But I think that there are other, underlying concerns that obstruct heritage management.

Skeates (2000:9-10) has defined archaeological heritage as ‘material culture of past societies that survives in the present’ and the ‘process through which the material culture of past societies is re-evaluated and re-used in the present’. In the process of discussing the specific problems and needs for cultural heritage protection in each site, I will also address the issue of site perception. I propose that cultural heritage protection is greatly dependent on how various sectors perceive sites. There should be unity in the perception of sites among different sectors to agree on how to manage heritage sites. However, the process of re-evaluating sites is what makes archaeological heritage a politicised field.

2 Case Studies of Archaeological Sites

2.1 Lumban

Lumban is an important site as the likely provenance of the Laguna Copperplate Inscription (LCI) (Figure 1), one of the few artefacts with inscriptions found in the Philippines (Figure 2). Although treated as a National Treasure, the LCI was not found in a secure archaeological context. At present, there is still no archaeological research conducted in this area despite its seeming importance as an archaeological site (Barretto-Tesoro in press a, in press b). Treasure hunting in the 1960s in this area had revealed the presence of extensive burials (Locsin and Locsin 1968). In the 1980s, sand quarry workers had recovered ‘coins, gold ornaments, stones adzes, small clay and porcelain artefacts, jade ornaments’ from the Lumban river (Villegas 1990) where the LCI was found. There is a lack of information on the archaeological importance of the Lumban area (Barretto-Tesoro in press b) among local residents. Lumban could have been a centre of power and trade in the tenth century AD. It was most probably part of a political alliance which included Tondo, Pila, and Binwangan (Barretto-Tesoro in press a), based on recent decipherment of the inscriptions (Tiongson in press). Quarrying continues, threatening the archaeological resources in the area (Figure 3). As mentioned above, the LCI’s exact provenance is still unknown but the presence of burials along the Lumban-Pagsanjan riverbanks point to the LCI’s most plausible context. If river dredging and sand quarrying persist, archaeologists and other scholars may not be left with anything to evaluate.

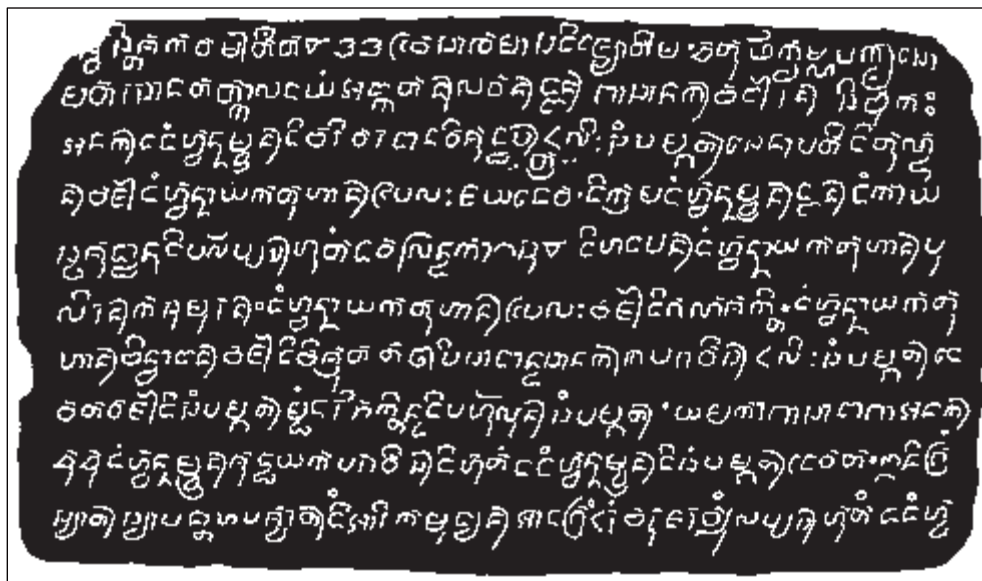


Figure 1. The Laguna Copperplate Inscription

(Source: http://en.wikipedia.org/wiki/Laguna_Copperplate_Inscription)



Figure 2. Map of Laguna showing Lumban in relation to the Manila area

(Source: http://en.wikipilipinas.org/images/6/69/Ph_locator_laguna_lumban.png)



Figure 3. Sand and gravel quarry in Pagsanjan-Lumban River, 1929
(Source: Philippine Photographs Digital Archive of the University of Michigan)

2.2 Batangas

My work in the south-eastern part of Batangas began in 2008. I am interested in the nature of archaeological resources in this section of Batangas as most sites archaeologically investigated are located in the western regions of the province (Barretto-Tesoro et al. 2009a). In 2008, five municipalities were visited as part of the survey. We surveyed mostly coastal areas. In 2009, one of the sites recorded the previous year was excavated as part of the University of the Philippines-Archaeological Studies Program (UP-ASP) annual field school. I was assigned to supervise the field school for three years from 2009 to 2011. A stone structure identified as a house was excavated for two field seasons in 2009 (Barretto-Tesoro et al. 2009a) and 2010 (Barretto-Tesoro in press c). Next year, I hope to excavate another probable stone house. To complement the 2008 survey, we conducted another archaeological exploration in inland communities in 2010 (Barretto-Tesoro 2010).



Figure 4. Map of Batangas showing San Juan municipality
(Source: http://en.wikipedia.org/wiki/San_Juan,_Batangas)

I will highlight below two sites in Batangas that I deem are in immediate need of heritage protection.

Virgin Resort Cave Site, Barangay Laiya Aplaya, San Juan, Batangas (Figure 5). This site was surveyed in 2008 (Barretto-Tesoro et al. 2009a). The cave was perhaps hidden from view until resort development in the area revealed it. Interviews with locals suggest that the looting of the cave coincided with the construction of the resort. Reports imply that the cave was a burial site. The locals used wood from the coffin for firewood. The site is significant as we found human bone fragments, shell beads, and pottery (Figures 6 and 7). The artefacts exhibit designs associated with the Late Metal Age (250 BC–500 AD) in other sites in the country. If we believe what the locals say about the wooden coffin, it would be the first such archaeological evidence found in southern Luzon. Although wooden coffins have been found in other Philippines sites (Reyes 2010), the only evidence we have for coffin use in southern Luzon is found in written accounts (Scott 1994; Tenazas 1973). The Virgin Resort Cave Site is important because it hints at the possible spread of people, the kind of burial methods practised in the area, and the presence of early sites in south-eastern Batangas. It thus appears that ongoing resort development, housing projects, and road construction which are intensifying in the area endanger archaeological resources, which have the potential to increase our knowledge of the prehistory of Batangas.



Figure 5. View from the Virgin Resort Cave Site (Photo by A. Pineda)



Figure 6. Shell beads found in the Virgin Resort Cave Site



Figure 7. Pottery sherd of the Metal Age, from the Virgin Resort Cave Site

Structure A, Barangay Pinagbayanan, San Juan, Batangas (Figure 8). This is the site of the UP-ASP's 2009-2010 annual field school. When we first surveyed Structure A in 2009, I only saw a room with four stone posts. Subsequent visits revealed more features associated with the ruins. It was only during the excavations that we realised the true extent of the ruins. Structure A measures 29.60 m long north-south, 14 m wide on the north side, and 14.80 m wide along the southern side. The floor area covers approximately 438.08 m² (Barretto-Tesoro et al. 2009b). The house was made of adobe blocks cemented together with lime mortar. Archival records and artefacts recovered from the site indicate a date of mid to late 1800s to early 1900s. To date, Structure A is the first stone house archaeologically investigated. During both excavation seasons, the team also interviewed the locals to gather pertinent information about the house. We learned that the reason for the house's destruction was that the stones

were deliberately collected to be recycled. One of the owners of the house ordered that the stones be used in the construction of fish ponds. The neighbours followed and collected stones for use as stove stands, garden decoration, house foundations, and flooring among others (Barretto-Tesoro et al. 2009b). During the town's centennial celebration in the 1990s sections of the house's standing walls were cleared to make way for the procession. During the last two years as we worked on this site, the team was actively promoting the preservation of this heritage site among the locals. We visited people in their houses, invited them to watch us excavate, distributed information programmes, put up an exhibit, and delivered public lectures. Their use of archaeological terms in their conversations was a positive development by the second year. Thus, we were outraged and dismayed when an unexpected incident happened towards the end of the second field season. On the day of the backfill, we discovered that the *in situ* terra cotta floor tiles had been stripped off (Figures 9 and 10). One of the students, Kate Lim said it best, during the evaluation, by pointing out that 'the best measure of our success in the field is when the locals themselves protect the site'.

Barangay Pinagbayanan was the Spanish town's original location, before it was transferred 7 km inland because of constant flooding. Structure A is not the only stone ruin found in the community. Remains of the old church, municipal hall, and another stone house are found within the immediate vicinity of Structure A. The whole *barangay*, hence, is an archaeological site. Among the stone ruins, it is the old church that is relatively intact, perhaps because the owners of the site had it declared as a historical site by the National Historical Institute.

Many have researched early Spanish towns in the Philippines. These studies however are from architectural and historical perspectives. Our work in Barangay Pinagbayanan is thus the first Spanish town to be investigated using archaeology.



Figure 8. Structure A in San Juan, Batangas (view from the north)



Figure 9. Terra cotta tiles in Trench 5



Figure 10. Trench 5 after the terra cotta tiles were removed surreptitiously

2.3 St Michael's Church in Camiling, Tarlac

We surveyed this site (Figure 11) in 2009 (Barretto-Tesoro et al. 2009c). According to our contacts, some locals were planning to tear down the church to build a commercial structure. They sought our advice to assess the nature of the church for preservation purposes. The parish priest, at that time, said that there was no truth to the information. He was simply renovating part of the church that burned down to be used as a multipurpose hall. Our survey indicated the presence of original construction materials including stones, bricks, and wooden beams.



Figure 11. Map of Tarlac showing Camiling, location of St Michael's Church

(Source: http://www.aski.com.ph/images/map_tarlac_camiling.jpg)

The town of San Miguel was founded in 1833 and named after the patron saint, San Miguel Arkanghel. In 1846, the construction of the original church began. It was made of hardwood logs for posts, and bricks plastered together with lime. In 1849, the church was transferred to the west of the river due to flooding. The new church was built from 1849 to 1863. It was made of stone following the Corinthian style. In the 1880s, an earthquake destroyed part of the church. The walls were rebuilt using bricks instead of stone. During the 1950s, after World War II, the parish priest decided to restore the church. The wooden floor boards were exchanged for cemented ceramic tiles. In the 1970s and the 1980s, renovations and restorations continued. The main entrance was cemented, wooden beams were encased in plywood, ceilings were also covered with plywood, the church repainted, lights improved and fans installed. Another earthquake in 1990 destroyed the tower and caused cracks in the structure. Again the church was restored. In 1996, the chalice was stolen and never recovered. In 1997, a fire destroyed the church (Figure 12).



Figure 12. St Michael's Church during the 1997 fire
(Courtesy of Ms. Purita Y. Tañedo)

At the time of our visit, the church was not yet restored fully (Figure 13). The top of the church has been added to but not yet complete. Luckily, the original church structure is intact, including the main walls and buttresses, but the higher sections are new additions. We observed original church parts such as wooden posts and doors just outside the church (Figure 14). Workers collected bricks, most probably from collapsed walls or posts. Attached to this church is the convent, which appears to be Corinthian. Columns are found on the exterior of the convent, which is west of the church (Figure 15).



Figure 13. St Michael's Church with a reconstructed facade



Figure 14. Original doors and beams from St Michael's Church, showing evidence of burning



Figure 15. Original columns west of the church, made of plaster over brick
(Photo by Elle Lim)

The arcs on top of windows were also intact (Figure 16). We observed decorations near the original altar wall. Beam holes had evidence of wooden beams. Capiz shell windows survive on the second floor. The exterior pillars were also in good condition. We observed that bricks were used for the walls and posts which were then plastered. The town's elites used the yard west of the church as a cemetery. The tombstones were hardly visible, as sediments have accumulated on top. Unfortunately, the yard was full of garbage and excrement (Figure 17). Graffiti was also present.



Figure 16. Original brick walls of the church, with arcs above windows intact



Figure 17. Garbage inside the courtyard

Original building materials like beams, rafters, and doors that were burnt or damaged during the 1997 fire lie outside the church. Some of the original wood posts were recycled into a construction work table. Behind the convent was an extension that functioned as a baptistery. A new door was evidently built to connect the baptistery to the church, because we observed that instead of lime mortar modern concrete was used. Inside the church, the dome was unfinished. The windows were bare. The original windows on the first floor of the church were covered with iron sheets.

The convent annex is now used as classrooms. Although the roof has been replaced with galvanised iron sheets and the iron gates added, the wooden beams and brick walls were original. The beams in the former stable, now used as the parish priest's residence, were also original.

Due to the renovations, the mass and other spiritual services were held on the basketball court of the nearby school. Parishioners were able to save parts of the altar, bell, baptismal font, and a crucifix. The baptismal font, at the time of our visit, was buried in the garden and served as a flower box. Despite the battered appearance of St Michael's Church including the graffiti and the garbage, the main structure is in good condition (Figure 18). The major sections of the church were intact and should be conserved and protected.



Figure 18. Original buttresses of St Michael's Church

A local conservation group is advocating for the church's restoration but the greater majority are unaware of its historical and heritage importance. The church's sturdy structure still stands, despite the historical calamities and accidents it faced. There should be an exhibit in the vernacular detailing the church's history and how it was able to overcome the unfortunate incidents. Lectures on heritage preservation should also be shared with parishioners.

2.4 Angono Petroglyphs

The site of the Angono Petroglyphs remains controversial despite its status as a National Cultural Treasure (Figure 19). It was first excavated in the 1960s and again in the 1990s but its date continues to be debatable. Results of the initial excavations put the date of the petroglyphs to 3,000 BP. The petroglyphs are on the face of a rock shelter that measures 62.84 metres long and 4.68 metres high. The petroglyphs were engraved about 1-2 centimetres deep on the tuff deposit known as the Guadalupe Tuff. According to the original excavators, the engravings were made with a 'relatively blunt instrument and not with a metal edged tool for the grooves are not as clean cut as it would be with a metallic sharp edge' (Peralta and Evangelista n.d: 20). There are 127 individual engravings. There are 51 type figures which represent 78 of the 127 drawings. The rest have not yet been

determined. The vertical figures are outlined bodies, heads, and appendages. Peralta suggests that the drawings are of juveniles and part of a ritual process. Each engraving was photo documented, drawn to scale, and replicated through making a casting. The 1990s excavations did not come up with older deposits.



Figure 19. The Angono Petroglyphs

I have made an initial study on the petroglyphs, assessing their nature as archaeological data (Barretto-Tesoro 2008). I considered several parameters and applied them to the petroglyphs. These include chronology, degree of completeness or bias in the surviving material, and association with other archaeological and natural features. Unfortunately, the Angono Petroglyphs do not meet the parameters described in this earlier paper.

At present, the National Museum of the Philippines has built a local branch within the vicinity. The deck allows visitors to view the petroglyphs from a distance. However this view deck does not prevent teenagers and young adults from descending into the rock shelter and engraving their names in the tuff.

The rock shelter environment greatly affects the state of the petroglyphs. Therefore, researchers should consider the effects of humidity, temperature, acidity of the water, gasses, resident flora and fauna, and lithology on this kind of rock art. The critical challenge at the moment is how to preserve the engravings from weathering. No studies have been conducted so far to investigate the agents and rates of weathering. The engravings are exposed to sunlight, rain, wind, and human actions.

The Instrumentation Laboratory of the National Institute of Physics at the University of the Philippines, Diliman, initiated groundbreaking work under the leadership of Dr. Maricor Soriano. They were able

to prepare digital casts of the two major figures (Figure 20). This method is in its initial stages. It was first applied to paintings at the Vargas Museum at the same University. The physics team was able to determine the painters' brush strokes and hidden signatures. For the petroglyphs, they took photos of the large and distinct engravings under controlled light conditions. The physics team is interested in the development of the methodology, while as an archaeologist, I am interested in the data that can come out of this scholarly research. The depths of the engravings and cross-sections of grooves can be assessed using computer software. The 3-D image of the engravings can also be manipulated and rotated. This method allows us to preserve and protect the images without physically touching the rock shelter. Continual physical contact with the engravings also contributes to their weathering.

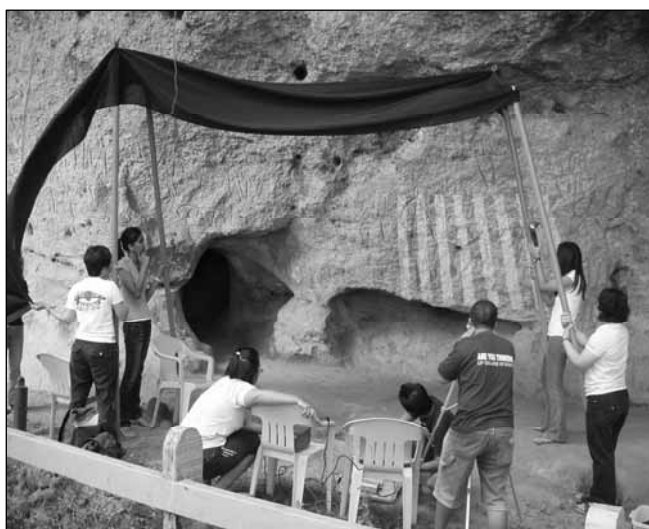


Figure 20. The National Institute of Physics, Instrumentation Laboratory staff with the author at Angono in 2008

2.5 Cemeteries

I head a project called *Philippine Cemeteries: Alive and Dynamic Spaces*. This began in 2008 when my class in Archaeology 241, "Mortuary Analysis," decided to conduct field trips to various cemeteries to investigate how the dead were treated. We also wanted to see through comparison if factors affecting burial practices in the past are the same as today. In addition, we wanted to determine if there are patterns that exist today which can be used to understand burials in the past. The objectives of this project include the following:

- a. To promote cemeteries as areas of archaeological, artistic, cultural, historical, and heritage studies.
- b. To disseminate information on the artistry and cultural significance of cemeteries.

- c. To integrate data from cemeteries with traditional sources of information on Philippine culture and heritage for a holistic approach.
- d. To view history from various perspectives, as multiple histories are evident from how burial structures were represented.

The research team has recognized the potential of cemeteries as sources of data for archaeological, cultural, and heritage studies. Unfortunately, cemeteries themselves are neglected. We have seen magnificent mausoleums, old chapels, and sculptures that need to be restored. Most of the cemeteries in the Philippines were constructed during the Spanish occupation (1521-1898). In addition, other notable cemeteries were those built in the early 1900s under American rule. We believe these cemeteries are repositories of cultural beliefs regarding the dead and how the living relates to the dead.

There are many cases of cemeteries that have grand stone entrances that are either badly maintained or not maintained at all. In some public cemeteries in Manila, the people have decided to take up residence in places for the dead. They have assigned themselves as caretakers of mausoleums and negotiated their stay with the families of the deceased. It is not uncommon to observe mausoleums and tombstones converted as house parts – as a wall, chair, dining table, bed, or room.

The presence of the living among the dead is also a topic that we are pursuing. Their living structures have already altered cemeteries as places for the dead.

I am proposing that cemeteries should also be considered as heritage sites. They may not have structures that can be seen as historical. Yet their architecture, particularly those of mausoleums, chapels, and styles of sculptures, can be treated as material culture. As products of human actions, we can consider how the living manipulates the dead to achieve a specific end. Thus, they are also venues of specific claims such as political statements, political strategies, ethnic ascendancy, status reinforcing, and identity manifestation. Therefore, people have different unconscious claims to their heritage. Although cemeteries are not commonly seen as heritage areas, the research team thinks otherwise.

3 Archaeological Impact Assessments

I have been involved with three impact assessments. The last one was from June to July 2010. This site in Manila is known as Sta Ana. Our investigation revealed the presence of at least two older structures belonging to the nineteenth century. The report has been submitted to the National Museum of the Philippines. The report details the excavation procedures, highlights the significance of the site

and recommends to the project proponent what it should do to protect it. If the project proponent is amenable to the consultancy's recommendations, then it modifies its plans to be able to accommodate heritage concerns. The Sta Ana case may be the first site in the Philippines that can be incorporated into the building design. In the past, key archaeological areas have been subjected to commercial development without the benefit of archaeological impact assessments. These have resulted in great loss of archaeological resources. It is through such assessments that big companies can help protect archaeological sites and preserve them for future generations to see. There still needs to be a lot of convincing for commercial companies to view site conservation as other than detrimental to their interests, but they can actually help in the preservation of the Philippines' archaeological past.

In conclusion, I want to highlight the great need for heritage protection in the Philippines. Little is known about the topic among the general public. Its discussion has been restricted to the academic community. Due to the profits that such sites can generate, Philippine towns have become active in the preservation of old houses and old churches in their areas. As these are tangible and known heritage sites, it becomes more difficult for archaeological sites. There are cases where support comes from the local government units which are favourable for us archaeologists since such actions are self-determined. I find it challenging to impose the same in some areas, as they do not see the direct benefits to their constituents. Aside from the common reason of lack of funds to support physical structures or a labour force to maintain and manage sites, there is a general inadequacy in understanding what heritage is and why it is important.

Terms and concepts related to archaeology and heritage are foreign to many people in the Philippines. Moreover, they are sometimes encountered in the popular media where such concepts have been tempered or altered. The media's glamorous and romanticised views have led the public to engage in disagreeable activities that damage sites. Active archaeologists in the country are fewer than 50 and we cannot handle all 7,100 islands. Thus, distorted views of archaeology and heritage exist because the media promote them. Such thinking needs to be transformed. Becoming involved in heritage work because it is viewed as a bourgeoisie pastime is not a theme inherent in the culture. Accordingly, it is the responsibility of cultural workers such as archaeologists to make heritage issues visible when conducting their research.

To dispel misconceptions, we must actively engage with different segments of society. We should translate the many meanings of heritage into ways it can be perceived. This should go hand in hand with concrete examples that people can actually experience and connect with. I believe that heritage can and will be meaningful to people if they understand that the benefits are beyond any monetary return.

Acknowledgements

Photos: Archie Tesoro, Anna Pineda, Elle Lim, Purita Y. Tañedo

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Sri Lanka

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Problems and Needs for Cultural Heritage Protection and Restoration Activities in Sri Lanka

Introduction

Sri Lanka is famous all over the world from the ancient period, due to its strategic naval links, and its being a centre of Theravada Buddhism and the production and export of tea, and more recently due to the ethnic conflict that prevailed for 30 years.

Moreover, in addition to the above Sri Lanka bears a rich natural and cultural heritage, bequeathed to the present generation. Previously, the concept of heritage was limited to architectural and archaeological heritage, and to movable objects. By today this concept has gradually stretched over time, and as a result, Sri Lankan cultural heritage now includes not only cultural landscapes, buried remains, the built environment, and settlements covering human development from prehistory to the present, but intangible elements as well, such as language, customs, and folklore, which are among the country's major tourist attractions. This broadening of the concept of heritage has helped to situate heritage in its context much better and thus highlight its importance.

Sri Lankan cultural heritage is mainly managed under the direct administration of the state, with the Department of Archaeology playing a major role in the protection and restoration of heritage. In addition, the Central Cultural Fund, the Department of National Museums, and various other offices and institutions spread all over the country, and at different levels including regional and provincial, are responsible for different archaeological and cultural heritage activities, and execute different duties, with a view to manage, preserve, restore and study all of Sri Lankan cultural heritage.

However, it is clearly seen that the Sri Lankan cultural heritage is still not paid due attention for various reasons. There are dire needs regarding the training of professionals, and deficiencies such as a lack of research in the field, inattention to archival management, lack of a general policy, insufficient public awareness and education, etc. This country report intends to discuss a number of these needs and problems regarding the protection and restoration of cultural heritage in Sri Lanka.

Lack of skilled personnel and the need for training

There is a need to provide education and training in conservation and restoration to professionals in the field of cultural heritage management. The Department of Archaeology, established in 1890, has mainly refrained from hiring persons without university degrees for some decades. Though several universities produce numbers of qualified archaeologists and architects every year, only a handful of openings are available to them to join and serve the department. The archeological field has long been confronted with an ongoing challenge of the polarization between graduates and non-graduates. Unfortunately, as a result of this conflict, cooperation and collaboration between these professionals has been missing over the last decades.

The capacity for work of the few graduates who are employed in the department is often diminished, moreover, by a lack of skill or knowledge in some areas. Most of them equipped only with the knowledge given by the universities and some experience received from the excavations they participated in during their undergraduate careers. This situation has led to a number of problems in the restoration and conservation field. Recent incidents of discoloration of the world famous Sigiriya frescoes are a consequence of lack of training and expertise in the field.

Providing local and foreign training in communications skills, knowledge and experience in new techniques of excavation, conservation, restoration and preservation methodologies, and in management skills, are essential to upgrade and enhance the knowledge especially of the young graduates. Training courses, workshops and seminars in particular can be a significant way of providing employees substantial knowledge and experience relevant to their work. There is also a necessity to have more specialized courses in conservation and restoration fields in the universities.

Such training will help employees better understand the techniques and new trends of the field and can encourage them to play a major part in the way the organisation conducts its affairs.

Lack of attention to archaeological museums

As a whole, museums play a major role in protecting, displaying, archiving and preserving cultural objects. In Sri Lanka, though the Department of Archaeology and the Department of National Museums are parallel, associated institutions, the two act as different and independent entities. The network of National Museums goes back to 1877 in Sri Lanka's history. They preserve and display to some extent the cultural and natural heritage inherited from the past.

In addition to the above museums, a number of archaeological museums are managed and maintained by the Department of Archeology in several regions. They exhibit archeological findings and other cultural properties mainly recovered in archeological excavations and explorations. It should be emphasized that these museums do not hold or display recently excavated materials or archive

documents/reports related to them.

Only few of the museums are managed and maintained properly, however, and all archeological objects displayed as well as several museum buildings need attention due to this unfortunate situation. For example, part of the palace of the last King of Kandy is maintained as the Kandy Archaeological Museum by the Department of Archeological Survey of Sri Lanka. Both entrances to the museum are situated in a high security area. Any visitor who enters the museum has to undergo strict checking protocols (see Photo 1). Parking facilities are restricted. The building has not been maintained properly. Discoloration and flaking of the surface and plaster can be seen. Since the building is adopted as an archaeological museum, the historic and cultural value of the building is ignored and neglected. Also there is a fire risk due to the poor state of electric wiring and neglect for maintaining electric connections properly (see Photo 2 for an example).



Photo 1

Security barricades in front of the museum



Photo 2

Unprotected wiring

The collection available for display and exhibit ranges from archaeological artifacts found in the excavations at the Dalada Maligawa premises and surrounding areas like Gurudeniya, to artifacts belong to the British Period, etc. All the exhibits on display show poor conservation status. They are full of dust and the floor has not been cleaned for a long time. The display methods are very poor and not up to acceptable standards. Most of the artifacts are displayed in open areas, placed on bricks, tyres and other materials (see Photos 3, 4, 5, and 6).

Many cultural assets have been seriously damaged or destroyed, due to the use of inappropriate display methods, inappropriate intervention and poor management techniques, and irreversible damage has occurred.



Photo 3



Photo 4



Photo 5



Photo 6

Since museums are non-profit institutions, levels of funding and attention are low. Nevertheless, the governing body or other controlling authority of the museum has an ethical duty for maintenance, providing physical security and if possible enhancing all aspects of the museum, its collection and its services. World Heritage City Kandy, being highly scenic and religious, and the last independent kingdom of Sri Lanka, certainly needs to have a well planned and managed archaeological museum that meets international standards.

Lack of education and public awareness programmes

Another problem Sri Lanka now faces is to educate the population as to the value of the cultural

heritage. Archaeological heritage sites cannot be protected without the cooperation of the people who live on or around them. It is true that no awareness programmes have been implemented to educate the public regarding cultural heritage management. To laymen, archaeological excavation is something scientific, of interest only to archaeologists or scholars. Also, most of the local tourists who visit archaeological sites concentrate only on the religious elements.

Therefore, it is important to educate all Sri Lankans about the importance of conservation and especially protection of their own heritage. Awareness should start first in the schools, universities and other educational institutions. Syllabuses should be reviewed to include history, archaeology and cultural heritage management as subjects to be taught in the schools. Secondly, awareness programmes can be conducted to educate different levels of lay citizens.

After terrorism was eradicated especially from the Northern and Eastern Provinces, a considerable growth of digging and looting of archaeological materials has been reported. The neglected condition of the archaeological sites due to the lack of funding, staff and infrastructure facilities in the Eastern and Northern Province is a good example of this situation.

Unless the public is informed about the meaning of their past and their connection with it, harmful incidents cannot be stopped and it is hard to expect that people will preserve and protect the cultural heritage of Sri Lanka. Therefore, necessary steps should be taken to promote local archaeology and cultural heritage protection by raising awareness which is an essential need for protecting the cultural heritage of Sri Lanka.

Lack of general policy in protection and restoration

Protection of cultural heritage mainly depends on the growth of heritage assets and financial resources. Although some heritage grows naturally, and factors such as the aging of buildings and objects, the increase in the number of published materials, and changes in the view of the concept of heritage management over time have added to the growth of cultural heritage elements. As a result, this has increased the volume of heritage needing protection, and thereby increased the need for concrete policy regarding restoration and protection activities.

The Cultural Property Act (1988) and Antiquities Ordinance (1940), revised in 1956 and 1998, provide necessary legal protection for better preservation of antiquities in Sri Lanka. With the advancement of cultural heritage management there is a need for developing strategies and policies which cover the entire range of cultural heritage all over the country.

In addition to the seven sites already registered as World Heritage, another three sites are on the tentative list. All of the latter are natural heritage. With regard to these three natural heritage sites, Sri

Pada, Knuckles and Hortan Plains, questions arise as to whether Sri Lanka has sufficient legal coverage protecting these sites. At the same time, protection methods and staff need to be provided to safeguard these sites. Since these sites cover huge areas, it has become a practical problem for the Department of Archaeology to maintain and manage them. Therefore, authorities should take urgent steps to impose and implement necessary strategies and policies in protecting these valuable natural heritage sites.

There is a dire need for having a general policy in restoration to improve the level of conservation science and to protect the Sri Lankan cultural heritage. The government and the relevant administrative bodies should take necessary steps to introduce a general policy for restoration and protection. When preparing policies, authorities should set objectives for developing public awareness regarding heritage protection, and for promoting their participation in protection programmes. At the same time, scholars from the universities and other relevant institutions should be consulted before preparing a national policy.

Lack of records and archival management system

In some countries museums act as the chief depository of archaeological materials available. However in Sri Lanka, the Department of Archaeology is the premier institution for the research, study and preservation of cultural heritage. Established in 1890 under the British period, the organisation is responsible for the implementation of the central legislation concerning cultural heritage.

Since its inception the Department of Archaeology has been in charge of the country's archaeological heritage, and has undertaken a large number of exploration, excavation, conservation and restoration projects at a number of sites throughout Sri Lanka. Under the permission and supervision of the Department, various universities such as Kelaniya, Peradeniya, Ruhuna etc., plus the Central Cultural Fund, and different missions from foreign universities and foreign funded agencies like Sida/Sarec, have carried out significant excavations and work on conservation and restoration. Some of these projects can be considered as landmarks of Sri Lankan archeology. Documents and reports related to these works have not yet been properly processed and archived, however. Also, a number of unpublished materials prevailing from 1890, especially available at the Department of archaeology and other related institutions and which are of enormous significance, should be archived. A proper records management system through information technology should be introduced with networking faculties, providing easy and speedy access to all interested.

Though it is a small country, Sri Lanka has made an attempt to register archaeological sites over the last ten years. A documentation project called Sites and Monuments is being carried out under this project. This long term project intends to inventory all ancient sites and monuments in Sri Lanka. However, due to a lack of staff and funding, etc., the project moves very slowly. Therefore, steps

should be taken to expedite the project, because documentation, publication, and restoration of a great deal of the vast architectural and archaeological heritage of Sri Lanka have become a major necessity.

The Department of Archives and the Department of Museums, which hold volumes of archival heritage, are at risk because the authorities have given little attention to the management of information from the past. In addition, these departments have not yet succeeded in developing and introducing the tools needed to efficiently access documents and information they hold. Information technology should be used to make heritage properties accessible more speedily. Conventional attitudes towards holdings, unwillingness to change and the lack of funding, expertise, and training opportunities are some of the reasons behind this situation.

As policy, copies of all items published on Sri Lankan cultural heritage are mainly deposited in three libraries, namely those of the University of Peradeniya, the National Museum and National Archives. They hold huge collections of published Sri Lankan materials. Unfortunately, these materials are at risk, because the collections are housed in buildings that do not meet accepted standards for temperature, humidity, and space for these types of documents.

Therefore, steps should be taken to preserve and archive the reports and materials on Sri Lankan cultural heritage for the benefit of future researchers and generations. It is necessary to have good records and archival management regarding both printed and non-printed materials available in the relevant institutions.

Need for protection of archaeological sites

A recent development can be seen worldwide for protecting all types of archaeological sites in their original contexts. *In situ* preservation of archaeological sites is not popular in Sri Lanka, and instances of *in situ* preservation are rare (see photo 7). Preservation of archaeological sites with standing architectural features has become a practice, while the other excavated sites with archaeological finds are covered over and neglected. That is mainly because archaeological sites with standing architectural features are religious sites and are worshiped by Buddhists.

Now the time has come to change this attitude. Due attention should be paid to excavated sites as well. Properly maintained, such sites could be used as major cultural attractions for local and foreign tourists. Through proper and thorough training and knowledge about new technologies of direct site protection and data acquisition methodologies, such examples could be developed. Appropriate site information centers would provide better understanding of *in situ* preservation to the visitors, especially the public.



Photo 7 Ibbankattuva Megalithic Site, a rare example of *in situ* preservation in Sri Lanka

Need for protection of portable cultural heritage

Sri Lankan cultural heritage includes an immeasurable treasure of portable artifacts, ranging from stone tools, beads, coins, and bones to images, lamps, pots, jewelry, etc. So far, major attention on conservation, preservation and restoration has been paid to immovable cultural heritage and very little attention is paid to movable objects. As mentioned above, these materials are kept in storehouses and rarely displayed in archaeological museums. For example, there are two archaeological museums in the Eastern Province of Sri Lanka, namely Seruwila and Dighavapiya. There is no full time curator at these museums, and only two laborers attached to the Department of Archaeology, who are not knowledgeable about curatorship, look after the materials. Objects displayed are not inventoried, nor are they properly preserved and conserved. Storage methods are not up to standard and no classification system is followed. Most of the time the original locations where objects were found are not mentioned, though they are found in excavations.

Movable artifacts are stacked in provincial and regional offices without classification, inventory or any method for protection. In regard to these materials, scholars, architects, and archaeologists should take the necessary steps of documentation with a view to reconstructing Sri Lanka's history. At the same time, displaying suitable materials, after proper treatment, is an essential task.

Antiquities legislation in Sri Lanka does not authorize the illegal export or import of antiquities, and does not permit unlawful excavation. Though the law is perfectly adequate on paper, stealthy digging and illicit traffic in looted archaeological materials are reported throughout the country almost daily. Increasing trends in clandestine digs are reported very often in the Northern and Eastern Provinces of Sri Lanka.

As a measure to minimize and prevent such activities, a police division has been established affiliated with the Department of Archaeology Colombo Office. However, it seems that the law has not been adequately implemented, especially in recent years.

Problem of environmental pollution

The relation between cultural heritage and climate change has become a major issue in the Sri Lankan context. Cultural heritage sites are threatened by pollution, local and foreign tourists, civil wars, and natural disasters like tsunamis, which have a great negative impact on the sites. Although this has become a major issue in Sri Lanka, it is not adequately addressed. For an example, Kandy, the hill capital of Sri Lanka, where the World Heritage Site of the Temple of Tooth is situated, was recently announced as an area with highly polluted air. It is said that air pollution levels in Kandy are two or three times higher than Colombo. It is suggested that air pollution has occurred due to the natural geographical setting of the city of Kandy, and from not providing solutions to heavy traffic jams. There is some indication that the World Heritage city status granted to Kandy is at risk because of the high level of air pollution.

In addition, environmental pollution can be seen deteriorating the cultural heritage almost everywhere in Sri Lanka. Therefore, cultural heritage protection under conditions of climate change, taking necessary measures to minimize such conditions, should be major concerns for decision makers and researchers in Sri Lanka.

Need for popularizing cultural tourism

Cultural heritage is an essential precondition for the development of tourism. In Sri Lanka, tourism in turn has produced a source of livelihood for many communities. Sri Lanka is the foremost leisure destination in the South Asian region, and employment growth in the tourism sector has been significantly higher than in the rest of the economy in recent years. After the long prevailing civil war, there has been an increase in tourists visiting Sri Lanka.

Since the impact of the tourism is very high, proper cultural heritage management strategies should be implemented to ensure a sustainable cultural heritage.

A good communication network is essential for popularizing cultural tourism. Lack of personnel with language, presentation and management skills, and failure in implementing heritage management plans, reduce popular attention to cultural heritage sites. Neglecting to use information and communication technology for popularizing cultural heritage in Sri Lanka are also reasons for reduced attention from tourists.

Need for risk management

After the tsunami disaster, attention to risk management and preparing for disasters increased in Sri Lanka. In addition to tsunamis, natural as well as man-made disasters, flood risks and landslides, fire and security threats are dangers to cultural heritage. Although less frequent than storms, droughts, high winds and landslides which also damage the cultural heritage in Sri Lanka, the coastal cultural heritage

was heavily affected by the tsunami, making it clear that such disasters are unavoidable. Although no statistics are maintained on jeopardy posed by local and foreign tourists to cultural property, it is certain that there is risk generated by them.

Therefore, prompt supply of necessary relief materials at disasters, providing infrastructure facilities to the threatened area, educating staff and the public in disaster and basic risk management techniques, and providing training in them, are all essential. Knowledge of risk management and disaster preparedness should be transferred through modern information and communication technology to all educational levels.

Need for applying ICT in cultural heritage

The communication and dissemination of data, information and knowledge is a major cross-cutting issue in cultural heritage. However, use of information communication technologies (ICT) is at a very low or a primary level in the Sri Lankan cultural heritage field. For instance, other than the telephone, which is restricted to a single line, no other communication technology is used at the Eastern Province Office. Though Internet and e-mail facilities are widespread in urban areas, obtaining such facilities at rural regional offices is still but a daydream. This situation restricts and minimizes opportunities for protecting cultural heritage from disasters, risks, dangers, and threats of all kind. High level communication technologies, activities and tools are needed to spread information on the activities being carried out in the cultural heritage field.

There is also a need for developing communication systems to interact with the public with a view to improve the safeguarding of cultural heritage. Creating such systems will help integrate learning about harmful impacts on heritage, and promote the development of methods of preservation and restoration, and long-term monitoring systems to understand the nature of interventions.

Problems in cultural heritage restoration

At present, the restoration of Sri Lankan cultural heritage is receiving considerable attention. Portions of the built heritage which are threatened are showing signs of deterioration. In the process of continuous evolution and change, an integrated restoration process is required. It is necessary to develop an appropriate process in order to avoid irreversible loss.

To minimize the deficiency in attitudes regarding restoration, the weaknesses of management procedures, and the effects of decreases in restoration expenditures, in levels of expertise, and in recruitment policies despite the continued growth of heritage, training and knowledge on restoration and conservation techniques should be taught to pure archaeological graduates. This will reduce the polarization between graduates and non-graduates.

Problems of cultural heritage threatened with destruction

Surveys carried out in the Eastern province revealed a trend of extensive destruction of archaeological sites. It is therefore absolutely necessary to proceed with measures against this destruction. After the eradication of terrorism from the region, there has been an increased tendency in the digging of archaeological sites to find treasure. These treasure hunters are being reported daily and it has become a major cause of destruction of cultural heritage in Sri Lanka.

In recent years the intensification of development in the Northern and Eastern provinces has paved the way for agricultural work, road construction, the construction of huge bridges and buildings, and the introduction of new settlements, so that the archaeological heritage of the country is subject to an unprecedented threat of destruction. Moreover, no archaeological exploration or impact assessment is carried out before starting these projects.

With upheavals in the economy and the political and cultural situation, and with industrial development, population growth, and environmental pressure, the cultural heritage is at risk. In particular, the wholesale destruction of landscapes can be seen in the Northern and Eastern Provinces in the name of economic revival and development.

Conclusion

As discussed above, there are a number of problems faced by Sri Lanka regarding the restoration and protection of its cultural heritage. Also, there is the need to develop and enhance the services provided. The more general problems which can be identified in restoration and protection can be summarized as follows:

- Lack of training, both for primary activities and as cross training
- Unwillingness to be a team player
- Lack of solidarity and harmony within projects
- Resistance to compromise and to finding balanced solutions
- A tradition of poor communication
- Deficiencies in the recording of movable, immovable, intangible and natural heritage
- Problems of sustainability of projects due to lack of funding
- Making projects of reconstruction, restoration and revitalization
- Lack of methods for raising public awareness
- Lack of informative, inventory and documentation activities
- Protection of the natural heritage
- Lack of cultural heritage research and publications

Finally, to promote the ability of professionals to upgrade the quality of the cultural heritage of Sri Lanka, the exchange of experience and information, training, and research in the field of cultural heritage and cooperation with other countries is suggested.

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Viet Nam

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Center for Preservation of the Co Loa Historical Site and Hanoi Ancient Citadel

Problems and Needs for Cultural Heritage Protection and Restoration Activities in Viet Nam

1 Introduction: Overview of Thang Long-Hanoi

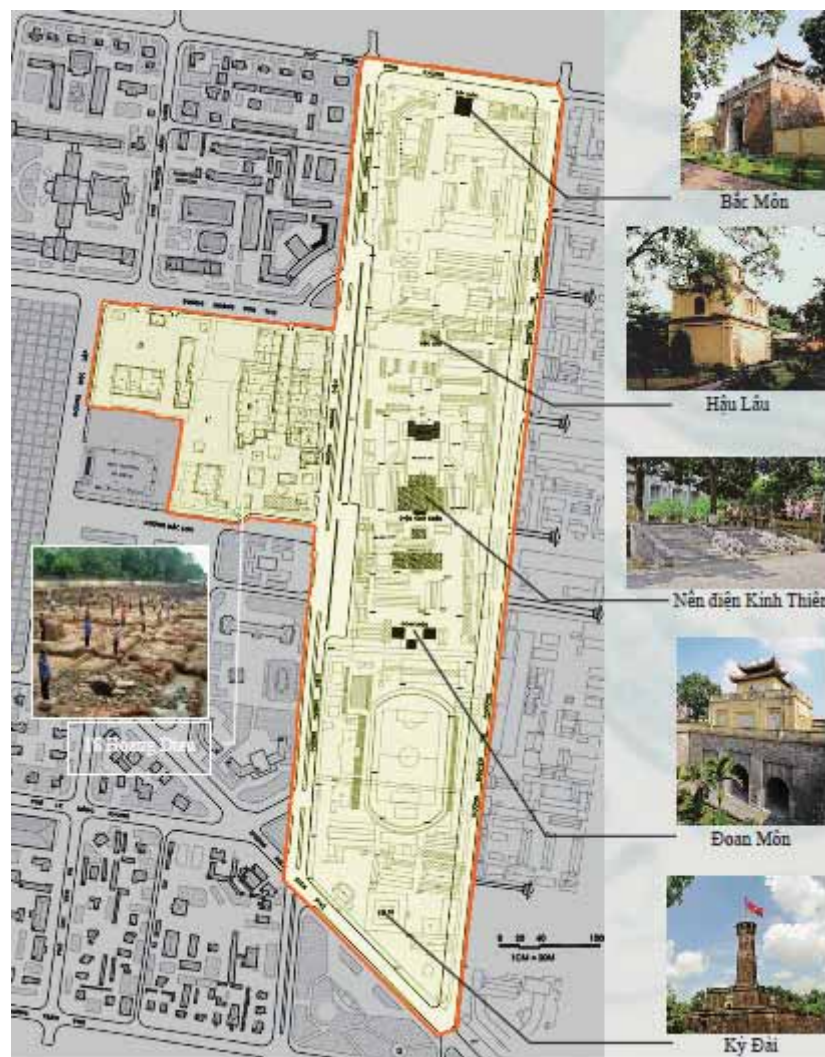
Thang Long-Hanoi, proposed as a World Heritage site, exhibits an important interchange of human values over a long span of time in an area where Northeast and Southeast Asia meet. This interchange is reflected in a remarkable collection of artifacts, monuments, structures, urban landscapes and morphology spanning more than 1,000 years. The resultant urban pattern and architectural and artistic forms bear unique and exceptional testimony to the continuous development of a prototypical Asian political power centre. Many events of global political, social and intellectual importance, including the development of independent states and forms of government in the Asian region, the interaction of Asian and European ideologies, colonialism and the post-WW2 wars of national independence, have had an impact on the site and can be read in the site's archeology and morphology. Significant cultural and artistic expressions were fostered in Thang Long and in turn contributed to its physical form and decorative arts, many relics of which have been found, particularly in the archaeological sites in the core area.

Thang Long Citadel features two sets of ramparts. The inner rampart enclosed an area named the Imperial Citadel of Thang Long-Hanoi, with the Forbidden City (Cam Thanh) at the very centre. The proposed World Heritage site also constitutes the core of the Dai La Citadel, dating from the period of the Tang dynasty (seventh to ninth centuries), and spanning the Dinh-Early Le dynasties (tenth century). The Citadel became the capital of the kingdom, under various names: Thang Long, Dong Kinh or Dong Do during the dynasties of the Ly (1009-1225), Tran (1226-1400), Later Le (1428-1527), Mac (1527-1592), and Restored Le (1592-1789). By the time of the Nguyen dynasty in the nineteenth century it was no longer the capital, and it was renamed Hanoi Citadel, the name by which it continued to be known during the French and post-colonial periods. The archaeological site at 18 Hoang Dieu Street features the earliest traces of the political and military power centre that comprises the proposed World Heritage property. The site dates back more than 1,300 years, but is most illustrative of the Ly, Tran, and Later Le dynastic periods when it constituted a key part of the Forbidden City.

The Forbidden City contained the symbolic, political and administrative centre of the whole Thang Long-Hanoi Citadel, the Kinh Thien Palace site. This site, presently occupied by a French-era building which served as both the headquarters of the French artillery and, from 1954 to 2004, as the

High Command of the People's Army of Vietnam, remained the centre of cultural and political meaning during the entire history of the proposed World Heritage property. It is the central feature of what is now the Hanoi Ancient Citadel site.

While the Hanoi Ancient Citadel area also dates back some 1,300 years, it was excised from the larger citadel during the Nguyen dynasty and became the northern residence for the Hue-based emperor. It features a number of structures dating from the more recent history of Thang Long-Hanoi, including the Nguyen period, and the French and post-colonial periods. The Dragon Steps (Them Rong) and Doan Mon (Main, or South, Gate), dating from the Le dynasty period, are two extremely significant relics of the pre-Nguyen era within the Ancient Citadel area.



2 Description

The Imperial Citadel of Thang Long-Hanoi consists of the central axis of the Nguyen dynasty's Hanoi Ancient Citadel and the Archaeological Site at 18 Hoang Dieu Street. Together these two components also make up the core of the former Forbidden City, which was the administrative, political and

domestic centre of imperial power during the dynastic period, housing the household of the emperor and royal family. It was from here that the kingdom was administered. After colonisation, the area became the headquarters of French military power in Indochina. Following the foundation of the Democratic Republic of Vietnam in 1954, the site was consolidated as the centre of political and military power for the new regime.

The Central Sector of the Imperial Citadel of Thang Long-Hanoi was the most important part of Thang Long Citadel, the National Capital of Dai Viet from the eleventh to the eighteenth centuries. Architectural remains and archaeological finds, including palace foundations and a large number of artifacts, attest to Thang Long Citadel's history of more than 1,000 years. The resultant urban complex and architectural and artistic forms bear a unique and exceptional testimony to the continuous development of an Asian political power centre. Significant cultural, artistic and technical expressions were fostered in Thang Long Citadel, contributing to its physical form and decorative arts, and exhibiting an important interchange of human values over a long period of time in an area where Northeast and Southeast Asia meet.

The major components comprising the Forbidden City are described in turn, in the following sections.

2.1 Archaeological Site at 18 Hoang Dieu Street

The Archaeological Site at 18 Hoang Dieu Street, to the west of the Kinh Thien Palace, was an integral part of the Forbidden City from the Ly dynasty until the end of the Restored Le dynasty. The site covers an area of 47,720 m², and is bounded to the north by Hoang Van Thu Street, to the south by Bac Son Street, to the east by Hoang Dieu Street, and to the west by Doc Lap Street (not including the area of the new National Assembly Building). The first excavation was carried out between December 2002 and 2004 over an area of 19,000 m².

This excavation revealed archaeological layers indicating that the Thang Long-Hanoi citadel site had been a political power centre for at least 1,300 years: the archaeological record includes layers from the Dai La period (seventh to ninth centuries) to the twentieth century. The most significant archaeological finds include remnants of palaces, identifiable by the sophistication and substantial nature of construction techniques. The hydrological characteristics of Hanoi's location necessitated considerable ingenuity in the construction of large buildings. Chinese Tang era techniques of foundation construction evident in the earliest archaeological layer were refined and adapted by Vietnamese architects utilizing clay specially sourced from elsewhere, and gravel, as well as brick, terracotta, and soil. This produced a unique form of foundation for the construction of large palaces suited to the Hanoi location. This technique is exemplified in the remains of one large structure, consisting of thirteen compartments with 14 lines of pillar foundations, and covering an area of over 450 m². A large number of other archaeological remains show that the same foundation technique was used in the construction of even larger palaces.

Archaeological excavation, especially of the palace remnants from the Ly dynasty period

(eleventh-twelfth centuries) at Section A-B, revealed evidence of careful design and planning of the citadel. A complex of building foundations was revealed in rectangular and polygonal shapes in configurations indicating a clear pattern of urban design. The remnants also reflect the large size and importance of the buildings. In addition, a well-designed drainage system was uncovered. The smaller drains served individual buildings and the larger ones provided drainage for the area more generally. In addition, the excavations have revealed a wide range of architectural materials of a kind associated with royal buildings, including decorative roof figures in forms of dragon or phoenix heads, roof-top tiles in the forms of bodhi tree leaves with relief decorations of dragons or phoenixes, and round roof tiles with lotus and chrysanthemum decorations. All of these artifacts provide evidence of the magnificence of the former buildings at the site.

The significance of the site as an integral part of the Forbidden City was confirmed by the discovery of a large number of high quality artifacts featuring the mark of the Imperial Palace, including porcelain, architectural materials and metal objects. The importance at Thang Long-Hanoi of exchange is evidenced by the large number of enamel, earthenware and terracotta pottery items of diverse origin that have been discovered at the Archaeological Site at 18 Hoang Dieu Street. Dating from the seventh to the nineteenth centuries, these pottery artifacts originated in Vietnam, China, Japan and Western Asia. Vietnamese enamel pottery found at the site takes various forms, including bowls, plates, cups, vases, jars, glazed terracotta jars, vessels, pots, lime-pots, and oil lamp dishes. Thin white pottery was typically decorated with the form of a dragon in relief, while deep blue pottery commonly featured dragons and phoenixes painted in intricate detail. A form of transparent porcelain as thin as egg shell was decorated inside with a relief painting of dragons and the word “Quan” or “Mandarinate” (官) in the center. The images and words can be seen when the pottery is held up to the light. These special products were the preserve of the imperial household. Some ceramic artifacts/fragments unearthed in this site were inscribed with Chinese characters inside, such as Truong Lac cung (長樂宮), Truong Lac kho (長樂庫), which indicates that these utensils were used within the Truong Lac palace. According to historical records, Truong Lac was a large, important palace in the Forbidden City, the residence of Madam Nguyen Thi Hang, King Le Thanh Tong’s queen (1460-1497) and King Le Hien Tong’s mother (1497-1504).



The Archaeological Site at 18 Hoang Dieu Street therefore reveals an outstanding record of imperial occupancy of the site for more than 1,000 years. Interaction between Thang Long-Hanoi and other cultures is demonstrated by architectural styles and urban patterns that reveal the influence of Taoism, Buddhism and Confucianism, adapted to the Vietnamese context. Other objects of diverse origin, such as ceramics and terracotta, indicate the extent to which Thang Long-Hanoi was engaged in cultural exchange with other parts of the world. In its entirety the site bears a remarkable testimony to the political, cultural, social, economic and domestic life of an imperial capital city over a uniquely long period of time.

2.2 Hanoi Ancient Citadel

When Gia Long (1802–1819), the first emperor of the Nguyen dynasty, came to the throne, the royal seat of government was moved to Hue, in central Vietnam. The Hanoi citadel was reconstructed in a square shape of about 4 km circumference with Vauban-style walls. The new facility functioned as a provincial capital and northern residence for the Nguyen emperors.

The Hanoi Ancient Citadel component of the proposed World Heritage site consists of the central axis of the above-mentioned Vauban-style citadel, located to the east of the Archaeological Site at 18 Hoang Dieu Street. The two sites are separated by Hoang Dieu Street. The Hanoi Ancient Citadel is bounded by a wall constructed during the Nguyen dynasty in the early nineteenth century. This, and the modern Hoang Dieu Street, creates a rather artificial separation between the two components of the proposed World Heritage site. Prior to the Nguyen dynasty the Hanoi citadel was of much larger extent, and the Forbidden City itself included both the Archaeological Site and the Ancient Citadel site. The central feature of the Ancient Citadel, the Kinh Thien Palace, dating from the Le dynasty (1428), was also the symbolic, administrative and power centre of the Forbidden City as a whole. It is important to understand the two elements of the proposed World Heritage site in this broader, connected context.

The extant fabric of the Hanoi Ancient Citadel precinct largely reflects the more recent history of Thang Long-Hanoi, from the nineteenth century onwards, although the underlying morphology and some Le period elements – most notably the Dragon Steps – serve to intimately connect it with the millennium-long history of Thang Long-Hanoi. It is also likely that archaeological remains from previous periods exist beneath the extant structures, as excavations near the Doan Mon have demonstrated. The walls and most of the gates of the Hanoi Ancient Citadel were constructed in the early nineteenth century by the Nguyen dynasty, when the Hanoi citadel was used as a northern residence by the Nguyen emperors. A number of the buildings within these walls were constructed by the French after their conquest of Hanoi in the 1880s. More recent buildings of considerable significance were constructed after 1954, and housed the High Command of the People's Army of Vietnam during the American War and until 2004. The Hanoi Ancient Citadel precinct thus demonstrates the remarkable continuity of the site as a political power centre until contemporary times.

2.3 Foundation of the Kinh Thien Palace

The Le dynasty's Kinh Thien Palace was erected in 1428 on the foundation of the Thien An Palace, dating from the Ly-Tran dynasties (eleventh-twelfth centuries) and Can Nguyen Palace from the Ly dynasty (eleventh century). The Kinh Thien Palace was considered “one of the masterpieces of An Nam architecture”. The importance given to this site by successive dynasties was derived from geomantic or *phong thủy* (feng shui) principles. According to this ancient tradition of urban design and architectural practice, the very centre of the royal citadel is the Nung Mountain or Long Do (Dragon's navel), a place of immense ritual power. The ground is slightly raised above the rest of the citadel and the main palace of the royal dynasty was constructed atop it. The site of the Kinh Thien Palace is presently occupied by a building constructed by the French in 1886.

The most significant elements of the Kinh Thien Palace still in existence are the foundation and two sets of stone dragon steps. The existing building only partially occupies the palace site: its forecourt, which features several large trees, was originally also occupied by the palace. The dragon steps at the front of the site were built in 1467, and include nine stone steps, each step 20 cm high, 40 cm wide, and 13.6 cm long. The steps project 5.45 m from the palace foundation wall and are divided into three flights separated by two stone dragons. The centre flight was reserved for the emperor, while those flanking it were for mandarins. The two dragons are beautifully sculpted. Their heads, at the first step level, are very large, the body tapering as it follows the ascent of the steps until it forms a sword shape at the top. The dragons each have five claws, symbolizing royal power.



The second set of dragon steps, at the rear of the palace foundation, were constructed at the turn of the seventeenth century. They are of a smaller scale than the steps at the front, consisting of seven steps. The dragon is 3.4 m long, with meticulous details, including an open mouth holding a stone “pearl”, and, as with the front steps, five-clawed feet.

2.4 Doan Mon

Doan Mon (Main Gate) is the main entrance to the Forbidden City, in which the emperor’s palace was located. A gate was first erected here during the Ly dynasty, but the existing structure dates from the early years of the Le dynasty (fifteenth century), with restorations performed during the Nguyen dynasty (nineteenth century). The Doan Mon, together with an area behind it formerly known as Long Tri or Dan Tri (Dragon Courtyard), played a very important role in the ceremonial life of the royal citadel. It featured in royal political, cultural and religious events, like the Nhan Vuong Festival, the Quang Chieu colored lantern festival (1136), the parade of imperial guards (1351), the ceremony for the national loyalty oath (1128), and ceremonies for the mandarin examinations (1457, 1466, 1481, 1496, etc.).

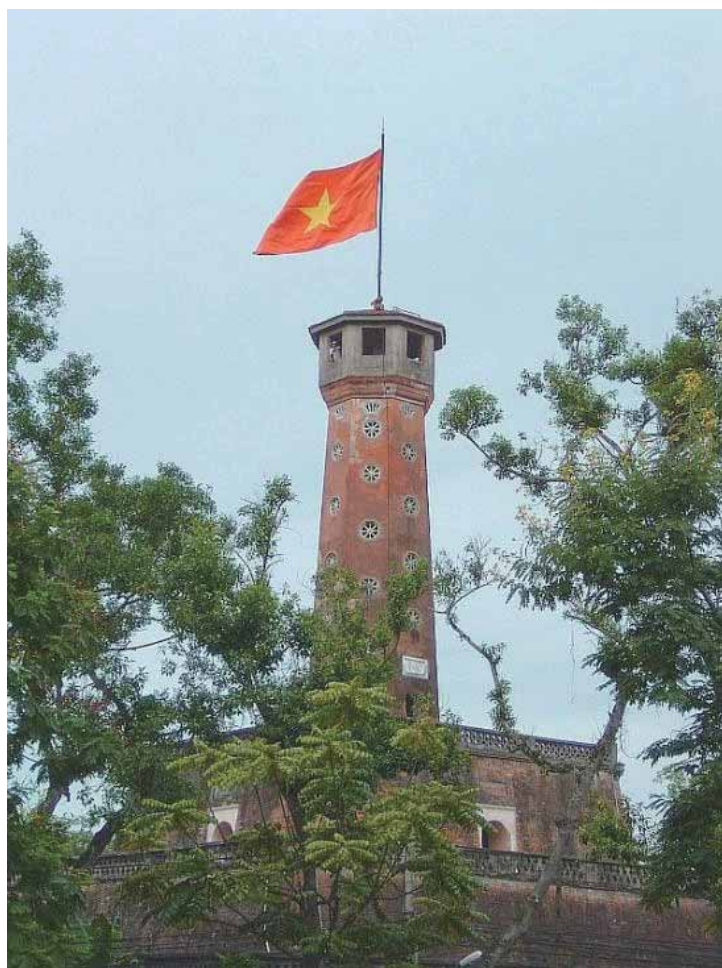
As dictated by *phong thuy*, Doan Mon was to the South of Kinh Thien Palace, leading directly to the Ky Dai (Hanoi Citadel flag tower). It is U-shaped, 46.5 m in width, 26.5 m deep and 6 m high. It was constructed of stone and large square-section bricks. The total area occupied by Doan Mon is 3,970 m².



The gate is a five arch pavilion. A stone tablet 1.5 m long and 0.7 m wide, with the words “Doan Mon” (端門) carved in it, is fixed above the central door. This door, the largest (4 m high and 2.7 m wide), was reserved for the emperor. To either side are two smaller doors (3.8 m high and 2.5 m wide) used by the mandarins and members of the royal family. There are also two secondary doors on each side of the main entrance.

2.5 Ky Dai – Flag Tower

The Ky Dai, or Hanoi Flag Tower, was built in 1805 during the Nguyen dynasty’s Vauban-style reconstruction of the Hanoi citadel. It stands on the foundation of Tam Mon, the outer gate of the Forbidden City during the Le dynasty. The 33.4 m high tower is one of the few structures that survived the French period intact. The base of the tower is square in form and consists of three levels constructed of brick in the form of pyramid frusta, each level reduced in size. The sides of the first level are 42.5 m long and 3.1 m high and there are two brick staircases leading to a paved terrace. The sides of the second level are 27 m long and 3.7 m high. Each wall of this level is perforated by an arched door, above three of which are stone Chinese inscriptions: “Nghenh Huc” (welcome the dawn



light) above the eastern door; “Hoi Quang” (reflected light) above the western door; and “Huong Minh” (facing the light) above the southern door. The sides of the third floor are 12.8 m long and 5.1 m high. A door in the northern wall leads to stairs ascending to the flag tower. The tower itself is almost entirely brick, octagonal in form and 18.2 m high; each of the eight sides has a length of 2 m at the base, tapering gradually to the top. Fifty-four internal spiral stairs lead to the top. Light and ventilation are provided to the tower by fan-shaped and octagonal ports. The tower is crowned with a 3.3 m high observation floor constructed of stuccoed brick with a rectangular window in each side. A 40 cm diameter flagstaff is fixed to the top of the tower.

2.6 Hau Lau

Hau Lau is also known as Tinh Bac Lau, the Princesses’ building, Pagode des Dames or, simply, the Rear Palace. The existing structure was built during the Nguyen dynasty as accommodation for ladies in waiting and concubines when the emperor was visiting Hanoi from Hue. At the end of the nineteenth century Hau Lau was seriously damaged and reconstructed.



Hau Lau is built of stuccoed brick. The base of the structure is a parallelepiped form, with an entrance framed by pilasters at each end, above which are decorative friezes. The second level of Hau Lau consists of a three-bay pavilion, the central part of which is slightly higher than the flanking elements. The central bay has rectangular windows on either side of an arched window, each divided

from the others by pilasters. The side bays have blank north and south walls framed by pilasters, while the western and eastern walls are perforated by arched openings. The central bay is topped by a two level gazebo with arched and rectangular windows, each level having a roof with round tiles and up-turned eaves decorated with dragon heads. The uppermost level of the gazebo has a gabled roof. In fact the building's roof structure expresses important architectural concepts, with each element of the upper levels having eight roof sides. In Chinese and Vietnamese numerology eight is a distinguished number. The upper walls feature extensive use of friezes.

2.7 Bac Mon

Bac Mon, or Northern Gate, is the last remaining of the five gates of the Nguyen dynasty Hanoi Citadel. It was built in 1805 during the Nguyen dynasty's reconstruction of the Thang Long-Hanoi Citadel. The structure is built of brick, with stone arched doors. Above the central door is a stone tablet with three Chinese words "Chinh Bac Mon" (政北門) and decorative liana figures carved in it. The base of the structure is trapezoid in shape, slanting 15 degrees and topped with a balustrade terrace with stone arris gutters. The upper pavilion has a double roof with up-turned eaves and gables.



2.8 French Buildings

A large number of buildings were constructed by the French in the late nineteenth and the first half of the twentieth centuries. These include the former artillery headquarters on the site of the Kinh Thien Palace, the first French building constructed inside the citadel, in 1886, but superficially altered after 1954. Several substantial buildings were erected in 1897, in the area of Long Tri (Dragon forecourt) between Doan Mon and Kinh Thien Palace. They include a large two-story building in neo-classical

style used by the French military, standing on the north-south axis to the south of the Kinh Thien Palace site. This is a brick and stucco, colonnaded structure with a balustrade and large round-holed pediment over the main entrance. It features a lantern roof, and inside, several large map cupboards remain from its time as the strategic planning centre of the Vietnamese army. Two smaller, single story buildings in similar architectural style, also constructed in 1897, flank the entrance to the large building, between it and the Kinh Thien Palace. The dragon steps, thus, face the entrance to the large building, with the smaller buildings framing the space leading to it.

The evolution in French architecture in Vietnam can be seen within the Hanoi Ancient Citadel. A large two-story building to the east of the large 1897 building was constructed in 1930. It is also a colonnaded structure, with wide, flattened arches. Its steep, sloping roof, with bracketed eaves is typical of the architectural style from the 1920s as a more appropriate response to the environmental conditions found in North Vietnam than the nineteenth century neo-classical style used in early French buildings.

The existence of the European style buildings exemplifies the continuity and layering of cultural values of the heritage site.

2.9 Building D67 and Bunker

Building D67 was erected, as its name suggests, in 1967, on the northern part of the Kinh Thien Palace foundation. Incorporated in its construction was a deep bunker, accessible from the building and from the former French artillery headquarters. The building housed the General Headquarters of the North Vietnamese Armed Forces during the Vietnam War, and contained meeting rooms for the Politburo of the Vietnamese Communist Party, as well as the offices of General Vo Nguyen Gap, Minister of



Defence and Vietnam's most famous modern military figure, and General Van Tien Dung, Chief of the General Staff. Two doors lead to stairs to the underground bunker.

The building is very modest in proportions and style. From the outside it appears much like an ordinary single story house with a flat roof, but the details of its construction betray its military importance. The walls are 0.6 m thick and soundproofed. There are two entrance doors, the outside one made of 1 cm thick steel. A layer of sand on the roof protected the building from shrapnel penetration.

The bunker is underground between Building D67 and the back of the former Artillery Headquarters. It is 9 m deep and reinforced to withstand bombing. There are three entry and exit stairs, accessible through steel doors, one leading to the former Artillery Headquarters and two to Building D67. The Bunker housed meeting rooms of the Politburo and Central Military Commission.

3 State of Conservation and Factors Affecting the Property

The proposed World Heritage site has two elements, the Archaeological Site at 18 Hoang Dieu Street and the Hanoi Ancient Citadel site. Although the two areas share some conservation issues, each has quite different overall conservation needs, and the factors affecting them vary substantially. Accordingly, each area is treated separately below.

3.1 The Archaeological Site at 18 Hoang Dieu Street

The Archaeological Site at 18 Hoang Dieu Street contains a large number of archaeological features and artifacts in overlapping layers at depths of 100 cm to 400 cm from the surface. The excavated area currently covers an area of 19,000 m².

The movable artefacts have been removed from the excavated area for treatment and safe storage. The architectural remains are largely the foundations and lower walls of palaces and large residences. The building materials include wood, tiles, bricks, stone, terracotta, mortar, gravel, cement and ceramics. There are also remains of roads, water features, wells, sewage systems and pathways.

The site is affected by a number of climatic and environmental issues, some of which are typical of archaeological sites and some of which are unique to this site. Some parts have been backfilled with sand to protect particularly vulnerable remains, while most of the site is protected from sunlight and rain by a plastic roof. Several reports on the measurement and monitoring of climatic and environmental threats have been completed, and inform the management of the site. Threats and strategies for their management are covered in extensive detail in the Master plan, which will be completed by the end of 2010. An interim conservation management plan will continue to provide protection for the site until the introduction of the new management plan in 2010. The management plan also sets out the direction for the long-term management of the site and the planning of infrastructure.

Overall, the archaeological remains are preserved in the form of a covered archaeological park.

Movable artifacts have been secured and are being treated, and in the long term a site museum/conservation centre will be established to facilitate their preservation and interpretation to the public.

3.2 Hanoi Ancient Citadel

The elements of heritage significance within the Hanoi Ancient Citadel consist primarily of a small number of structures remaining from the Le dynasty (the Dragon Steps being the most important), several structures built during the Nguyen reconstruction of the citadel in the early nineteenth century (the gates, the Ky Dai, Hau Lau, etc.), a number of substantial buildings erected by the French in the late nineteenth and early twentieth centuries, and a small number of buildings associated with the post-colonial liberation struggle (chiefly Building D67 and its bunker).

So far, the Vestiges Conservation Centre, which is responsible for the management of the site, has taken over the central part of the Citadel and some historic buildings elsewhere (such as the North gate). The north and south parts of the Citadel remain in army use and will be transferred to the Centre's management in successive phases until 2015.

Also within the Hanoi Ancient Citadel are archaeological relics dating back to the eleventh century. A small amount of archaeological exploration has been done, revealing a number of artifacts. Most excavations have been backfilled, although a small section of the old road leading from Doan Mon to the Kinh Thien Palace (dating back to the Tran period, thirteenth-fourteenth centuries) has been left uncovered and preserved under a roof, just behind Doan Mon.

4 Protection and Management of the Property

4.1 Means of Implementing Protective Measures

When the Thang Long Centre proposes significant works, such as new construction or demolition, or the adaptation of existing buildings to new roles, it consults its panel of experts on the proposals. Depending on their views, it will then seek the necessary consent from the Ministry of Culture, Sports and Tourism in accordance with relevant legislation and regulations. Outside the nominated site, there are different procedures for regulating new building in different areas abutting the site.

4.2 Capacity Building for Management and Conservation of the Site

Further scientific investigation in order to expand understanding of the value of the site, and in the process, build up more domestic and international research cooperation, will be conducted as follows:

- Identifying artifacts and objects, plus measuring and photographing those objects, and developing scientific profiles for them.
- Collecting information from domestic and international documents on the basis of which comparative research and evaluation can be made to enhance understanding of the site's significance and values.

Research and surveys are essential to the long-term conservation of the materials. At the same time, these activities are expected to help enhance the technical ability of the staff.

4.3 Urgent Measures for the Immediate Conservation of the Site

The measures which need to be taken without delay for the conservation of the site are as follows:

- Analyses of environmental and climatic conditions in order to implement an immediate conservation plan that protects the excavated sites against weather, water and humidity, etc.
- Conservation of objects made of wood and metal, and the animal and human remains.
- Backfilling with sand.
- Improving the skills and standards of Vietnamese conservationists through implementing preservation methods.

4.4 Promotion and Interpretation of the Property

It is recognized that a vital component of good heritage practice is the communication of significance to the public. The following interpretation strategies are to be developed.

- On-site interpretation, including signs, displays, visitor programmes, guide books etc.
- Promotion of the site by means of leaflets and brochures as well as websites and other publications, such as pictorial books titled *Thang Long Imperial Citadel*, *The Thang Long Imperial Citadel of Hanoi: Guide Book*, among others to be released soon.
- Hold regular exhibition and display events and festivities. Examples include antiques and calligraphy displays, and traditional festivals held annually on the site.
- Coordinate with Hanoi Municipal Department of Tourism to provide sightseeing tours of the site.

Final Reports by Participants

Bhutan

Tshering Namgyal

INTRODUCTION

The Department of Cultural and Heritage Sites, under the Ministry of Home and Cultural Affairs of Bhutan, appreciates the invitation from ACCU, Nara, to allow a representative from Bhutan participate in its unique program of training in the area of heritage protection. This training opportunity in techniques and approaches to enhancing and improving the management of archaeological sites and remains will be utilized and modified to fit the situation in our country.

To start in brief regarding Bhutan, its heritage sites form an integral part of a country with a rich and ancient cultural heritage. Most of these sites date back to the seventeenth and eighteenth centuries, and a few even go back as far as the seventh century. But with very little recorded history for Bhutan, the development of these sites is rarely researched or documented. Since these sites in Bhutan form the indisputable physical record of its history through the ages, archaeology provides one of the most promising ways of extending our knowledge about the medieval period of Bhutan. For much of its history, Bhutan was largely isolated from the rest of the world and its people carried on a traditional way of life, through farming and trading, which had remained intact for centuries. After China invaded Tibet, however, Bhutan strengthened its ties and contacts with India in an effort to avoid Tibet's fate. New roads and other connections to India began to end its isolation. In the 1960s, Bhutan also undertook social modernization, abolishing slavery and the caste system, emancipating women and enacting land reform. In 1985, Bhutan made its first diplomatic links with non-Asian countries.

CONTENT OF THE TRAINING PROGRAM

The training started on September 7 with the opening ceremony and addresses by the organisers, greeting speeches from the guests, introductions of the guests and staff, self introductions by the participants and the taking of group photos. A courtesy visit was made to the Nara Prefectural Government, with greetings from the Vice Governor, Mr. Kubota.

An afternoon orientation session was held on Cultural Heritage Protection Cooperation, at the Asia Pacific Cultural Centre for UNESCO, Nara, followed by a welcome dinner.

Global Trends in Conservation of Archaeological Sites

This presentation focused on issues in the preservation and restoration of cultural properties in different countries, and with different types of monuments, artefacts, and objects, looking at problems in the implementation of conservation methods, problems encountered with higher authorities and the

community, the especially the users and beneficiaries. Topics included the relevant legislation, the willingness of the owners, and cases of the lack of proper documents, and authentication, surveying and proper maintaining of dates. These were discussed at length throughout the day with Mr. Gamini Wijesuriya, Project Manager with the International Centre for the Study of the Preservation and Restoration of Cultural Property.

Presentations followed by the sixteen participants on different projects and the problems and needs for heritage protection in their respective countries, on September 9 and 10. Each presentation was followed by a question and answer session.

The Cultural Property Protection System in Japan

Although I have not studied issues regarding cultural landscapes before, I found this very interesting and was glad to learn the situation regarding Japanese cultural landscapes designated for protection, including the following (names of cultural landscapes given in quotations).

- “Cultural Landscape along Sarugawa River,” including stock farms in the Memu area, representing modern development, and traditional huts or *chise*, representing Ainu tradition
- “Arakawa Highland Farm” in Tono, including the farm landscape seen from Senkaribata area, a natural environment preservation district, and a stone monument of the mountain spirits
- “Rural Landscape of Ichinoseki-Hondera”
- “Cultural Landscape of Kanazawa,” including the exciting Omicho market
- “Rice Terraces of Obasute,” which features hillside terraces climbing up to the ridge
- “Lakeside District of Ohmi-Hachiman,” including Maruyama village, which stands at the foot of the mountain to avoid the wind
- “Waterfront Landscape of Kaizu, Nishihama, and Chinai” on the shores of Lake Biwa
- “Terraced Fields of Yusu-Mizugaura,” featuring fields held by stone walls making terraces on a steep slope
- “Cultural Landscapes in the Shimantogawa River Basin,” including rural communities such as Makino village and Funado rural village
- “Onta Pottery Village,” featuring *karaus*, mortars for pounding the clay with water-driven mallets

By learning through the lecture and seeing the examples, I will try to maintain the landscape in Bhutan in similar fashion, if I get the opportunity to do this as part of an upcoming project.

Maintenance and Management of Archaeological Sites in Practice (Nara Heijo Palace Site)

In the morning session we learned about the basic policy of maintenance and management regarding the Heijo Palace site, going over the fundamental plan of 1978 for preparation of the site, its basic

principles, the basic plan of maintenance, zoning, subsequent revision of the Basic Concept, plus changes to the reconstruction plan and changes accompanying the nationalization of sites such as Heijo.

We also learned about the preservation of structural remains (for un-excavated and for excavated sites), the principles of site maintenance as sustainable conservation, and also the various ways of expressing past features at sites (including two-dimensional displays, partial three-dimensional displays, and full-scale reconstruction). Other issues covered included the maintenance of the site and its service facilities as a public space, involving not only public facilities for display, but also restaurants, shops, rest rooms, and parking areas. In reality, management of a site includes both the maintenance of “hardware” (by which is meant the vegetation, structures, and buildings at the site), and of “software” (including, for example, the content of the displays). Other aspects of the long-term planning and maintenance of a site include the initial opening up to the public, its subsequent utilization, providing adequate guides for the public, planning various events, and considering future issues.

In the afternoon session we visited the archaeological site of Heijo Palace, to see how these principles have been put into practice.

Lecture and Workshop on the Documentation of Archaeological Artefacts

The morning session covered explanations of the tools that are required, and instruction in their method of use. Then, exercises in drawing the front view, side view, plan and cross section of pottery and other artefacts were done as practice. The primary objective of the stone tool measurement diagram is to indicate the old and new relationship created by removal of the surface. The ring fissures were also drawn, which are signs indicating the context of removed surfaces.

The tools used for drawing the pottery were pencils and erasers, triangles (used to measure the height and horizontal distances from a vertical line), straight edge rulers (used to measure horizontal distance from the measurement point to the triangle), and dividers (for measuring the distance between two points). Also, calipers are used to measure the thickness of pottery, and a contour gauge is used to copy the exact shape and contour of pottery.

In the afternoon session we were taken to visit the laboratories, and inspected stone artefacts and pottery collected from excavations, and preparation of these materials for museum display.

Introduction to Environmental Archaeology

In this lecture on environmental archaeology, the following topics were explained.

- Extant specimens

- Importance of comparative specimens in environmental archaeology
- Extant animal bone specimens for zooarchaeology
- Preparation of extant specimens
- Significance of specimen preparation
- Precautions concerning specimen preparation
- Obtaining animals
- Data obtained from specimens
- Storage and disposal of extant specimens

In addition to the explanations, we were given pieces of animal bone, with missing parts to be selected from a mixed assortment of bones, and worked to assemble the full items and name the animals and parts identified.

Lecture and Workshop on Photographic Documentation of Sites and Remains

The basic knowledge of cultural properties photographs was taught, beginning with an introduction, and discussion of the role and types of photographs of cultural properties. The types of cameras explained and shown were 35 mm single-lens reflex cameras, medium sized and large format cameras, and digital single lens reflex cameras. The focusing and effect of light direction were also demonstrated. Finally we were asked to photograph 10 shots each to test our knowledge of taking photographs, and the laboratory and work space were also inspected.

On-site Lecture on Utilization and Management of Sites in Practice

We were taken on a tour to Takatsuki city and its archaeological museum and sites, where we were given an on-site orientation to the foundation of a stone chamber, opened in 2007, and surveyed a park featuring a *haniwa* kiln site, opened in 2002. We also visited the museum showing the actual items and replicas of *haniwa* found during the archaeological excavations.

Maintenance and Management of Archaeological Sites in Practice (Imperial Palace Sites at Asuka and Fujiwara)

The museum in Asuka has displays devoted to different time periods of Japan, offering a chronological overview plus a focus on the local materials. The institute deserves high credit for its heritage presentation and management. The museum can boost interest in archaeology and conservation, improving site protection and preservation.

Introduction to Dendrochronology

Dendrochronology is based on the annual growth of tree rings and has the capability of being accurate to a single year. It has been playing an important role in determining the age of wooden cultural heritage in Japan. The object of analysis with dendrochronology includes not only archaeological

materials, but wooden art and craft items, and components of wooden buildings. Methods of measuring tree rings were demonstrated, as we were taken to the laboratories and shown the different techniques.

Site Visits to Yoshinogari, Dazaifu, Korokan and Fukuoka Castle in Fukuoka City

The conserved sites, and their museums focusing on ancient and archaeological materials, show different chronological periods of the Japanese past, presenting actual materials and replicas of the artefacts found during the site excavations. The methods of placing objects and excavation results were systematic and well arranged. It gives real meaning and interest of the places where the archaeologist and conservationist have worked.

Conservation of Heritage Sites

A brief presentation was given explaining this topic, based directly on the international conventions and standards that have been set. The sites on the World Heritage List number 704 for cultural heritage sites, 180 as natural sites and 27 mixed. The total of 911 properties are found among the 151 states that are party to the heritage convention.

The list of World Heritage in Danger was also presented. The total number of sites in danger is 34. An overview of the value-based management process covered heritage values, monitoring and evaluation, authenticity, integrity, an adequate protection and management system, deletion of properties from the World Heritage List, main risk factors, hazards, vulnerability factors, and so forth, which were discussed at length.

The need to mitigate disaster to the World Heritage was stressed, through reducing risks at World Heritage properties, international efforts in risk preparedness, identifying risks, and preventing disasters. The need to prepare for response in emergencies, and strategies for risk reduction at World Heritage properties were also discussed. Finally we were divided into four groups, choosing a project and noting the problems, advantages and disadvantages in relation to the Heritage site, and with discussions held between the individuals regarding their ideas and suggestions.

CONCLUSION

The knowledge gained from the training will be utilized in the best way possible in my project, which is called Lhuentse Dzong, a dzong and Buddhist monastery in the Lhuentse district in Eastern Bhutan. It is perched on the eastern side of the Kurichu river. The dzong was built by the Trongsa Penlop, Minjur Tenpa, in 1654 on the site of a temple built in the sixteenth century. It is the district administrative center and residence of the regional body of monks, with over 100 monks.

Tashidelek

(Thank you)

Cambodia

PHOEUNG Dara

I. Introduction

This is my first time in Japan, in Nara for the Training Course on Culture Heritage Protection in the Asia/Pacific Region 2010, on “Research, Analysis and Preservation of Archaeological Sites and Remains,” from 7 September to 7 October 2010. This programme has participants from 16 countries, including Bhutan, Cambodia, China, Fiji, India, Indonesia, Kazakhstan, Kyrgyz Republic, Laos P.D.R, Marshall Islands, Myanmar, New Zealand, Pakistan, Philippines, Sri Lanka, and Vietnam. When I was a student at the Faculty of Archaeology of the Royal University of Fine Arts from 1997 to 2003, I studied ancient Japanese history, but now I have the opportunity to be trained for one month and see with my own eyes the ancient cultural heritage sites, and especially to learn about management of the conservation, preservation and restoration of the ancient sites.

II. Importance and Content of the Training Course

This training is very important for conservation and preservation of the World Heritage sites and tangible and intangible cultural properties of my country. I gained a lot of knowledge from Dr. Gamini Wijesuriya, a project manager of the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), who explained about ICCROM’s work in his presentation on the research, analysis and preservation of archaeological sites and remains. I also learned about the 1950 law for the protection and conservation of cultural properties in Japan, the 1897 law for the preservation of ancient temples and shrines, the 2004 amendments to the cultural properties law extending protection to cultural landscapes and other features, and the 1968 law on city planning as presented by Prof. INADA Nobuko and SUZUKI Chihei. These laws are very useful for protection, conservation and preservation of archaeological sites even in the midst of widespread city planning and development. Japan has 14 World Heritage properties, with 11 being cultural heritage plus 3 natural heritage sites. My country, Cambodia, has only 2 World Heritage properties, and both are cultural heritage sites. The Angkor Archaeological site in Siem Reap province was inscribed on the World Heritage List in 1992, and the Temple of Preah Vihear was listed in 2008. From the training course, Japan seems to be a pioneer in the Asia/Pacific region for the management of conservation and preservation of archaeological sites, as led by the Nara National Research Institute for Culture Properties. In this training course, I did not see any international research team conducting archaeological research in Japan. In Cambodia, there are many international agencies working in cooperation with APSARA Authority on conservation, restoration, and research in the Angkor region, and Japan also is involved in several projects such as Japan-APSARA for the Safeguarding of Angkor (JASA), the Sophia University Angkor International Mission, and the work of the International Site Research Section, Nara National Research Institute for Cultural Properties.

During this one-month training course, I gained new knowledge from different Japanese experts who have more than 30 years of work experience in the field of management of archaeological sites, conservation, preservation and restoration. The Nara Heijo Palace site dates from the eighth century AD, and has no surviving wooden structures, but does have their vestiges as archaeological remains such as postholes of wooden pillars and other features. Part of the ancient palace has been reconstructed in order to add to its value as a historic site and to help people know their own traditional style of building. In my country, there is no reconstruction of ancient monuments yet, so we usually undertake conservation, preservation and restoration work. We have many temples that have collapsed from human and natural causes, so we usually do conservation, preservation and restoration. During this training I learned to take photographs using additional lighting arrangements in order to produce clear pictures of ceramics, other artifacts, and excavated trenches. However, my department doesn't have the professional cameras and other equipment for taking such photographs. We use only small digital cameras to take photographs of ceramics and other artifacts from archaeological excavations. For training in photography, I performed well among the 16 participants when the lecturer, NAKAMURA Ichiro, gave us the results of our taking photographs. In drawing artifacts, I learned to understand how to draw the inner patterns of ceramics. I did not know of this technique of drawing before at my workplace, as my colleagues in my department usually follow another way of drawing, as trained by the French experts.

I visited the Nara National Research Institute's ceramics storage, and the wooden and bone conservation laboratories which use the modern technology of x-ray computer tomography, with which we can see the interior structure of objects in three dimensions. Those machines can analyze artifacts that archaeologists find during the excavation of sites. My department does not have wooden or bone experts. If we find some pieces of wood we need help from international experts who work in the Angkor area. Recently, we found an ancient wooden boat south of the Angkor area, close to the Tonle Sap lake. Now we keep it in the moat of Angkor Wat temple. We sent a piece of the wooden boat to France for analysis through cooperation between APSARA Authority and the École Française d'Extrême-Orient. We know that archaeologists must conduct joint research together with other experts, including natural scientists, because APSARA Authority doesn't have enough experts and the equipment to analyze archaeological findings. So we need to cooperate with international teams working in the Angkor area to help in such analysis, though the Ministry of Culture and Fine Arts has several experts in human bone, animal bone, metals, and in ceramic reconstruction and stone conservation.

Environmental archaeology is a field that studies the mutual effects of man and the environment by reproducing the ancient environment around the site. For example, Mr. YAMAZAKI Takeshi showed data from a shell midden of 7,000 BP in Japan. I am interested in this site because it is a large

archaeological site similar to a prehistoric Neolithic mound in Cambodia discovered in the late nineteenth century at Samrong Sen. Samrong Sen is situated around 22 km east of the provincial port of Kampong Chhnang. It lies on the east bank of the Stung Chinit, a tributary of the Tonle Sap. It has yielded many polished stone tools, but no proper excavation has ever been conducted at the site. These stone tools are now scattered in different museums, especially in Europe. But at this site only polished stone tools, beads and metals have been found. No discoveries have been made of human or animal bone at Samrong Sen, as at shell middens in Japan.

I visited the *haniwa* kiln site in Takatsuki city, and the tour was guided by Mr. KANEGAE Ichiro who is director of the city's cultural properties division. This kiln site is an open site museum showing visitors ancient culture. In my country, the Angkor area has many kiln sites, such as the Toul Mrech kiln site at Koulean mountain, and the Bakoung, Sorsei, and Tani kiln sites. The Tani kiln site has just been opened to show people different kinds of ceramics and indications of a kiln site. We do not have an open site museum there yet but we will in the near future. This museum building is funded by Nara National Research Institute for Culture Properties. These kiln sites have similar architectural structures and shapes, and they were built on the slope of a mound. The shapes of kiln sites in Cambodia are big and wider than Japan's, which are oval and longer in shape. The opening of museums on the archaeological sites as exhibition halls is very important as it helps people understand the ancient culture, and the actual structural remains which are visible just as they were discovered through archaeological excavations, as in examples such as the excavation site exhibition hall at the Nara Palace site, showing the postholes of wooden structures and the drainage system, the northern burial mound at Yoshinogari in Saga prefecture showing how the deceased were placed inside jars as coffins with lids, the joints being sealed with clay before being buried in the earth. This type of burial using jars is frequently discovered in northern Kyushu, especially in Saga and Fukuoka, and is a unique method of burying in the past. It was my first time to see large burial jars like these.

When I visited the exhibition at the archaeological excavation site of Korokan in Fukuoka prefecture, from the later half of the seventh to the eleventh centuries (Asuka to Heian periods), it was interesting to find Islamic ceramics unearthed there; these materials indicate there was international exchange between Japan and certain Islamic states in ancient times. In Cambodia, we have also found Islamic ceramics at Prey Monti temple of the reign of the King Jayavarman III (834–877), and the site was excavated by the École Française d'Extrême-Orient.

The Kyushu National Museum in Fukuoka prefecture undertakes comprehensive treatment, including the collecting, preserving, exhibiting, and researching of various cultural properties such as archaeological, historical, artistic, folkloristic and ethnological materials. The museum has many resources for the analysis, conservation, restoration and preservation of these materials, for example by using X-ray CT, 3-dimensional scanning, painting scanning, plus storage facilities to preserve

paper, and so forth. Such equipment is useful in preserving and restoring artifacts. Another big museum is the National Museum of Ethnology in Osaka. This museum carries out comprehensive research with about 60 academic specialists in ethnology and other related fields. It hosts an extensive collection of materials, about 250,000 objects total from all over the world. Of these about 12,000 items are on display in the regular exhibit. One of the main focuses of the museum is to provide accurate and updated information about various societies around the world to the general public, in order to facilitate understanding of peoples with different cultural backgrounds living together in the world.

The seventh-century burial mound of Ishibutai in Asuka is larger than any tomb that I have seen before. It may be related to the Soga clan, which became powerful after the beginning of the sixth century, and such burial mounds were built by numerous powerful people at the time, including emperors and other members of the imperial family. Ishibutai has an imposing crypt with a horizontal entrance, built from massive boulders of great size, estimated to weigh up to 75 tons, forming a long chamber with a high ceiling. This tomb is also surrounded by a dry moat. There are no tombs of such size known in Cambodia yet. Besides the Ishibutai tomb, I visited the Imashirozuka burial mound in Takatsuki city, a national Historic Site, which was built in the first half of the sixth century, and the Ama Miyayama burial mound (mid-third century) at Takatsuki Park Cemetery. Located 125 meters above sea level, halfway up Amayama mountain and above the Ama archaeological site, they found five bronze mirrors including two triangular-rimmed mirrors. Another site is Yoshinogari, a Special Historical Site in Saga prefecture, which has excellent reconstructed wooden buildings, and preserves and conserves the Yoshinogari settlement of the Yayoi period, a symbol of Japan. The Yayoi period spanned approximately 600 years between 1,700 and 2,300 years ago. During this period, it is said that countries emerged for the first time in Japan, and as such it is one of the most important periods in Japanese history. Bronze mirrors were also found at this site. These two bronze mirror sites in Japan are from the same period as some bronze sites in Cambodia. A site in Srah Srang, located near Banteay Kdei temple in Angkor, was excavated by the French under Bernard Philippe Groslier in 1963, and a burial containing bone was found with several bronze mirrors. The bronze mirrors look like the ones from the Ama Miyayama burial site. There are many burial sites found in Cambodia, such as the Phum Snay site (in Banteay Meanchey Province), Prohear site (in Prey Veng), Krosang Thmei site (in Banteay Meanchey Province), Svay Chek site (in Banteay Meanchey Province), and Kok Tameas site (in the Angkor area, Siem Reap Province). However, we have not found any big tomb fit for a king like Ishibutai yet. Some researchers have suggested that during the Angkor period, people may have cremated the bodies, rather than burying them in tombs. Regardless, the ancient wooden architecture of temples in Cambodia were roofs built to cover structures of sandstone, and the doors of temple gates, also used in combination with sandstone. Since we do not build these big stone temples anymore, we try to preserve, conserve, and restore them to a stable condition.

Presentations on the 16 participants' countries covered various topics such as World Heritage archaeological sites, national culture and historic heritage sites, landscapes and intangible culture. Some presentations showed the problems and needs for cultural heritage protection and conservation. It is very important to get more knowledge that I did not have before about such archaeological sites, especially their management as related to conservation, preservation and restoration, for World Heritage sites as well as national cultural heritage properties, plus intangible heritage of various ethnic groups. For example, the Indonesian participant showed that his government has used tax incentives to promote preservation among owners of colonial buildings, which I think is very good strategy for the government of Indonesia in trying to keep the original houses in Jogjakarta. Through studying and interacting with other participants over the month, I also came to know better each country's culture, religion, language and style of living.

From this one-month training course, I gained a lot of experience in conservation, preservation, restoration and reconstruction, that will improve my work related to the cultural World Heritage sites, and the national cultural heritage properties and landscapes in my country. It was useful for me to learn additional skills applicable to archaeological work. I will share my experiences with my colleagues and keep of the course documents in the APSARA Authority's library.

III. Acknowledgments

I would like to take this opportunity to profoundly thank Mr. NISHIMURA Yasushi, Director of Asia-Pacific Culture Centre for UNESO, Dr. Gamini Wijesuriya, Project Manager, Site Unit of International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), Ms. INABA Nobuko, and Mr. SUZUKI Chihei. I would also like to thank all the lecturers from the Nara National Research Institute for Cultural Properties: Mr. SHIMADA Toshio, Mr. ISHIMURA Tomo, Mr. MORIKAWA Minoru, Mr. KUNITAKE Sadakatsu, Mr. SHIBA Kojiro, KANEDA Akihiro, Mr. MATSUI Akira, Mr. YAMAZAKI Takeshi, Mr. NAKAMURA Ichiro, Mr. SUGIYAMA Hiroshi, Mr. KOHDZUMA Yohsei, and Mr. OKOCHI Takayuki. I also like to thank Mr. SHICHIDA Tadaaki at Yoshinogari site in Saga Prefecture, Mr. AKASHI Yoshihiko and IMAZU Setsuo at the Dazaifu site, Mr. YOSHITAKE Manabu at the Korokan site and Fukuoka castle in Fukuoka prefecture. I like to extend my profound thanks to Mr. TAKAHASHI Wataru, Deputy Director of ACCU and Mr. KOBAYASHI Ken'ichi, Ms. KATO Naoko, Ms. HORIKAWA Kazuko, Ms. NISHIDA Michiko, Ms. OTANI Yasuko, Ms. SHIDA Sayuri, and Ms. HATA Chiyako. Lastly, I would like to thank Ms. KIMATA Akiko, Ms. LEE Jihee, Mr. TAGASHIRA Naoki and Mr. HANEDA Tomohiro who took care this training.

China

MA Chaolong

I am very glad to have had the opportunity to participate in this 2010 training course in Nara on cultural heritage protection in the Asia/Pacific region, on the theme of “Research, Analysis and Preservation of Archaeological Sites and Remains,” as one of 16 participants from the Asia/Pacific region. The one-month study course was an unforgettable experience and left me deeply impressed. During the training course, there were many diverse training methods for us to look at with experts giving theoretical direction and practical on-site teaching, emphasizing the application of the theoretical knowledge. Some experts introduced advanced equipment and materials to us, broadening our outlook with lively teaching. I received much knowledge about methods for the preservation, maintenance, management, and development of historical sites.

I. SUBSTANCE OF THE TRAINING

The objective of this training course was to provide participants with knowledge for analyzing and protecting archaeological properties, with principles and methodologies for the conservation, development, and utilization of archaeological sites. The course gave the participants the opportunity to study from experienced experts and colleagues.

The final purpose of the training course was to lead the participants through a program of lectures, practice and on-site study which will inspire them to apply the knowledge and skills learned on the course to their own conservation work.

Lectures on Management and Conservation of Cultural Heritage

Through the lectures, I learned the system of cultural heritage management in Japan, including the constant efforts to improve knowledge of principles, methodologies and techniques for the conservation and restoration of cultural properties. I realize that risk to cultural heritage is a global problem, and encompasses environmental as well as human factors. All we can do is try our best to apply effectively mitigating measures to reduce the risk to heritage. This study provided me an excellent opportunity to learn and develop my understanding about the need for risk management of cultural heritage.

The lecturers were experts in their fields, such as the scientists in conservation and restoration. The training course provided new techniques involving specialized scientific equipment for different purposes in the study and analysis of sites. For example the idea of applying geophysical prospecting

methods to survey the site by using radar, electromagnetic equipment, along with GIS and GPS, allows exploring the potential of the site before excavation, so the work can be done precisely. In the stage of excavating in the field, scientific methods are still involved in the case of environmental archaeology, which can interpret the evidence obtained from archaeological excavations.

Workshop Study

During the training course I had the chance to participate in practical workshops, in areas such as conservation science for archaeological sites and remains, documentation of archaeological artifacts, and photographic documentation of sites and remains. These workshops gave us the chance to draw, measure, investigate and view conservation practices in the field. These sessions added greatly to my knowledge about preservation and conservation in practice.

There are multiple modern science and technological techniques that can be applied to aid in the preservation and restoration of cultural properties, such as 3-D, X-CT, XRD, XRF, IR technology, and the analyses of environmental archaeology and dendrochronology. These technologies and practices play an important role in the conservation of cultural properties. Environmental archaeology is a good way to obtain knowledge about the habits of the inhabitants of a site, and it was the first time that I have encountered the method of dendrochronology which can be used in many fields to research the period of architecture and historical remains. Many of these technologies are related to my field of research and should be learned and utilized.

When I studied at the Nara National Institute for Cultural Properties, the cooperation based on division of labor among the staff, and the application of advanced equipment in the field of conservation of cultural properties, made for an enjoyable experience which can also be utilized in my work.

The training course was a good chance to diversify my experience and broaden my views. While improving my ability to understand the issues, I admired the researchers' knowledgeable, rich experiences in excavation, conservation, and international exchange. At the same time, the devotion and precision of the experts have set good examples for the participants.

Study Tours

Utilization of a historical site is a way to give information to the public about the site. Besides the presentation of replica buildings, the government may build exhibits of artifacts that were found at the site. How to develop and utilize historical sites while adhering to the principles of conservation and authenticity is not so easy to achieve. I have visited many archaeological remains in Japan on study tours after learning in lectures about the development and utilization of archaeological sites in Japan. I have identified as an important value the necessity of balancing conservation with utilization of the

site by the public. How to meet popular demands is one of goals for the work in Japan. I also studied the various ways of conservation of site remains in the study tours.

This training course also gave me a chance to meet experts from different countries of the Asia/Pacific region, which meant I could exchange ideas on conservation and management of cultural properties with other participants.

II. CONSERVATION AND MANAGEMENT CONCEPTS OF ARCHEOLOGICAL SITES IN JAPAN

During visits to some important ancient archaeological sites and remains, such as the Nara Heijo Palace site, the Yoshinogari and Korokan sites, the local site experts introduced the process of excavation, the post-excavation conservation work and the concepts used in making the exhibits of the historical sites and remains. Through these site visits, I now understand the conservation and management concepts regarding archaeological sites and remains in Japan to a certain degree.

The government applies such methods as replicating the remains of archaeological features on the surface and introducing information through various media to convey the magnificence of the site and the remains, and their place in history, so that the public can fully comprehend the value of the cultural properties. The experience enriches the people's experience and creates a demand for more cultural property preservation from the public. For example, in the process of showing the Heijo Palace site, the government's effort to coordinate the exhibit, the residents, and the surrounding environment, have made the public satisfied with the exhibit and they enjoy visiting the site. Though the buildings may be not exactly like original ones, the Heijo Palace site reconstruction project has obtained good results. The Heijo Palace site is in a good condition of conservation, but there are also some problems at the site, such as the railway in the protection zone.



Fig. 1 Harmony between people and the Heijo Palace site



Fig. 2 Railways across the Heijo Palace site

III. APPLYING THE TRAINING COURSE TO CULTURAL HERITAGE PRESERVATION IN MY WORK

The lectures from more than twenty experts and researchers enriched me in the theoretical foundations of cultural heritage. I have benefited from the lectures as I have gained an understanding of the advanced information and technology used in site preservation as well as international and Japanese views. The course has helped me attempt to apply dialectical and rational thinking on preservation techniques used for historic sites and remains. Comparing the concept of exhibitions and conservation on cultural heritage sites between China and Japan can help me to think about these questions more deeply. The serious and rigorous scholarship of the lecturers about archaeology left a deep impression on me. Through the 2010 training course in Nara on cultural heritage protection in the Asia/Pacific region, researchers from China, Bhutan, Cambodia, Fiji, India, Indonesia, Kazakhstan, Kyrgyz, Laos, Marshall Islands, Myanmar, New Zealand, Pakistan, Philippines, Sri Lanka, and Viet Nam discussed and exchanged their experiences and ideas, which sparked new ideas and debates while deepening the friendships that formed during the course. The course showed me that it is possible for us to communicate and cooperate on cultural heritage in the future. I am sure that the training gave me not only new ideas on how to preserve historical remains but also ideas on how to apply these perspectives and techniques to my work.

The Longmen Grottoes is one of the three big art treasure houses of stone carving in China, which was inscribed on the World Heritage List in 2000. The Longmen Grottoes has also been afflicted with many types of damage for over 1,500 years. Issues such as weathering and deterioration threaten the heritage value of the site. The factors which adversely affect the heritage are as follows:

1. Physical factors. Wet and dry, freezing and thawing, solar radiation, wind and rain, crystallization of salt, etc.
2. Chemical factors. Acid rain, leaching, hydration, oxidation, etc.
3. Biological factors. Moss, lichen, mold, root of plants, insects, animals, etc.
4. Natural disasters. Earthquakes, floods, wind storms, etc.
5. Artificial factors. Tourism, graffiti, etc.

These adverse factors have been threatening the preservation of cultural heritage for a long time, and it is hard for researchers to know how to deal with these problems and perform the requisite conservation and restoration work at the Longmen Grottoes.

For a long period, we had placed our efforts on conservation for rescue. In recent years, we have been undertaking daily maintenance and engineering conservation which takes up most of our time. As a result of the daily maintenance and engineering conservation work, the grottoes have been in a good

and stable condition. However, there are many challenges to work on such as the weathering of statues, leaking in the caves, and increasing tourist pressure, and further research is necessary to resolve such problems. Along with inscription on the World Heritage List by UNESCO, international and bi-lateral collaborations have become more and more frequent and effective projects such as the UNESCO Longmen Grottoes Conservation and Restoration Project, lasting for several years, have played a significant role, as well as civil collaboration projects on the site. Benefiting from this, the staff of the Longmen Grottoes conservation center have all attended different training courses or other study opportunities over the years. However, there are many difficulties for the development of conservation practices at the Longmen Grottoes, such as a shortage of capital and the lack of advanced equipment. A challenge for me is to learn how to make good use of new technological equipment (3-D, X-CT, XRD, XRF, IR) in conservation work at the Longmen Grottoes.

Due to the acceleration of the deterioration and damaging factors, I feel that the work is very urgent and serious and that it is my responsibility to make sure this work is undertaken as soon as possible. We have to apply new methods and use collaboration to solve the problem, and encourage all kinds of international societies to take part in the conservation at the Longmen Grottoes, a heritage which belongs to mankind all over the world and contributes to the history and memory of human beings.

IV. INSPIRATION AND THINKING

China and Japan are neighboring countries and have communicated with each other for more than 2000 years. From the Qin and Han dynasties to the Tang and Song dynasties, China and Japan had been friendly neighbors, and in that period there were close political, economic, cultural and personnel exchanges between China and Japan. In the study tour, from the bronze dagger and mirrors at the Yoshinogari site to the ancient Chinese porcelains at Korokan, I saw so many cultural properties related to cultural exchange between the two countries which encouraged me greatly. The Chinese and Japanese should be engaging more and more in communications regarding the future, and I will do my best to accelerate communication and cooperation in many fields, especially in the conservation of cultural heritage. As for the Longmen Grottoes, we have had successful cooperation in past years with the government and organizations of Japan. With this good beginning, I am sure that it will be a happy job for me to carry on.

I was honored to have taken part in this 2010 training course in Nara on cultural heritage protection in the Asia/Pacific region. Through listening to the lectures by experts and the face-to-face discussion with researchers from different countries, the training course has broadened my views in many important fields. When I go back to China, I will attempt to convey my impressions and experiences to my colleagues and the Chinese public, as well as applying the ideas and technologies learned on the course to the Longmen Grottoes. As I use the advanced instruments, equipment, and materials for

protection in research and conservation works, the training will be have a beneficial effect at the Longmen Grottoes in the future.

V. ACKNOWLEDGMENTS

I would like to express my gratitude to ACCU Nara, ICCROM, Nara National Institute for Cultural Properties, Agency for Cultural Affairs of Japan, for offering this useful training course, and to all the experts who gave the lectures and workshops. Also I would like to give my grateful thanks to all the ACCU staff members who organized this successful training course and took the responsibility of taking good care of all the participants, making our stay in Japan comfortable. I thank all of the participants in unison.

Fiji

Ulaiasi MOTONIKUMI

Introduction

Different countries have different cultural backgrounds, and use different practices and restoration techniques to preserve their cultural heritage. As a developing country, we are very fortunate to be invited to this one month training course in one of the richest and oldest countries in the world, Japan. Fiji has learned a lot from this one month of training.

This report will mainly focus on the potential contribution of this training course, in terms of how it can be applied to my actual work. There are also some suggestions and comments which I believe can be useful to the organizers for future training courses.

Comments on the training program's lectures and site visits

The opening ceremony and orientation were well organized, and I as a participant was really satisfied and got a glimpse of how the actual training would be done. And the presence of the lecturers at the opening ceremony was really vital, allowing us to get some information from them before the actual training began.

Mr. Gamini Wijesuriya's presentation on the "Global Trends in Conservation of Archaeological Sites" was instrumental. He was an effective speaker and for me all the topics and discussions he elaborated on were really useful and vital for my work. Even though we are still a developing country, we are fortunate to be informed of these important global trends in conserving archaeological sites.

The two days of country report presentations by fellow participants were really interesting. I was able to get a fair idea of their restoration and preservation works in their different countries and I believe that it will help me a lot when I get back to Fiji. I was also able to compare my work with theirs, and I am happy that I have found solutions to some of our problems from their country reports. I have made the most of the allocated time so that I could get their techniques and the restoration styles used by them. I also shared Fiji's position in the protection of intangible cultural heritage under the research framework used in my country.

Professor Inaba's presentation on legal protection for archaeological sites was very important. As we lack adequate legal protection systems for the protection of archaeological sites, I found the professor's lecture interesting and worthwhile for my country. As a participant I was really impressed that she was able to deliver so much information within her allotted time.

Mr. Suzuki Chihei, a specialist in the monuments and site division under the Agency for Cultural Affairs, gave an interesting introduction to the cultural property protection system in Japan, and Japan's conservation and utilization of cultural heritage resources. He elaborated on the protection system, the procedures for world heritage selection, on cultural landscapes, and on the details when we asked questions. I believe it will be vital for all of us especially, as this is the core part of this training where we study the techniques and restoration methods used in Japan. It is very interesting to know that Japan is paying two million Yen per year to national human treasures for the revitalization of their traditional knowledge. This shows how much the government is concerned about heritage.

Mr. Shimada Toshio and Mr. Ishimura Tomo, both with the Nara National Research Institute for Cultural Properties, gave a detailed lecture on the "Maintenance and Management of Archaeological Sites," focusing on the Nara Heijo Palace site. We were able to witness restoration work at the Heijo Palace still under progress. They discussed the basic policy of maintenance and management of the Nara Heijo Palace site, the preservation of structural remains, the realities and challenges of maintenance, problems of management and future issues and plans in regards to restoration work at the site. It was really interesting as I can apply this to my work and can also help decision makers in Fiji regarding the restoration method which needs to be undertaken. The restored buildings bring a sense of reality of how the palace looked like at that time. With the exhibition area I think Japan is using the right technique and I will try and convince our decision-making bodies with what I have witnessed at the Heijo Palace. Great work!!!

Three other experts from the Nara Research Institute, Mr. Morikawa Minoru, Mr. Kunitake Sadakatsu and Mr. Shiba Kojiro, gave inspiring presentations on the documentation of archaeological artifacts. They elaborated on the method and procedure for stone artifact drawings as well as pottery drawing. For three days we were able to draw using the skills and technology available. We were also able to visit the storage rooms and labs. The information from these three gentlemen was really useful and can help my country in various ways.

Mr. Kaneda Akihiro updated us on the archaeological prospection of sites and the modern technology used in Japan for archaeological surveys. The new machines were useful for accuracy and understanding the context of the site. It might be difficult for us Fiji to get some of this equipment, but the explanation was valuable.

Mr. Yamazaki Takeshi, a specialist in environmental archaeology, elaborated on the animal bone specimen preparation method. We were given a chance to identify specimens after the lecture. His work and presentation were interesting.

Another interesting lecture was given by Mr. Nakamura Ichiro, an expert in formal documentation of sites. I was really impressed with the new technologies used in the photographic documentation and techniques. This will really help me as I am engaged in the photographic documentation of sites in Fiji. We may not have all the technology used in Japan, but from the lecture I was able to grasp aspects which will help me and my fellow colleagues back home.

In addition, Mr. Kanegae Ichiro of the Takatsuki City Board of Education gave us a brief on-site summary lecture on the utilization and management of archaeological sites in practice. We were able to visit the Haniwa Factory Park at the Shin'ike kiln site. They maintain original excavated portions of the site for exhibition, and have restored buildings on the site, which I found most interesting. I think it is a good method of protection, and at the same time the public can witness the original excavated site.

On September 24, Mr. Sugiyama Hiroshi gave a presentation on the maintenance and management of archaeological sites in practice in the imperial palace sites in Asuka and Fujiwara.

The following week Mr. Kohdzuma Yohsei from the Conservation Science section gave us a very good presentation on conservation science of archaeological sites and remains. He also elaborated on the conservation technologies for archaeological sites and artifacts, including conservation treatment for organic and inorganic artifacts. I believe this is very important for all of us.

There was a presentation on dendrochronology by Mr. Okochi Takayuki, the head of the dating section at the Nara Research Institute. For me it was really complicated because I had never heard of the word itself and I am not closely involved with the topic. So it was really interesting and I was impressed by the modern technology used to determine the actual dates of remains. Unbelievable!!!

From September 29 to October 1, we went for a study tour around the country. We visited the Yoshinogari, Dazaifu, and Korokan sites, and Fukuoka castle. There were many interesting things in the sites such as restored settlements and village gates and walls. It brings back the originality of the past to the local people. Everyone can get a good idea of how it may have looked like in those days. The presentation of the sites was good, such as the burial mounds. The restoration work in those sites was superb.

In the last two days of lectures Mrs. Montira Unakul from the UNESCO centre, Bangkok, summed up the one month training program with the topic "Future Issues on the Preservation of Sites and Remains." She focused in detail mainly on risk management and utilization for the public. For me this was the most interesting topic, when I asked the most questions, and I am very happy that all my queries were answered as this will help me solve problems back in Fiji. There was plenty of time for

group discussions which I found to be good. I was able to identify our areas of weaknesses after group discussions with the explanations given by Mrs. Montira.

Suggestions

Overall the whole training program was really good and well organized, but I suggest that people who are in public exhibition areas, such as sites and parks, should be provided with English training, so that visitors may get more of the information they need.

Everything else was OK during the one-month training program.

Acknowledgment

On behalf of the Fiji Government I would like to express our sincere gratitude to the organizers of this one-month training course. We are so thankful to be part of this training and we really need more of it.

Special thanks are due to the organizers, especially the ACCU staff of Mr. Nishimura, Mr. Takahashi, Mr. Kobayashi, Ms. Kato, Ms. Horikawa, Ms. Nishida, Ms. Otani, and Ms. Shida. Thanks go also to the interpreter, Ms. Hata Chiyako, and the various tutors, Ms. Kimata Akiko, Ms Lee Jihee, Mr. Tagashira Naoki, and Mr. Haneda Tomohiro.

To all the participants and lecturers, and other information sources: May God bless each and every one of you.

Vinaka vakalevu

(Thank you)

India

Bhuvan VIKRAMA

In this final report I would like to talk about what was taught and in what order, and whether it was new information to me or just a refresher for my existing skills and store of knowledge, while suggesting along the way some points which I think should have been part of the curriculum of this course, but unfortunately were not. Secondly, I will give my personal evaluation of the programme. Finally, I will draw a comparison with India.

Course Content

The training on 'Research, Analysis and Preservation of Archaeological Sites and Remains' came to an end a bit too suddenly leaving an insatiable feeling and a hunger for more on the core subject. I came here with my own understanding of archaeological sites and remains but what I found did not conform to it. I take this partly as a result of different terminology being used in the respective countries. It is very important that UNESCO, especially ACCU, attempts to formulate a set of unified terminology that is widely circulated among the member countries.

The course began with 'Global Trends in Conservation of Archaeological Sites'. Though it was very informative and enlightening, yet it appeared as if the cart was put before the horse. Nevertheless, it was good and educational to hear Gamini Wijesuria's presentation.

The idea of presentations of country reports by the individual participants was interesting and interactive as each individual was introduced to 15 other countries, their cultural heritage and the methods and efforts to preserve it.

The lecture by Prof. Inaba Nobuko, of Tsukuba University, giving the general introduction to Japanese architecture and the development of the concept of heritage protection legislation, was very interesting and engrossing.

The introduction to the legal provisions prevailing in Japan, and the development of the notions such as cultural properties, scenic beauty, cultural landscape, etc., was interesting to hear. All these things are being done in India too, but they are known or referred to by different terms.

Thereafter the course provided lecture/practice on 'Documentation of Archaeological Artefacts,' i.e. pottery drawing and tool drawings, which again was very useful and came as a refresher course to me, but in my opinion it was not complete, as it asked the participants to draw the complete pots.

Participants should have been given potsherds to draw and then told about the methods and techniques to calculate the diameter and position the potsherd in its proper location, etc., which are more important as excavations yield more potsherds than complete or nearly complete pots. It would have been of greater use to most of the participants. Further, the documentation part should have incorporated not only the drawing and measurement, but also the method of context recording at the time of actual excavation.

The tour of the labs was really interesting. It was great to observe the available facilities and to appreciate the work ethic.

The photography class was thorough and done with a professional touch. The equipment and studio set were mesmerising and enviable. I know I can only admire such a set up and wish I could also have such facilities back in my country.

The archaeological prospection of sites was a useful study which told the importance of prospection or searching around for signatures of ancient or archaeological traces. The Ground Penetrating Radar (GPR) and magnetic surveys are good tools but they are cost intensive and not easily utilised at most excavations. While I have indeed been using GPR at my site, Ahichhatra in India, it is not always easy to procure such equipment for most archaeological excavations. However, the information about the availability of various technologies and their possible application in archaeological investigations is very important and useful for future consideration.

The lecture on environmental archaeology was interesting but was only introductory in nature, which I think is not sufficient for such a high level training programme. Identification of species of animals or plants from the fragmentary bones or floral remains is fine, but at the same time it requires a certain specialist and hence it is not in the purview of the archaeologist. It would have been interesting to learn the ways of collecting such samples and preserving them until they are analysed by the experts. There was also insufficient information as to what and how many types of inferences may be drawn from such floral and faunal evidence, how they will help in reconstructing the paleo-environment of any given region, and also how the palaeo-environment could affect the development of the specific culture or cultural equipment of that site or region.

The introduction to dendrochronology, though not new to me as concept, was interesting as it also told the history of dendrochronology as well as the process of calculating the date. But unfortunately the Indian climate and the nature of the soil do not preserve wood in archaeological contexts, hence dendrochronology has little use in the Indian scenario. However, I could not get the answer to my query as to 'what is the difference or relation between the growth rings of a stem and branches of the

same tree? Do they show the same pattern of annual growth?’ I would still like to have some more information to satisfy my understanding.

Lectures on the conservation of archaeological sites and remains were good and familiar, so far as the purpose and the end result was concerned. The difference in factors or agents of deterioration and the material of which artefacts are made in various countries makes the approach to conservation and preservation different. As a philosophy and concept, conservation in both countries progresses along the same lines. Natural phenomena such as ground water table fluctuation remains more or less beyond human control in both countries. However, raising the ground level by land-filling for reconstruction is a concept which did not appeal, because after some time, say one hundred years later, these reconstructed buildings will also become historically important and need conservation. Reconstruction appears good for the present but when viewed from the perspective of posterity it may pose a problem, and further, the original materials which are reburied below are not tested for stability and preservation under the reburied condition, because the environment has already changed.

The study tour to various cultural properties like the Haniwa Factory Park and pottery kiln site, Imperial Palace sites at Asuka and Fujiwara, the Yoshinagori, Dazaifu and Korokan sites, and Fukuoka castle etc. was a treat to the academic appetite but with a lingering aftertaste from the replicas. It may be good strategy to bury the original archaeological surface under a layer of 80 cm to 100 cm of soil cover, but to erect full-scale replicas is a different case. These exude a modern feeling and fail to generate the sense of history within the onlooker.

The research facilities that these different institutions have are really unparalleled. I was literally mesmerised by the display of technical and scientific equipment and gadgets. The worst part of the training was that I could only see these tools but could not get the feel of working with them. I would have appreciated if at least some practical demonstrations were given to us with X-Ray radiology, computer tomography, rapid prototyping (3D scanning), etc.

Visits to the Asuka Historical Museum, the National Museum of Ethnology and the Kyushu National Museum clarified my concepts about real museums capable of carrying out all their roles, including research, display and dissemination of knowledge to students and visitors alike. All of the museums are unique in their categories. I liked the concept of having all the research facilities under one roof with specified areas for each section.

Dr. Montira Horayangura Unakul from the UNESCO office, Bangkok, introduced the concepts of risk management at the heritage sites and the public utilization of these sites in a very simple but effective manner, drawing in all the participants into group activities and making them think and decide upon the given problem. The two days with Ms. Montira were very interactive and educative as well

interesting, also because after a long gap since Gamini Wijesuria and Inaba Nobuko, it was an opportunity for direct dialogue with the lecturer and that perhaps made it ever more enjoyable.

My Opinions/Views

1. The training was more on theory than practice (except for the pottery and tool drawing), and was more or less just an exhibition of facilities available at the different institutions. I would have liked it the other way around.
2. The training could have been more precise and effective had it been given directly in English rather than through translation. In effect, it took twice the time for theory, as the translation consumed half the time. This time could have been utilised for either practical sessions or even for teaching beyond just the basics.
3. The training did not include the main field techniques, namely archaeological excavation procedure, trenching, section drawing, plan drawing, the type of excavation methodology adopted, *in situ* documentation of archaeological finds, collection of samples for scientific studies. It mainly concentrated on the archaeological artefacts recovered from excavation and on lab work, which basically is the secondary activity, while the primary recording is to be done at or during the excavation.
4. Reconstruction, the way it has been done, is good but for the present time, there seems to be no strategy as to its status after some fifty or one hundred years. Raising the level of the site or mound by almost one metre amounts to changing the land feature and affecting the interventions in the ancient environment. My queries on this point remain unanswered.
5. Further, there seems to be no fixed criteria as to what should be declared a cultural or archaeological property. Even the terms such as ‘cultural landscapes’, ‘monuments’ (as living animals are also designated as monuments), and ‘cultural property’ (as primeval forests are also designated as cultural property) lack proper definition.
6. The conservation of archaeological sites, it appears, is still under experimentation. There appears to be no national policy on conservation. Making an excavated site into an *in situ* museum exhibit appears to be very popular in Japan, which I think is appreciable. It is good for such sites where only the traces of structures are found, but at sites where huge structures are unearthed, making a shed or even reburying may also not be the right approach. It is cost intensive and so cannot be applied in many countries including India.

Current Archaeological Practices and Status of Research in India

India has a long tradition of archaeological investigations and research, which has its beginnings, however modest they may have been, in 1784 when the Asiatic Society was established with a view to study the relics from India's past and make the public aware of the antiquarian wealth of India. Soon, in 1814, a museum was organised to house the findings of the Society. In 1800 Francis Buchanan was appointed by Marquis of Wellesley to survey the Mysore area, and later he surveyed the present states of Bihar and Uttar Pradesh in 1807. Conservation and repairs, though not thought of as important activities, were begun by 1807 when monuments like Taj Mahal, Fatehpur Sikri and Akbar's Tomb were repaired in minor fashion. In 1810 came the first legislation as Bengal Regulation XIX, which was perhaps the first attempt to make the government intervene in the case of risks to a monument. Thus, by 1810 India had almost all the faculties of archaeology well in place, and the first excavation was not far to come, in 1830, when the Manikyala stupa (now in Bangladesh) was excavated.

Gradually the methodology and techniques were improved, and explorations, excavations, surveys, conservation works, documentation and research were carried out in larger measures. However, the methodology was by no means scientific by modern standards, yet they did their best to arrest the further decay of the monuments. In 1915 Sir John Marshall framed the conservation manual defining standards and principles for the conservation of monuments. Several cultures and ancient sites were brought to light through excavations. During the 1940s India experienced scientific input in the field of archaeology when Sir R.E.M. Wheeler introduced new methodology.

In the field of conservation, India has an established policy. Since the country has a variety of monuments made of different materials, treatment also accordingly varies. The Archaeological Survey of India is the nodal agency and the custodian of all archaeological heritage in the country, and thus has the onus of conserving the monuments under its jurisdiction, for which the department has a trained work force and defined skill set. Over the long history of development of conservation, India now has settled for minimal intervention in the monuments, just enough for arresting the decay and strengthen the structure with the same or similar types of material and technology. For excavated sites where low structures are exposed backfilling is preferred, however, at sites where tall structures are exposed some part of it is allowed to remain exposed to the sight after the necessary strengthening and conservation.

In India, we achieve the similar results as our Japanese counterparts, but the difference lies in the level of mechanisation. Being a developing economy burdened with huge population pressure, India does not yet possess enough machines and scientific equipment to take care of all the projects, but we do have all the latest equipment available, though not necessarily at one centre. At the excavation site of Ahichhatra all the latest devices such as ground penetrating radar (GPR), terrestrial LiDAR, total station, etc., for archaeological prospection and survey were utilised. I have also worked on reverse

engineering (3D scanning of art objects) and rapid prototyping (3D printing), and we have also developed our own custom-made GIS package and archaeological database software. Progress in India is slow but steady, and I am sure we are not lacking in skill sets or spirit.

It is my desire that there should also be some projects where people like me may be given opportunity to work with archaeologists/scientists in Japan. Venues for collaboration with various Japanese research institutions should also be explored for scientific research on our materials.

Indonesia

Fahmi Prihantoro

Introduction

First, I would like to thank ACCU Nara for giving me this good chance to join their training program in cultural heritage protection. It was the second chance for me, and I got much more knowledge and experience in this very different program designed by ACCU Nara. From September 7 to October 7, we participants from sixteen countries had the opportunity to learn about cultural heritage protection in Japan. We also shared and discussed the differences in cultural heritage protection in each of our countries.

The overall training program was designed by ACCU Nara very well. We had the opportunity to get much information based on archaeological data and research. We also obtained knowledge about presenting archaeological data to the public. It was great when I visited and participated in workshops at the Nara National Research Institute for Cultural Properties (Nabunken).

It was also great because this training program opened my eyes to the recent importance of cultural heritage protection and its role in benefiting all. Cultural heritage is not simply the dead objects produced by people in the past, but a source of information to people in the present and future.

There is the opinion that money is very important for cultural heritage protection activities. But actually it is not at all true. The ability to manage and create is more necessary in this case. Japan give us an example of a good system with a limited budget. From this training program I got much exposure to how Japan can manage cultural properties, while being creative and efficient.

It was very interesting to learn about managing cultural heritage in the global era. There are many problems in the management of cultural heritage. In this training program I got some examples which may or may not be relevant for my country. I also got some ideas from others countries which are applicable for my country.

Finally, future issues in cultural heritage protection are not only national but also international. We must have global thinking on cultural heritage protection. It is not our separate responsibilities but we all have a common responsibility regarding heritage protection in the world. We must have a sense of belonging to world heritage culture and all of its problems.

Comparison of Japan and Indonesia

The legal system. Japan has a legal system giving coverage to all cultural property. It protects not only tangible but also intangible heritage, and the natural landscape. This has become a very important focus for cultural heritage protection policy, so the national government exercises responsibility in this regard. It is supported by prefectural as well as local governments. Prefectural governments also have

specific legal systems for their areas. The management and utilization of cultural properties is also part of this system of coverage.

My country also has a legal system for cultural heritage protection, but it only gives coverage to tangible cultural heritage. This legal system is more specific regarding archaeological objects. Actually, we have problems in our system of management and utilization. There is a lack of good cooperation between government and the communities. Sometimes people as heritage owners do not know how to utilize and maintain their heritage.

Conservation science for archaeological remains and sites

Japan has a good system of conservation science for archaeological sites and remains. It is supported with high technological equipment, which makes it easier to conduct maintenance and research in cultural heritage protection. Nabunken is one of the important institutions undertaking analysis and research in conservation science, as seen in its laboratories for pottery, wood, animal and human bones, etc.

In my country, there is also a system for cultural heritage protection, in regard to conservation science. We too have a conservation institution, but it is not provided with high technological equipment. We only focus on chemical conservation, especially for stone monuments. We do not have much in the way of human resources, such as experts who specialize in pottery, wood, and bone, in regard to conservation science activities.



Maintenance and utilization. Japan provides many examples in the maintenance and utilization of cultural heritage. It is very interesting because many sites and remains revealed through excavation can be presented to the public in many ways. Visitors can understand and imagine the site and remains because they are presented through reconstructed buildings. It also interesting because of the many site museums which display information from archaeological research. This makes it easy for the public to understand people's life in the past. The infrastructure facilities are also up to acceptable standards.



In my country, the maintenance and utilization of sites and remains are not conducted as well as in Japan. There are many sites and remains that are not presented to the public effectively. Visitors do not get much information, but only know it as an archaeological site. My country also has on-site museums, but the information is not organized under a good system. Facilities and services not meeting acceptable standards is also still a problem in my country.

Relevance of the Training Program for My Country

Concept of cultural heritage protection (legal system)

In this training program I gained some knowledge about the legal system for cultural heritage protection. Basically, the system of law is very important. It is the starting point for cultural heritage protection activities. If we want to protect our cultural heritage we must start with the legal system. Regulation is an important tool for guiding protection activities. Some local governments also take care of their cultural heritage and protect them through local regulations. We also must always connect with international conventions and organizations for cultural heritage protection. International conventions are very important as a source of standards for cultural heritage protection.

Indonesia has much cultural heritage, including six World Heritage sites recognized by UNESCO. Since 1992, Indonesia has had a legal system for cultural heritage. Now it has come to be revised under new regulations. It will cover many aspects, especially regarding the maintenance and utilization of heritage, and the role of local communities. I believed that our new regulations can bring improvements over the old system. It will be the starting point of better protection for our heritage. Currently, some local governments also have local regulations to cover cultural heritage protection in their areas. This will help support the national regulations.

Practice of cultural heritage protection

In this training program I gained knowledge about conservation science for archaeological sites and remains. In practice, Japan has the high technology to support many activities in conservation science. It is very different for conservation science in my country. We do not have the high tech tools to support similar conservation of sites and remains. But actually we have similar methods in conservation science. In this regard, Nabunken and the National Museum of Kyushu impressed me with the importance of technology for supporting conservation in the modern era.

It was very interesting when I saw some activities in practice on the maintenance and utilization of archaeological sites and remains in Japan. We visited many places that will serve as examples, such as Heijo Palace, Asuka, the Haniwa Factory Park and sites in Fukuoka city. One of the important aspects is the management of cultural heritage. It was seen that archaeological sites can be presented in a variety of perspectives. Many visitors will share the experience of people who lived in the past. Archaeological data can be presented to the public in 3-dimensional perspective. Another aspect of management is providing visitors with acceptable standards of facilities in transport, utility and other services. Many of these sites will be good examples for developing cultural heritage management in my country.



The management of museums was also very interesting. I very much admired all of the museums seen in Japan. There was a museum at each of the archaeological sites and remains visited. The museum presented much archaeological data and artifacts from the site recovered by excavation, and other results of research. In my opinion this can be good for developing the memory of ancient culture for many, especially for the Japanese people. Museums give many benefits for the country in terms of ideology, identity, education, science and technology, and tourism.

Museums presented many artifacts recovered from the distant past, bringing those objects back to life. Visitors enjoy and have good experiences in these museums. All of the data provides much information about the past which is easily understood. The displays used technology and many illustrations to help visitors understand the data.

Some of the methods in the museums for giving information to visitors I found to be very creative. I was interested in the information for children at the Haniwa Factory Park. It was great and enables children to enjoy the museum. If this approach can be applied at museums in my country, they will become favorite places for children. If we can apply this method, I believed that museums will be visited by many more students and children. They will enjoy the museum, and it can become one of the alternatives for spending time on a holiday.

We also found many museums have service facilities, especially libraries and museum shops. This can be useful for visitors because they can get much information by reading the books, and buy some souvenirs as symbols of the knowledge they obtained as visitors.



Conclusion

In my opinion, this training program provided me with much new knowledge and many experiences in cultural heritage protection. We are becoming one of the “preservation communities” in the world. We are responsible together for cultural heritage protection, and have sense of belonging through common involvement in cultural heritage protection.

Sharing experiences with such people from other countries and joining training programs like this helps enrich our knowledge about the activities of cultural heritage protection. But we must select the knowledge, based on whether or not it will be appropriate in our home country. This depends on the context and culture in each country.

Heritage is something we have to protect and preserve. It is like a diamond that is no longer visible if not kept and maintained in its current condition. I believe that *a country without heritage is like a human being without memory*.

Finally, as a participant training program I have the following suggestions for ACCU Nara.

1. I suggest that ACCU Nara could explore further the role of the local community. I did not learn much about the role of local communities or NGOs in cultural heritage protection in Japan. As I understand it, the government has a big role in these activities and does not involve the local community.
2. More information is needed on the involvement of young people in cultural heritage protection activities in Japan. I know ACCU Nara has a lecture heritage program in the schools, but I do not know much about the activities in heritage protection of young people.

Kazakhstan

Janna PROSKURINA

I. INTRODUCTION

Both the course lectures on aspects of cultural heritage and its protection in Japan, as well as the possibility of making close acquaintances with professionals from different countries of the Asia-Pacific region, were of great importance to me and my research on various problems. Many of the problems which initially seemed to be local and unique to my country are in fact global, and it was very informative to learn how they are handled in different countries. Also, it was pleasant to learn that some of the problems other researchers experience in their countries, including Japan, do not exist at all, or exist to a very insignificant degree, back in my country, such as the following examples.

- Strict private property legislation prohibiting government and research institutions to interfere with cultural heritage monuments in case their owners do not allow (Japan, Philippines, India)
- Lack of stone and brick-made constructions, making difficult both the preservation and presentation of heritage properties to the public (Japan, partially China)
- Insufficient financial support (Sri Lanka, Laos, Kyrgyzstan)
- Lack of long-term investigation and data consolidation (Marshall Islands)
- Lack of the effective governmental legislation on cultural heritage protection
- Insufficient public awareness (this was highlighted by almost all of the participants).

II. PROGRAM EVALUATION

The following sections examine in turn aspects of the training program, in terms of the potential for implementation of the received information in heritage protection work in Kazakhstan.

a. Protection system and legislation on conservation of cultural properties

Besides the analyses of cultural property protection systems of different countries provided by the participants in their country reports, very informative from this point of view was the lecture about global trends in the conservation of archeological sites and the history of development of protection, for both tangible and intangible cultural heritage, in different countries and at the international level (charters, conventions, international organizations, and other mechanisms) provided by Mr. Gamini Wijesuriya from ICCROM, along with the situation in Japan summarized by Mrs. Inaba Nobuko, and Mr. Suzuki Chihei in the reports on the “Cultural Property Protection System” and “Conservation and Utilization of Cultural Property.” Regarding these laws and provisions for heritage protection, I conclude that all of these measures (some common, some unique, especially in Japan) were worked out and adapted as a response to the problems each country experienced while trying to protect their

heritage from disappearing and to preserve it for future generations. The accumulated experience of this legislation and organizational structure should be taken into account by all specialists involved in cultural heritage protection. Closer acquaintance with the activities of ICCROM, which was established to promote conservation of cultural properties worldwide, was also very informative and important. Conservation is an important issue requiring a high level of professionalism; poorly planned conservation or protection measures for monuments could cause even more damage than natural disasters and aging. Such examples were provided by Mr. Wijesuriya, and unfortunately we had this experience in Kazakhstan, especially during 1995-2001 when Soviet era legislation could not be implemented due to the newly gained independence and related changes in the political and economic systems, before new legislation could be adopted. This is when partial restoration was conducted by non-specialists or in a spontaneous manner, without inspection and scrupulous investigation beforehand. I have described this issue broadly in my country report as one of the most important problems in Kazakhstan. Training, information, research, cooperation and advocacy were listed among the activities of ICCROM. The assistance of such an organization could bring many solutions in terms of monitoring, investigation, conservation, legislation improvement and training for our specialists. However, Kazakhstan is not among the 129 member countries of ICCROM. During private conversations, Mr. Wijesuriya explained how to begin consolidation with ICCROM and very kindly offered his assistance. Upon my return I plan to contact him again and start correspondence with both ICCROM and Kazakhstani authorities to undertake necessary procedures for Kazakhstan to become a member of ICCROM in the close future, in order to get badly needed advice and assistance in many aspects of protection of cultural properties from this esteemed organization.

Cultural property protection, investigations, documentation, conservation and restoration in Kazakhstan has also a comparatively long history, starting in the nineteenth century under protectorate status of the Russian Empire, and further developed during the Soviet period using central mechanisms from 1969, on a national level, and after 1991, independent legislation and mechanisms of protection and maintenance have been worked out. Notwithstanding with such a long history of protection, Kazakhstan like all other countries experiences many problems in this sphere and much work still needs to be done. The situation of cultural heritage preservation in Kazakhstan was examined in my country report. Here I would like to quote some of the notes in regards to legislation improvements that have been undertaken due to specific features of Kazakhstan's monuments.

The problem of preservation of archaeological heritage in Kazakhstan has its unique features, in its technological and methodological aspects, and also in the legal maintenance of these actions. Nowadays more than 30,000 immovable monuments of history and culture have been taken under protection, and more than 20,000 of them are archaeological remains in a ruined condition. The methods of preservation of archaeological monuments practiced today in Kazakhstan, according to the Venetian charter of 1964, do not seem to be very effective. The reason is that the overwhelming

majority of these monuments are made from adobe (sun-dried, rather than kiln-fired bricks) and the existing conservation means today cannot provide guarantees for strengthening them. Consequently, with the purpose of protecting these remains from the natural elements and to prolong their lives, the provision of stationary cover is strongly recommended. But besides destroying the appearance of the monuments themselves and their historical landscape, these measures have other weak points such as the necessity of organizing security services to protect them from vandalism, which is not possible for such a great number of monuments spread over a big territory, and many in the uninhabited steppe. These problems of protection were taken into consideration and comprehensive methods of preservation for the historical and cultural heritage were worked out, including both conservation aspects and the integration of this heritage into the vital activities of society, by including it in social and economic plans for development of the regions where it is located. This method of protection has been presented and comprehensively described in the catalog of norms and standards (SNIP RK B1-7-01), "Instructions on coordination of expertise and approval of project documentation on regeneration of historical monuments of architecture and town-planning, including those in a ruined state." Using these instructions, provided by the consolidated work of specialists in different spheres, renovation projects of historical centers have been conducted, with the development of a tourism infrastructure, in Almaty, Zhambyl, South Kazakhstan, Mangystau, Atyrau and the West Kazakhstan regions, but some are yet waiting their turn to be realized.

The deficiencies of some of the points of the Venetian charter of 1964 were also experienced in many countries (mentioned in lectures provided by Mr. Gamini Wijesuriya, Mrs. Inaba Nobuko, Mr. Suzuki Chihei and Mrs. Montira Horayangura Unakul), and Japan was one of the first countries which forced the international community to change some of the conservation approaches to allow alternative methods of restoration, especially regarding sites with continuing utilization in the original function, or those with outstanding national or international value.

b. Preservation of the living monuments and sites and their cultural landscapes

The importance of cultural value, the necessity of preserving living monuments or "monuments which continue to serve the purposes for which they were originally intended" together with cultural landscapes, the problems and threats they experience today, and the ways of handling these problems, were examined in many lectures during this course. Good examples of living monuments and cultural landscapes from different parts of the world were given by Mr. Wijesuriya and by Mrs. Montira Horayangura Unakul, including important sites such as: the rock art site at Peterborough, Ontario, Canada; rock art sites in active use (Australia); Petra, Jordan (until the Beduin were removed); Angkor, Cambodia; Great Zimbabwe and the slogan of the local pilgrims, "your monument, our shrine"; Ayodhya, India; Jerusalem; Anuradhapura, Sri Lanka; Teotihuacan, Mexico; Taj Mahal in India; Hoi An village in Vietnam; the buffer zone in Vilnius, Lithuania; and others. Mr. Suzuki Chihei from the Agency for Cultural Affairs demonstrated other examples of 21 cultural landscape sites in Japan (rice

paddies, stock farms, forest or water uses, fisheries, mining or industrial manufacture, ancient residences or settlements) which represent typical or unique elements of the basic modes of life or livelihoods of the Japanese people.

Back in my country, there are also many previously inhabited historical landscapes which for different reasons lost their continuity. For instance, the historical settlement of ancient Turkistan was inhabited until 1980, but instead of repairing and preserving the site, these historical dwellings, with their inner yards and quarter mosques, squares and streets, were destroyed due to modern urbanization.



Front view, photo from the 1950s



The situation today



Rare examples of surviving dwellings of an ancient settlement in Turkistan, and the situation today

For more than 15 years our center has worked out numerous projects revitalizing the functions of important historical sites in Kazakhstan, which can prevent further distortion of the historical settlements. But because some of these sites are not being treated as cultural landscapes, or cultural or historic heritage, they continue to be demolished due to lack of support and modern urbanization.

c. Challenges and advantages of reconstruction of cultural monuments and sites

Another important factor which is tightly connected with the necessity to revitalize vulnerable cultural properties was underlined during the course, and should be taken into consideration if reconstruction is going to be implemented, is the high level of authenticity in terms of shape, architectural structure, the use of original or similar materials, and of traditional techniques of construction. “In relation to authenticity, the reconstruction of archaeological remains or historic buildings or districts is justifiable only in exceptional circumstances. Reconstruction is acceptable only on the basis of complete and detailed documentation and to no extent on conjecture” (World Heritage Committee Operational Guidelines (2005) § 86). The main challenges of reconstruction are the necessity to obtain authenticity of the monuments which also “may differ from culture to culture and even within the same culture. It is thus not possible to base judgments of values of authenticity within fixed criteria” (The Nara Document, 1994). So even the determination of authenticity itself is subject to debate, not to mention the methods and degree of reconstruction. There are no certain answers to questions such as: Should the whole site or only a part of it be reconstructed? Which part of the site/monument should be reconstructed? Are the sources of information trustworthy enough to justify the project? Which materials and construction techniques should be used (traditional or modern)? Should the monument/site preserve its original function or can it be utilized in a different way? The important matters that have to be secured are the preservation of original features, documentation of any excavation and reconstruction work, and the possibility of reversing work undertaken, due to updated information subsequently obtained. There are many advantages to restoration and reconstruction, such as the maintenance of the initial architectural and artistic values, of the functional purpose, the possibility of further utilization of the restored building or site, introducing it into the system of local and international tourism, religious and educational importance, revival of the ethnic and cultural atmosphere, and etc. Many of these advantages we had a chance to experience during our visits to different historical sites in Japan: Heijō Palace site in Nara, water-oriented ritual area near the Imperial Palace sites at Asuka and Fujiwara, Shin'ike Haniwa Production site, Imashirozuka burial mound in Takatsuki city, Yoshinogari site, Korokan archeological site, and Fukuoka castle.



Examples of reconstruction of historical monuments in Japan



Examples of reconstruction of historical monuments in Japan



Examples of reconstruction of historical monuments in Kazakhstan (fortification walls of the citadel, Mausoleums of Rabiya Sultan Begum, Aristan Bab, and Aysha-Bibi)

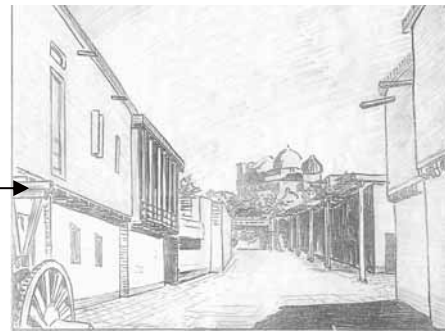
Other projects of reconstruction that could be very favorable in terms of revitalizing “dead” or “dying” historical monuments and sites were detailed in my country report. Here I would like to give some examples to show how partial restoration (suggested for almost all of the sites) and reconstruction may have positive impact in terms of interpretations of these sites, improvement of the living standards of the local communities, raising consciousness of national identity, the religious and cognitive values of the monument, and the development of handicrafts, tourism and economy of the areas in general.

Regeneration project of a fragment of the Turkistan city historical center. The project assumes the regeneration of the housing area of the northern part of the city with a territory of 12 hectares, the

cultural layer of which was already destroyed by 1980 (due to modern city planning). Relying on architectural and archeological evidence, graphic materials, written sources from the fifteenth to nineteenth centuries, and photographs preserving views from 1910–1952 when the medieval dwellings still existed, it was possible to reconstruct the obliterated part of this ancient city with a high level of authenticity. The project envisages the revival of the architectural and ethnic/cultural atmosphere of the medieval center of the ancient city, and utilization of the restored historical buildings for pilgrimage, tourist and ethnographic facilities.

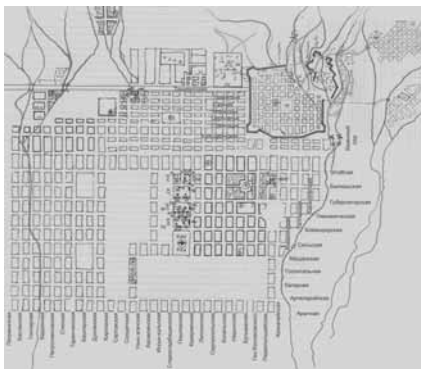


View of the back side at present



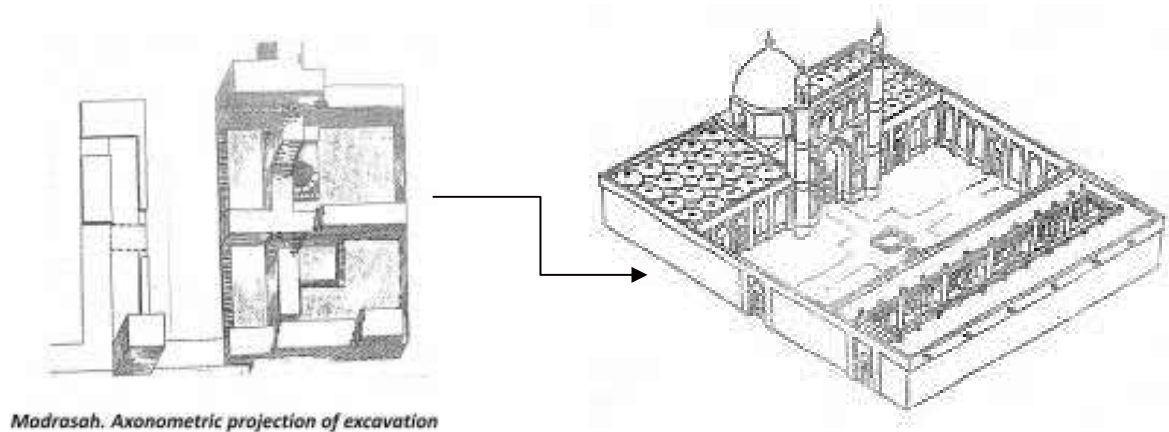
Regeneration project

Other positive examples of ongoing historical sites are the Russian fortress and settlements of Bolshaya and Malaya Almatinskiye Stanicy of the eighteenth century in Almaty city. The fortress, mosque and churches are being preserved separately as historical monuments, but the dwellings, parks, and gardens with original vegetation are disappearing, again due to modern urbanization. Today we have all the data to restore or reconstruct authentically almost all of the original buildings of the area, and stop the development of new facilities. Financial and technical support from the government could encourage people to preserve their houses. In some of them, boutique hotels, restaurants and workshops can be organized. The location of these areas in the very core of the modern city could be another advantage for utilization as ethnographic villages.

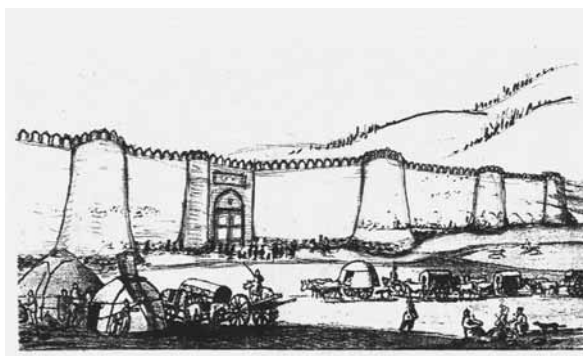


Plan with preserved street names and inhabited houses of Bolshaya and Malaya Stanicy

Restoration of the palace mosque in the ancient settlement of Otrar. This project envisages a complex of works including the complete restoration of the mosque, with preservation and conservation of the remaining portions, and regeneration of its original function.



Regeneration project for the medieval city of Talgar. This is being done with the goals of converting the medieval city site into a museum, reconstructing one of its living quarters, and continuing the architectural and archaeological study of the monument. A part of this project includes the reconstruction of farmsteads with their full interior and exterior decorations, and their subsequent utilization as a museum of the ethnographic culture of the Djikili and Tuhsi tribes.



Partial conservation seems not to be effective due to the weakness of the original material (adobe), and sufficient conservation means have not yet been found. Even if well preserved, ruins attract only the attention of scientists. Other important features of this monument, such as its architectural and artistic appearance, its touristic, religious and educational values, are thus being neglected. Restoration and further integration of the historical objects into the vital activity of today's society also can help to preserve them from further destruction and disintegration. Personally I was pleased to learn how widely reconstruction is practiced in Japan. Doubtless, these reconstruction projects were worked out with the best knowledge of specialists and to the highest degree of authenticity. However, some of the methods seem to be difficult or impossible to implement on our monuments. In my opinion, in order to

preserve originality to its highest possible level, the reconstruction should use materials similar to the original, with traditional techniques of construction, and the original flora is also very important. Modern materials and engineering, and vegetation foreign to the area, used for example at the Heijo palace, give an impression of it being “artificial,” unlike a “real” historical monument/site but rather like a museum, and reduce the level of appreciation. This weakened appreciation is visible even at sites where original materials and techniques were implemented (water-oriented ritual area near the Imperial Palace Sites at Asuka and Fujiwara, Shin’ike Haniwa Production site, Yoshinogari, and Fukuoka castle). Restoration of the original, or at least a traditional, function is another important factor which helps to provide integrity to the building in the social and cultural life of the city/community. The method of backfilling of the archeological site with later reconstruction of buildings, vegetation and settlement including streets and pavements, an irrigation system and even lakes on top of the modern layer is not practical and cannot be implemented at the majority of Kazakhstani monuments, due to the depth of the cultural layer being up to 10 meters, making it partially higher than the ground level (some of the fortress walls or preserved basements and lower parts of the buildings rise up to 7-8 meters high). Again, in my opinion, this method separates the reconstructed building from its historic setting and environment; thus almost none of the preserved original portions could be displayed. Only a small number of scientists can enjoy viewing and examining original structures or materials, over a short period and through the costly process of re-excavation. Without being monitored, better protection of the remains under the ground is not guaranteed either. Instead, the combination of professionally conducted conservation, restoration and only partial reconstruction provide for maintenance and regeneration of historical, aesthetic, scientific and other values of the site, allowing systematic monitoring and thus better protection of the remains.

d. Other methods of preservation and maintenance of archeological sites

During this program we had a chance to receive information about, and see in practice, other methods of preservation, maintenance and utilization of archeological sites followed in Japan. Very informative lectures and tours were provided by specialists of the Nabunken research institute, Mr. Shimada Toshio, Mr. Ishimura Tomo, Mr. Sugiyama Hiroshi and Mr. Kohdzuma Yohsei (on the topics of “Maintenance and Management of Archeological Sites,” “Utilization and Management of Sites” and “Conservation Science of Archeological Sites and Remains”), by Mr. Kanegae Ichiro from the Takatsuki Shiroato Historical Museum, and by Mr. Shichida Tadaaki, Mr. Akashi Yoshihiko, Mr. Imazu Setsuo and Mr. Yoshitake Manabu during our three-day visit to the archeological sites of Fukuoka and Saga prefectures (Yoshinogari, Dazaifu, Korokan and Fukuoka castle). Here I will look more closely at some of these topics in turn.

Conservation science. The science of conservation in Japan is highly developed and there is much to be taken as example for our country in terms of methods, technology, and its utilization. Prior to and during the conservation treatment, comprehensive measurement and investigation of the environment

has to be undertaken in order to identify subsequent methods that should be used. As a result of such analysis and decisions about strategy, conservation may be applied on site for some of the most fragile artifacts, and others are removed from the site for further material analysis and conservation in specially equipped laboratories. We were introduced to such important and integral parts of the conservation process as the systems of precise documentation, photographing, marking and storage of the archeological artifacts, in demonstrations kindly provided by Mr. Morikawa Minoru, Mr. Kunitake Sadakatsu, Mr. Shiba Kojiro, Mr. Yamazaki Takeshi, Mr. Matsui Akira, and Mr. Nakamura Ichiro from the Nabunken institute. For some of the artifacts traditional methods and techniques are sufficient, but for others, which had undergone severe physical and chemical changes and degeneration, treatment is necessary under a program of conservation with the full use of modern science. As many of the artifacts in Kazakhstan are made of materials similar to Japanese artifacts (wood, stone, clay, ceramics, etc.) we can use and the latest innovations in conservation treatment science, and particularly the methods of their measurements and laboratorial analysis.

Methods of restoration. We were introduced to four main ways of restoration practiced in Japan. Some of these are practiced in Kazakhstan, and others are worth considering.

a. Restoration with a full-scale replica in three-dimensional display (reconstruction):



b. Restoration with a partial three-dimensional display:



c. Restoration with surface marking (two-dimensional display):



d. *In situ* exhibition of excavated features:



Other examples of volumetric and virtual reconstruction in the world (USA, Canada and Belgium), provided by Mr. Gamini Wijesura, are shown below.



e. Technology for measurement, dating, analysis and display of archeological artifacts

During this course I was most impressed by the technological aspects of the entire process of managing archeological sites and artifacts in Japan. There is much to be learned and there are certain methods that I would like to start investigating when I get back to Kazakhstan. Here I would like to go over the most important of these, which are not developed in my country.

Archeological prospection. The demonstration was provided by Mr. Kaneda Akihiro from Nabunken. This approach allows obtaining information about archeological sites for research without excavation.

It can be considered one of the most effective ways of protecting buried cultural properties. Archeological prospection includes several methods such as topographic analysis, ground penetrating radar (GPR), electric resistivity survey, and magnetic prospection.

Dendrochronology. The demonstration was provided by Mr. Okochi Takayuki from Nabunken. This approach permits scientific dating of preserved wooden artifacts with the potential accuracy of one year. This approach was applied first in the US, and then in many other countries all over the world. However, this methodology is not yet implemented in Kazakhstan, though there are plenty of wooden artifacts accumulated which can provide a sufficient dendrochronological database for some species of wood. Personally I would like to start some investigations into possible ways to implement this very useful approach for Kazakhstan, by providing information to Mr. Okochi and being in touch with him and other specialists from his department for consulting and sharing of opinions.

Photographic documentation, 3-D photographing and printing. Demonstrations were provided by Mr. Nakamuro Ichiro, Mr. Yamazaki Takeshi and Mr. Matsui Akira from Nabunken, and also by Mr. Akashi Yoshihiko and Imazu Setsuo from the Kyushu National Museum. I took note of what kind of equipment is used in Japan in terms of photographing, 3-D photographing and 3-D printing, and information for making particular requests in Kazakhstan, such as pointing out the strong necessity for equipment for converting conventional data into digital format, which has not yet been conducted. Mr. Nakamura Ichiro kindly offered his assistance to inform me, in case proper means is found for this type of documentation.

Display of archeological, cultural and ethnographic artifacts in closed and open-air museums and parks. We had a chance to visit all kinds of displays of historical and archeological artifacts and sites, such as national and local museums, historic and natural parks, and temples and shrines in many cities in Japan, and experienced a high level of attractive and informative functions as well as a highly developed infrastructure (transportation facilities, service utilities, health and public safety facilities) and management provided. Also informative in this respect were the lectures on key principles of visitor management at historical places, and the group sessions led afterwards by Mrs. Montira Horyangura Unakul from the Bangkok UNESCO office. Unfortunately, the level of display, touristic infrastructure, management and security at historical places and museums in Kazakhstan is not sufficient and there is a lot of work to be done, which will require the participation of various authorities, institutions and specialists involved in the sector of protection of cultural properties at different levels, the training of specialists and management personnel, and the implementing of structural and inter-organizational regulations.

III. ACKNOWLEDGMENTS

I want to express my sincere gratitude and appreciation to all the persons and institutions involved in organizing this course and taking part in it, with special thanks to the ACCU Nara and Nabunken staff for their care and concern.

Kyrgyz Republic

Aidai SULAIMANOVA

I. INTRODUCTION

My final report is part of my participation in the training course “Research, Analysis and Preservation of Archeological Sites and Remains” in the Asia-Pacific Region 2010, in the historical city of Nara, Japan, which has provided me with a wealth of knowledge. The entire curriculum offered during this course was extremely relevant to the current needs of work for the conservation and preservation of cultural properties in Kyrgyzstan. Participants in this training course, organized by the Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Center for UNESCO (ACCU), from 7 September to 7 October 2010, had a chance to listen to lectures on the study, protection, use and management of archaeological sites and cultural landscapes. We also had practical workshops, and got acquainted with archeological parks, open-air museums, examples of medieval constructions (temples, gates and walls), plus national and local historical museums featuring archeological and ethnographic materials, as well as *in situ* exhibitions of excavated archeological sites of ancient settlements.

II. PROGRAM EVALUATION

1. The Cultural Property Protection System

In the lecture on “The Cultural Property Protection System in Japan,” we learned how the Japanese government and professionals have developed their activities in the sector of protection of their country’s cultural properties. Their accumulated activities show how much they respect their natural and cultural values and traditions. I am certain that if a government over time continues developing and promoting various legislation for their citizens’ cultural properties protection, and cares about its preservation for future generations, then such a country has all the necessary foundation for prosperous development in the future. Taking into account the example of such a governmental approach to matters and problems of protection and preservation of its country’s monuments, I sincerely wish that my country, the Kyrgyz Republic, which gained its independence at the end of the twentieth century, also starts to deal actively with matters of protection of its people’s tangible and intangible cultural heritage. In this respect we have a very meaningful proverb in Kyrgyzstan: “If there’s nothing in the head of a fish, don’t expect its tail to do anything.”

One of the approaches or projects in the preservation and utilization of objects of a cultural landscape was rather interesting. It involved the granting or renting of lands having value as part of a natural and cultural landscape to local residents. This method has several advantages:

- 1) The allocated property will be well kept while being under protection against certain risk factors.
- 2) Traditional skills in the use of the lands (such as agriculture) will be maintained, the problem of local unemployment partially solved, while the culture of cultivating the earth is also maintained and developed.
- 3) The problem of the migration of young people from villages and suburb areas to the cities, because of poorly developed rural infrastructure and causing abandonment of cultivated lands, will be reduced. This matter includes an economic aspect. Announcement of such lands as objects of a cultural landscape brings the advantages of their being treated in the same way as protected objects of special value, and consequently the landowners can gain financial support and other assistance from the government and receive better benefits from their work.

Such approaches impressed me most of all. In Kyrgyzstan, many natural and historical sanctuaries remain without care and supervision. Therefore, such methods of natural and cultural heritage preservation should be applied and developed. However this approach should be modified and implemented by taking into consideration the specifics of the Kyrgyz cultural landscape and the traditional life of its inhabitants. For example, Kyrgyzstan is a country of high mountainous pastures (*jayloo*) with *archa* (a kind a tree) woods and huge territories with natural and historical sites and monuments such as ancient burial mounds, stone sculptures and rock paintings, etc. For instance, by settling families on such pastures, granting them the power as inspectors against unsanctioned cutting of the forests and hunting, and rendering some financial support, there will certainly be positive results. Besides, a shepherd's family would also be continuing the traditional life of their ancestors, as nomads.

In our country, such a way of life is maintained in many local areas. In recent years it is seen mostly in seasonal pastures. A main objective of this seasonal movement is the usage of high mountainous pastures. It is limited to a short period, often between spring and early autumn. During this period people herd and care for large and small cattle, manufacture dairy products basically for sale, and make all the necessary preparations for the autumn-winter period. Another important fact to mention is that besides taking care of their own cattle, pastoralists also herd cattle on behalf of their fellow villagers for some extra charge. Thus, pastoralists use the pastures for their seasonal earnings. It may be said that these people have no experience of high civilization in their traditional life. Nevertheless, much of this traditional way of life, such as the methods of housekeeping and the skills of cattle breeding, of processing trees and the skins of animals, wool manufacturing, preparation of traditional food, and the affinity with and understanding of nature, is very close to the lives of our ancestors, involving the harmonious coexistence of humans and the environment.

Another approach which should be noted is the financial support provided by the Japanese state to those with skills in developing or processing national products, to manufacturers of national food, and bearers of oral creativity.

In the governmental programs of my country, the last point is absent. Regardless, private persons or non-governmental public organizations sometimes provide such persons with temporary support. The international organizations also sometimes give financial assistance (a fund for the development of villages, the Alliance of Mountain Communities of the Central Asia, Association for Support of National Crafts in Central Asia, International Fund Christensen, Global Ecological Fund, etc.).

If the state starts to implement such an approach to support bearers of traditional skills and knowledge, we could solve some of the problems concerning tangible and intangible heritage preservation in the manner practiced in other countries, such as Japan in particular.

2. Introduction to Archaeological Prospection

Some of the methods of archeological prospection are very similar to those practiced in Kyrgyzstan, except for the electric and magnetic devices used by Japanese colleagues.

In our country we use aerial photographs, shadow marks, soil marks, analysis of topography, and excavation of a prospecting nature, as in the case of a test trench. On rare occasions we also use metal detectors. This is a tool especially popular among the so-called “black archeologists” (a type of thief who plunders archeological sites).

Our archeologists have sufficient experience with visual detection of a cultural layer from the natural ground lay. We had that pleasure even before the advent of the powerful devices for archaeological prospection shown in this program. But I am very much impressed by the achievements in new technologies made in Japan in the field of archaeological prospection, especially radar (GPR).

3. Dendrochronology

The lecture about dendrochronology was sufficiently detailed and was interesting for me. Therefore, it seems to me after hearing such a lecture, that it may be possible to try to determine the age of our wooden artifacts. Usually we find fragments of wooden objects in archaeological excavation, such as tableware, small kitchen tables, parts of saddles and stirrups, funerary items such as coffins, boards, and others. When found buried in the ground these items are usually in bad condition. In such cases at least we should be able to make good documentation (measurements of the radial and transverse sections) and a good quality photo recording the position before the wooden object is moved. Thus, it is possible in part to collect and create our own database for tree ring dating. However, in our region monuments of wooden materials are very rarely found. Wood usually was used in the construction of

various medieval buildings, while dwelling houses and mausoleums were made with adobe and kiln-fired bricks.

I think that by means of the knowledge received in Nara, it may be possible to put some of these skills into practice in my work. In my country the science of dendrochronology is not well developed. There were some experts in dendrochronological measurement in Kyrgyzstan who received education on this method from the Russian Academy of Sciences (Moscow). However, due to the absence of support for the development of this kind of science, and probably because of the low need for it, there has been a termination of scientific research in this field. This is definitely a sad loss for science in my country. The scientific development in dendrochronology and the laboratories with their equipment in Nara were very impressive, enabling the exact determination of the age of wooden artifacts and of the date of a monument. This can be considered as one of the most important achievements in the study of cultural monuments.

4. Heritage at Risk

The lecture on this theme, I felt, was very useful not only for me, but for all the participants of this course. In this lecture, among diverse issues, risks factors for cultural heritage and its value worldwide were explained, with an emphasis on how we must be ready to prevent unexpected dangers, and what measures or actions we have to undertake, etc.

Actually, in my country, my colleagues and I have given some thought to this question. We realized its importance when in June 11-13 of this year, violence flared up in southern Kyrgyzstan between two ethnic groups, the Kyrgyz and the Uzbeks. While this has not been the only menacing risk to monuments of natural and cultural heritage there, a high level of threat during this incident extended as well to the lives of the staff of the museum and open-air complex of the sacred mountain Sulaiman-Too. At the time, no effective measures to reduce the risk were undertaken by either the government or non-governmental organizations. Therefore, it is desirable to take note of such risk factors, including the menace to the lives of employees working at World Cultural Heritage sites in Kyrgyzstan.

Also, regarding the case of inter-ethnic conflict, we consulted the convention of 1972 (Conventions and Recommendations of UNESCO concerning the protection of the cultural heritage) and the subsequent edition. But we did not find the issue, the case of risk due to inter-ethnic conflict, to be addressed, nor were there any recommendations of what to do in such situations. Fortunately, at the monument of Sulajman-Too, there has been no damage or injury to the heritage or the staff, because the monument is of great importance as material and spiritual heritage for both of the ethnic groups involved in this conflict.

5. Maintenance and Management of Archeological Sites

Regarding the management of monuments of antiquity, we found sites such as the Heijo Palace, historic sites in Takatsuki city such as the Haniwa Factory Museum, the Asuka Historical Museum, burial mounds and palace sites in Asuka, and Kawaradera temple, were all very nicely managed and maintained, and it is clear that in Japan many such sites are similarly maintained.

During discussion among the participants in the training, however, about the reconstructions at the above monuments (in particular the Nara Heijo Palace), there were some criticizing views. It is possible to agree in part with some of their opinions, but I believe that morally I have no right to criticize, as in my country such extensive work has not been carried out on monuments of cultural heritage yet. I can only envy my Japanese colleagues and support their views. In addition, it was important for me to see monuments and their management in Nara, and I will certainly convey this knowledge to my colleagues in Kyrgyzstan.

Among works of reconstruction that have been implemented in Kyrgyzstan, there could be mentioned the regeneration of the so-called “Osh settlement” (a site on the southern slope of one of the peaks of Sulaiman-Too). It is a monument of the archaeological culture named Chust of the Bronze Age (dated to the fifteenth to the seventh centuries BC based on the finds, and supported by radiocarbon results). Restorers and archeologists reconstructed it under the governmental program “OSH 3000” (the anniversary of the ancient city of Osh) in 1999-2000.

This monument was a uniquely “restored” ancient object, the authenticity of which was supported by evidences of soil analysis for traces of wooden pillars of a dwelling, with some remains found of wood. This wooden reconstructed structure was primitive and did not correspond with the surrounding landscape. Also, it differs from the usual subsidiary sheds or canopies of rural and mountain inhabitants of the mid-twentieth century. Unfortunately, the original construction is not available at present; local residents burned it during the violence in the city of Osh. Nevertheless, it has had some positive effect, such as the fact that protection of settlement sites from further destruction is now generally visible after archeological excavations.

In addition, the ruins of a medieval public bath built from kiln-fired brick have been excavated in Osh (southern Kyrgyzstan), and at the medieval complex of Burana (Chui valley). After archeological excavation, already more than thirty years ago, these remained without protection. However, these monuments have great importance as their number is very small in all of Central Asia.

In the future, we would like to preserve these objects, or at least to construct a canopy over the ruins. In recent years, we were able to manage the protection of a medieval mausoleum of kiln-fired brick (the archeological and architectural complex of Burana) under the UNESCO project, and to establish a

canopy over the remains of features from a Buddhist temple of the sixth to seventh centuries (in the Chui valley, and at sites of ancient settlement on the Red Small river, monuments mentioned in my country report).

6. Introduction to Environmental Archeology

The lecture and practical sessions were rather interesting and very useful, especially to archeologists of ancient settlements and burials. For help in our work we sometimes rely on zoologists, as our institute at present does not have such a laboratory. Usually, though, I collect a few bones of animals as extant specimens (after a meal). In excavation there are cases when none of the participants could define individually found fragments of bone. Nevertheless, in the future, I hope for more help through cooperation with laboratories.

7. Photographic Documentation of Sites and Remains

The lecturer Mr. Nakamura Ichiro gave us a detailed lesson on photo documentation of archaeological objects, and the subject was very informative. This is because the qualitative recording of materials through photos is an important and effective part of documentation. I liked the practical session and the laboratory very much, as well as what was taught about the equipment and quality of photo taking, and the processing of materials, in photo documentation.

III. ACKNOWLEDGMENTS

I would like to say thank you to Mr. Nishimura, Director of ACCU, for providing me the chance to participate in this training course. Also I would like to express my gratitude to all the members of the organizational committee. Thanks again.

Lao P.D.R.

Soukphachanh KHAMPHASOUK

Introduction

First of all, I am very happy to have participated in the training course on preservation and restoration of cultural heritage in the Asia/Pacific region. During the month-long program in Nara we visited a number of ancient temples and other important building sites, which show some of the very interesting history of Japan. Japan has done an excellent job in protecting, conserving and maintaining its cultural heritage.

I think that Japan is a country with a rich collection of cultural properties. There are eight cultural properties on the World Heritage List in Nara city alone. This training course has given me the opportunity to learn a lot about the system of archaeological site management for individual cultural properties. One such property is the Heijo Palace site, which is designated as a Special Historic Site and is an important historic monument of ancient Nara.

Lectures given by specialists

The lectures given by the specialists were very interesting because they have much experience in working on cultural properties, and are considered experts in their fields. The classes listed below are the ones I found extremely useful and relevant to my own work, as they dealt with site management and conservation techniques for heritage sites which can be applied in my work as an engineer. The photography class was interesting as it showed the different types of technology and skills needed for using a camera well.

“The Law for the Protection of Cultural Properties in Japan,” by Professor INABA Nobuko, World Heritage Studies, Graduate School of Comprehensive Human Science, University of Tsukuba

“The Cultural Property Protection System in Japan” and “Conservation and Utilisation of Cultural Heritage Resources (Cases in Japan),” by Mr. SUZUKI Chihei, Monuments and Sites Division, Cultural Properties Department, Agency for Cultural Affairs

“Maintenance and Management of Archaeological Sites in Practice I: Nara Heijo Palace Site,” by Mr. SHIMADA Toshio, Architectural History Section, Department of Cultural Heritage, and Mr. ISHIMURA Tomo, International Cooperation Section, Department of Planning and Coordination, Nara National Research Institute for Cultural Properties

“Introduction to Archaeological Prospection of Sites,” by Mr. KANEDA Akihiro, Center for Archaeological Operations, Nara National Research Institute for Cultural Properties

“Photographic Documentation of Sites and Remains,” by Mr. NAKAMURA Ichiro, Photography Section, Department of Planning and Coordination, Nara National Research Institute for Cultural Properties

Museum visits

During the month-long course we visited a number of museums, including the Kyushu National Museum, the National Museum of Ethnology, and the Asuka Historical Museum.

The museums that we visited displayed objects relating to world history and different cultures, as well as the history of Japan and its culture. In particular, museums are often facilities which show evidence and knowledge obtained through research undertaken at the cultural properties we visited. Items from cultural properties were usefully displayed in the museums, but in my opinion, the perfect museum is one that is easy to maintain, easy to understand, and it must be alive. The Asuka Historical Museum is a very good example with its exhibitions and simplicity in design. The museum is a living building because people can join in activities that teach them about peasant life styles and other elements of the period in a public setting.

Site visits

Various historical sites were visited during the course. We visited the Heijo Palace site, the Fujiwara Palace site, sites in Asuka village, Dazaifu, Yoshinogari, Korokan, and finally Fukuoka castle in Kyushu. These site visits were interesting as they showed the various ways that sites are reconstructed, and the different types of public displays, explaining the history and importance of the sites.

From the site visits and lectures regarding these places I obtained a lot of knowledge about cultural properties, and the many methods and the technology used in conserving and protecting these sites. However, while the information was interesting and a worthwhile experience, the technology and conservation methods used in Japan are difficult to apply in Lao P.D.R, due to a lack of money, skilled personnel, and resources.

Preservation of culture

Although Japan has lost many treasures in the past due to development, it is obvious that thanks to the work of the government, various agencies such as ACCU Nara, and heritage specialists, many cultural properties have been saved for future generations. During our course many of these cultural properties were introduced to us, some of them now being World Heritage Sites. It is clear there are many important cultural properties in Japan, and it is the job of specialists, government, and agencies such as ACCU Nara, to continue protecting these sites from possible future development, so that future generations can enjoy visiting them and learning from them about their history.

While most of the one-month program focused on the buildings, and the archaeological work being carried out at cultural properties and sites, it is clear that religion, the beliefs of the people, and respect and pride in Japanese culture and history on the part of the general public as well as the government are also important. These factors have played a major role in the preservation and protection of many cultural properties. This is demonstrated through the protection and conservation of many Buddhist temples and Shinto shrines in Nara. It is this strong respect for religion, culture and history in Japan, and how they have shaped Japanese identity, that has kept many temples and shrines preserved and protected, since to destroy them would mean losing a part of Japanese culture and heritage, which is important for Japanese identity. It is known that the architecture of the different temples and shrines indicate their origins, with some aspects tracing back to China and Korea.

World Heritage Sites in Japan

In Japan the central and local governments offer financial support for the protection of World Heritage Sites. World Heritage Sites in Japan are mostly wooden monuments, which represent the identity and spirituality of the Japanese people and the continuation of a lifestyle from the past to the present. In Lao P.D.R, we do not have big wooden structures as in Japan, but we have our own special cultural properties which show our culture and identity. Our cultural properties need specialists who can aid in the protection and conservation of the properties for the future. Further training in heritage protection and conservation techniques needs to be undertaken if our cultural properties are to survive for future generations. Presently sites in Lao P.D.R are under threat from development, and damage brought by visitors as well as by disasters and aging.

Lastly, I believe this program has been very important and relevant to my work as it has given me more understanding about the archaeology, conservation and preservation of cultural properties, as well as valuable ideas to take back to Lao P.D.R. The ideas learned here will be used to help to improve our heritage protection and management system. Each participant gained some knowledge from the experts and had the opportunity to discuss various topics with others. I have come to understand just how precious cultural heritage is and how vital it is to preserve it for the future.

I would like to thank ACCU Nara for giving us such an interesting, intensive, and unforgettable experience.

Marshall Islands

Kazutoyo WASE

Introduction

It was truly an honor to be a part of this year's training course offered by the Asia-Pacific Cultural Centre for UNESCO (ACCU) on cultural heritage protection. An opportunity like this doesn't come around very often, so I planned on making the most of it. This training has provided me with extensive hands-on experience and knowledge about preserving and protecting cultural heritage sites. Based on the lectures and what I've seen in Japan, it is accurate to say that Japan is among the countries that excel at conserving cultural properties because of its long history. This training course has given me the opportunity to engage with other participants and learn their methods of managing and preserving cultural properties in their own countries. "Research, Analysis, and Preservation of Archaeological Sites and Remains," from my own perspective, was the goal of the training. It might not be a simple issue to tackle, but deserves a lot of time, attention, and proper analysis for applying it differently in each country.

Before proceeding to the technical or methodological topics covered throughout the course, I would like to extend my sincere gratitude to the course organizers.

Acknowledgements

I would like to take this time to recognize the Agency for Cultural Affairs in Japan, the Asia-Pacific Cultural Centre for UNESCO (ACCU), the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), the National Research Institute for Cultural Properties (Tokyo and Nara), and the Nara Prefectural and Nara Municipal Governments for giving me the chance to broaden my skills in the field of archaeology. I would like to give thanks to the lecturers and instructors for sharing their knowledge and expertise that will benefit and improve the treatment of Marshall Islands cultural heritage sites. My warmest appreciation goes to the ACCU staff, tutors, and Ms. Hata Chiyako for all the hard work they committed to making this training course a success. Thank you for making my stay here in Japan a memorable and unforgettable experience.

Course Curriculum

The training course provided applicants with new methodologies and principles for the protection, conservation, preservation, and utilization of cultural heritage sites. It also gave us a glimpse of how to record and analyze sites and artifacts the Japanese way. Below are the topics covered by the organizers throughout the one month training course.

- Global Trends in Conservation of Archaeological Sites
- The Cultural Property Protection System in Japan
- Conservation and Utilization of Cultural Heritage Resources in Japan
- Introduction to Archaeological Prospection
- Introduction to Environmental Archaeology
- Introduction to Scientific Dating Methods
- Introduction to Dendrochronology
- Introduction to Conservation Science
- Recording of Archaeological Features and Artifacts
- Conservation Treatment of Artifacts
- Preservation, Development, and Utilization of Archaeological Sites
- Future Issues on the Conservation of Cultural Heritage

In addition to the above, I personally found extremely interesting an item provided by the course participants, the sessions consisting of country reports. This is because the participants were from different parts of the world, and we all shared different problems/solutions regarding cultural heritage protection. Some are facing similar problems, others somewhat different, while others are very remote. Because of this I was able to gain knowledge of what are the biggest concerns and needs of others in carrying out their duties as conservationists or preservationists. This made me aware of what issues might arise in the future that are still yet to be discovered and addressed in the Marshall Islands. It also provided feedback on how applicants from different countries respond to different problems that others were facing.

Brief Course Overview

The training course began with Global Trends in the Conservation of Archaeological Sites. It showed how our actions as conservationists/preservations can both harm as well as benefit a site by excavating it, then leaving it exposed and vulnerable. “Your Monument, our Shrine,” a quote from Dr. Gamini Wijesuryia’s PowerPoint presentation grabbed my attention. So in order to counteract these negative effects, new technologies and new methods are introduced to enhance research, analysis, conservation, and the protection of cultural sites or properties. I myself have witnessed the efficiencies of these new methods and recognize that Japan has reached a new plateau regarding cultural protection systems.

As of right now, the Marshall Islands can only apply several of the perspectives discussed during the course of the training. What we do in our office is mainly to record, document, and preserve cultural sites or artifacts. Our main focus is leaving something discovered the way it is, not allowing the loss of authenticity while still on-site. Of course documentation and recording are done before backfilling a specific feature, but this is mainly due to our office not having the resources to preserve these features. As a result of this training course, I was able to gain more knowledge of the techniques of documenting such as drawing and photography, to record the original state before something becomes lost or damaged.

As I've learned during the training, when documenting or drawing artifacts, one must include the full details of the object, which means describing every little detail that is present on the object you have before you. According to the instructors, one must be patient and fully determined in order to sketch the artifact successfully. This method is an instrumental way to keep the original's integrity intact to be stored for future usage. After being introduced to this technique of drawing artifacts, I strongly believe it will be an important tool that can be applied to our work in the office.



This is because what we in our office is mainly to encounter in our daily activities such artifacts that need proper restoration and documentation. We may not have the resources available, but now that I've acquired this new skill I can go ahead and document on behalf of our office.

Another method of keeping an artifact's authenticity which I also found very useful is the photographing of artifacts. We know that a photograph tells a thousand words, and what is more useful is a way of backing that up by a detailed presentation showing an artifact's dimensional attributes. A range of light sources differing from regular light can be used, and depending on where you position the light, you can capture photos from different angles and your outcomes will be different. Thus taking photographs is necessary for recording sites and remains. I think this too will be one of our assets because most of our artifacts are small enough to be photographed and drawn.



With improved documentation possible thanks to the help of this training, our office can better utilize the artifacts that are in store for us. From my point of view this section of the training course was one of the best that ACCU had to offer.

Site Visits

Many of the sites that we visited here in Japan, which included the Heijo Palace site and the Imperial Palace sites at Asuka and Fujiwara, the Yoshinogari site, etc., provided an in-depth way to see how the Japanese safeguard their cultural sites. After touring and observing these sites I realized that most of the cultural heritage sites here are reconstructed. This practice of reconstruction, as I understand it, is a process in which the original remains are excavated and surveyed, and later they are backfilled and a new structure is built on top of it. Almost all of the sites are preserved underground with a depth on 18 cm or more. By contrast, in the Marshalls Islands reburial is the only solution for preservation, because we don't have the facilities, resources, and most importantly, the necessary funding. What is also very different in the Marshall Islands is our belief that reconstructing over the original material may cause it to lose its authenticity, thus resulting in different usage and functions, forms and designs, and spirit and feeling to a site. But we do have cases where if a site is very significant, and is the only resource of its kind, we then proceed with the conservation with the help of outside sources. An example would be the Joachim deBrum Plantation, which is located in the outer islands of Majuro. Established in 1904, it was the only house in Micronesia that was placed under the National Register of Historic Places. Although some participants did not agree with this idea, I found it effective especially because Japan has a lot of resources. Reconstruction also helps interpretation, and gives people a glimpse of what the site was once originally. Although the spiritual feeling is altered, but there is still a sense of pride looming in the atmosphere.



Heijo Palace Site



Yoshinogari Site

During these on-site tours, the participants were exposed to the advanced technologies and methodologies keeping these structures standing. These advanced technological devices can help further elevate our performance in preserving and protecting cultural properties. But due to the lack of funding and expertise, to employ these means we can only use tools that are within our reach, therefore they must be placed into future plans for preservation and protection. I personally think that our office needs such devices, although it will take some time for funding and purchasing of the equipment. After being amazed by what these devices can do, it made me realize that with these means at hand, our office will surely benefit greatly. But I am confident that without this equipment our office can still do its work, although it might take some time, and because of that I will try to convince my superiors to purchase such equipment. Not all the devices introduced can be utilized in our future preservation work, but I believe that I might be seeing some of them later on.

Understandings Taken from the Course

All of the topics discussed during the course were interesting and worthwhile. I find the Japanese way of preservation and protection very effective. Using all kinds of knowledge and resources to various degrees, and applying these to their archaeological work, not just for sites and remains but the whole situation of heritage, results in the proper protection and utilization of cultural properties. Although this practice may not be readily applied in other parts of the world, it can certainly be declared as instructive. Development and utilization of cultural properties is a key focus here in Japan, and its main emphasis is on reconstructing structures and archaeological remains. In addition this practice takes a lot of creativity and wise choices. Although the authenticity of the site may be altered, the interpretation remains and reminds the Japanese people of what past life was like.

Comments

The entire training course was a success, although it lacked some basics that could use much more emphasis. Some of the materials covered were quite complicated and would have been better if presented in English. It would be helpful if they were all English because different people have different perceptions and ideas of the material. PowerPoint presentations are always excellent sources of information; the instructors did an excellent job in preparing them. Finally, the duration of the course was not long enough to cover all the material. It would have been nice to have it a bit longer in order to extract all the information available to each applicant, but the bottom line is everything else was great!

Conclusion

All in all, the entire training program was successful and unforgettable, and has broadened my views on many archaeological issues. It has been very useful for many participants, not just myself, and it also provided me such great insights into the study of archaeology with regards to conservation and restoration methods for cultural heritage in other countries. I know I am very proud to be selected,

because I had a chance to learn from the finest instructors Japan has to offer. From this training I'm confident that I can go back and help my country in preservation work of cultural properties. Coming from a small and developing country, this was a once-in-a-lifetime opportunity for me, to experience such a high level of methodologies and techniques that Japan has used to elevate itself above the rest of the world. The knowledge I've gained will not only benefit me, but also my country.

Once again, the topic of cultural heritage protection is vital for knowing about one's history. Preserving, restoring, and utilizing archaeological sites is of great value; these are the very foundations that make each country individual, and uniquely different from all the others.

Arigato Gozaimasu.

Kom Kanuj in Emol (Thank you very much).

Myanmar

Aung Aung Kyaw

Introduction

I would like to thank Director Nishimura Yasushi and the ACCU officers, the Japanese professors and lecturers from ACCU, ICCROM and NNRICP, for this opportunity to participate in the training course on Cultural Heritage Protection in the Asia/Pacific Region 2010, “Research, Analysis and Preservation of Archaeological Sites and Remains,” which was held from 7 September to 7 October 2010. The sixteen participants from sixteen countries learned both from the Japanese heritage professionals’ lectures, and by sharing their own experiences and knowledge. This program has given me a good opportunity to expand my knowledge of theoretical and technical work in the analysis and preservation of archaeological materials and sites. Throughout this training course, I have learned how the Japanese protect and preserve their cultural heritage and observed their modern techniques and methods of research and analysis.

The Training Course

All sixteen participants submitted their country reports, focusing mainly on the problems and needs of cultural heritage protection in their respective countries. The training course provided a good opportunity for all participants from the Asia/Pacific region to exchange views and ideas with colleagues from different countries. The training course began with an introduction to “Global Trends in Conservation of Archaeological Sites” by Mr. Gamini WIJESURIYA of ICCROM. He talked about the challenges confronting heritage management in different parts of the world. Each heritage site has its own problems and needs. Management entails understanding the internal nature of the site, its historical development, significance, and function in the lives of the people who live at or use the site. Then, we also learned about the values of archaeological sites and remains, about the preservation of the heritage being influenced by a variety of factors both positive and negative, about archaeological context and environmental control, and different views of diversity and managing archaeological heritage sites and remains. I also became acquainted with the different international charters, recommendations and convention guidelines for heritage conservation in various parts of the world.

The lecture delivered by Mr. SUZUKI Chihei on “The Cultural Property Protection System in Japan,” and the following lecture on “Conservation and Utilization of Cultural Heritage in Japan,” were very useful for understanding the legal framework for the protection of cultural heritage in Japan. We studied the cultural landscape areas which have developed in association with the modes of life or livelihoods of the people and natural features of the region. The law for the protection of cultural properties has been continuously revised by the government and concerned parties. It has become a

foundation for the conservation and utilization of cultural heritage resources. This lecture provided an outline of guidelines that govern the funding, management, conservation and protection of cultural properties from both international and national perspectives. We observed examples of cultural landscapes associated with agriculture, grassland or livestock ranching and forest uses, mining and industrial manufacture, transportation and communication, and residences and settlements. Cultural landscapes can have a combination of two or more of the characteristics, listed above, which represent typical or unique elements of the basic modes of life or livelihood of the people.

The Nara Heijo Palace site is one of the most interesting places in Japan for research, preservation, restoration, maintenance and management of heritage. Preservation of the actual remains is achieved by leaving them untouched, or when excavated, by reburying them under soil. There are many maintenance principles such as sustainable conservation, preservation and providing facilities for the site. A significant aspect of this site is not only preservation but also the use of modern techniques. The Heijo Palace site and the Imperial Palace sites at Asuka and Fujiwara really provided us much valuable knowledge about the preservation, restoration and management of these cultural heritage sites. The concept of site museums in such areas is very interesting and should be studied further.

There are many kinds of archaeological artifacts, such as ceramics, roof tiles, wooden items, stone implements, etc. Archaeological artifacts provide a wealth of information on archaeological sites and remains. Drawing is an especially important means of documenting artifacts and recording the data they provide. When we find an artifact, first we observe the condition of the material, its characteristics and other information. Then we treat the artifact for conservation over a long time. All the participants in the training course carried out practical work of drawing items such as pottery and stone tools. A photographic record is also necessary as an important method for recording archaeological artifacts and site remains. We learned basic knowledge of the many kinds of cameras, the storage of photograph records, how to take photos to get high quality, and general knowledge of photographs. Our country needs training courses for non-professional photographers, such as cultural properties workers at archaeological sites, and conservators at laboratories for cultural properties.

In hearing the lecture on the “Introduction to Environmental Archaeology,” we observed interrelations between the eating habits of people and the environment in ancient Japan. Studies have been made to understand the flora and fauna, the environment and food habits of the animals eaten, and to make age and sex determinations of human skeletons found during the excavations. Environmental archaeology asks “what do plant and organic remains tell us?” Pollen analysis is a widely utilized method for identifying plant remains in archaeology. Other methods include the identification of seeds, fruit, and tree species. The methods are used to study the vegetation of the environment, and ancient eating habits, at archaeological sites and remains. Recently, dendrochronological analysis of ancient wooden

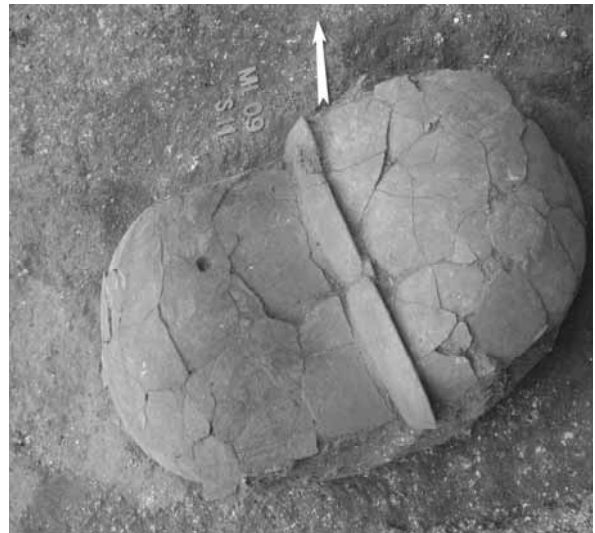
cultural properties is being applied to a wide range of materials, including archaeological artifacts, building components, wooden sculptures and handicrafts.

We learned from so many lectures in this training course, in different fields of research. All of the lectures and workshops will be very useful for our country. I am interested in archaeological survey equipment such as Ground Penetrating Radar (GPR), magnetometry and electric resistivity surveys, etc. We know that archaeological prospection is very important before excavation. We could determine where we can get more information from a site in our research. And also, we can prepare and plan for excavation better using the modern equipment and techniques. We observed that there are many scientific dating methods such as tree ring dating, radiocarbon dating, thermoluminescence, fission track dating, electron paramagnetic resonance, paleogeomagnetism, etc. In Myanmar, we usually date by ^{14}C measurement, and by typological and stratigraphic methods.

As a study tour, we went to Kyushu and observed the Yayoi settlement site of Yoshinogari, the Kyushu National Museum, the Korokan site and Fukuoka castle. The Yayoi settlement site (300 BC-300 AD) was very interesting for me. The reconstruction at the site was truly impressive. The reconstructed wooden houses at the site show the characteristics of those days. At this site, double jar burials were found at many places in the area. Similarly in Myanmar, we find big burial jars used in sets. But they are only for burials of babies. Sometimes we find burial jar sets with two or more pieces of pottery. We never find adult skeletons in the burial jar sets.



Double burial jar set, Yoshinogari site in Japan



Double baby burial jar set in Myanmar



Baby burial jar set in Myanmar

The Kyushu National Museum showed a high level of presentation and display with modern techniques adopted by the Japanese professionals. In this museum, we studied many ancient artifacts of Japan and other countries. I admired their systems for analysis, preservation, storage and security using high levels of technology.

At the end of the training course, we enjoyed a lecture on “Heritage at Risk” by Ms. Montira Horayangura Unakul, UNESCO Bangkok. We learned about “What we are protecting from risk” and a “value-based approach to heritage management.” Risk management is very important for cultural heritage. When cultural heritage is exposed it may face dangerous situations or damage, and it is necessary to plan for such situations. However, viewed from a different standpoint, such risk is shared with other peoples who are blessed with cultural heritage. Of course there are many international organizations such as UNESCO, ICCROM, and ICOMOS. But it is very difficult to devise special techniques of risk management.

Conclusion

The training course on Cultural Heritage Protection in the Asia/Pacific Region 2010 has provided all participants with opportunities to gain knowledge and study new methods of conservation and restoration of cultural heritages. This training course has also provided me with various ways in which

heritage management can be practiced based on the experience of Japan. This training course also introduced me to many modern technologies, conservation, preservation, and research analysis techniques. This course has been of great value to me, as it has provided me with a special opportunity to learn from other countries and become aware of potential issues that could be encountered in the present and future. I will also share the experience and knowledge I gained from this training course in Japan with my colleagues and the younger generation.

Acknowledgments

I would like to thank the government of Japan for giving me the chance to attend the ACCU Training Course on Cultural Heritage Protection in the Asia/Pacific Region 2010, and the International Centre for the Study of Preservation and Restoration of Cultural Property (ICCROM), the Ministry of Foreign Affairs of Japan, Nara National Institute for Cultural Properties (NNRICP), the Cultural Heritage Protection Cooperation Office of the Asia-Pacific Cultural Centre for UNESCO (ACCU Nara), and the Nara prefectural and municipal governments. I am really grateful to Mr. NISHIMURA Yasushi, Director of ACCU Nara, Mr. TAKAHASHI Wataru, Mr. KOBAYASHI Ken'ichi, Ms. KATO Naoko, Ms. HORIKAWA Kazuko, Ms. NISHIDA Michiko, Ms. OTANI Yasuko, Ms. HATA Chiyako, Ms. KIMATA Akiko, Ms. LEE Jihee, Mr. TAGASHIRA Naoki and Mr. HANEDA Tomohiro. I am also grateful to all the lecturers and all the ACCU staff for the excellent and wonderful organization during the entire period of this training course.

New Zealand

Kathryn HURREN

Introduction

The training course on Cultural Heritage Protection in the Asia-Pacific Region 2010, “Research, Analysis and Preservation of Archaeological Sites and Remains,” was extremely interesting and informative. The course ran from 7 September to 7 October 2010 and incorporated various seminars, workshops as well as on-site lectures to show the 16 participants from countries around the Asia-Pacific Region the techniques that are used by Japan to help reconstruct and preserve archaeological sites in the country. This final report supplements the country report that was submitted to ACCU Nara as part of being accepted for the training course and details the problems faced in New Zealand by comparing aspects of archaeological site preservation in New Zealand and Japan, and showing how the topics covered in the course are applicable to New Zealand. The final report will detail the relevance of the training course to my position as Regional Archaeologist for the New Zealand Historic Places Trust (NZHPT) and how I shall implement the relevant teachings of the course to aid in the preservation of the archaeological record of New Zealand for future generations.

Comparisons with New Zealand and how the training programme can be applied

As a Regional Archaeologist for the NZHPT Central Region Office my position has two functions. The first function is to ensure adherence with the archaeological provisions of the *Historic Places Act* 1993 (HPA 1993), to undertake compliance monitoring, and to investigate site damage. The other function of my position is to advocate for the retention and protection of archaeological sites and to educate people on the history of New Zealand and the significance of our archaeological record. Below I shall detail the different seminars of the course, and how they are applicable to my position at the NZHPT in relation to my two functions.

The first session of the training programme introduced us to global trends regarding protecting heritage as well as the education programmes and work undertaken by ICCROM. This session was presented by Gamini Wijesuriya who discussed with us the history of UNESCO, ICCROM and ICOMOS, as well as putting forward valuable discussion topics on the conservation and management of archaeological sites. Suggestions for better site preservation in our own countries included going over our principle legislation for heritage protection as well as other legislation that aids in managing and conserving archaeological sites. Our countries need to look at the main institutes and regulations in relation to heritage as well as looking at our national along with international resources. It was highlighted that heritage protection needs to be proactive and not reactive. This session was very valuable in that ideas about heritage protection were discussed and suggestions for better site preservation and conservation were identified which are extremely applicable to the situation in New Zealand.

The second session of the training course had individual participants report on heritage protection in their countries. This session demonstrated that many countries had similar issues, and that by discussing these issues with each other possible solutions could be found and applied to our own countries.

The third session was very valuable to me as Regional Archaeologist for the NZHPT, as it was on cultural property protection and discussed the legislation of Japan. New Zealand and Japan have similar legislation, but New Zealand's legislation in the HPA 1993 does not encompass all the heritage items that the Japanese legislation does. The legislation that protects archaeological sites in Japan is the *Law for the Protection of Cultural Heritage* 1950 (amended 2004) which protects archaeological sites as well as cultural landscapes. The HPA 1993 only protects archaeological sites, which are defined as any place in New Zealand that was associated with human activity that occurred before 1900, or is the site of the wreck of any vessel where that wreck occurred before 1900, and which may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand. No work on an archaeological site can be undertaken without an archaeological authority from the NZHPT. While it is clear that archaeological sites are protected by law, the HPA 1993 does not cover post-1900 archaeological sites or cultural landscapes, and because of this even if an archaeological site is protected and preserved the landscape in which the site is located may be ruined by development. This can be clearly seen in large-scale developments such as subdivisions, dams or wind farms.

Another factor about the Japanese legislation is that all artefacts are protected regardless of their origin, while in New Zealand only Maori artefacts are protected under the *Protected Objects Act* 1975 (POA 1975), meaning that items of European or other non-Maori cultures are the property of landowners who can do whatever they like with the items. The POA 1975 should be changed along the lines of the Japanese law where everything is protected regardless of origin, as little consideration and respect are given to items of non-Maori origin due to the current legislation. Items and sites of European origin are often only protected by the good will of the developer or landowner, but nothing else.

After the first four sessions the training course became more practical, beginning with maintenance and management of archaeological sites in practice. This session introduced us to the preservation and reconstruction methods used in Japan and a site visit to the Heijo Palace site was undertaken. This session ties in with a another site visit to the Imperial Palace sites at Asuka and Fujiwara as well as a three-day study tour to Fukuoka where we visited Yoshinogari, Kyushu National Museum, Dazaifu and finally Korokan and Fukuoka Castle in Fukuoka City. These lectures and site visits were interesting as they showed the various techniques used for archaeological site management in Japan, and it was interesting to see what information was used to preserve and reconstruct sites. The types of preservation and maintenance include covering over the archaeological remains and then making a reconstruction over the buried remains, or leaving excavated areas exposed so that visitors can view the true archaeological surface, and lastly, showing how the site was excavated via reconstruction of the excavated site. Reconstruction/preservation of archaeological sites is rarely undertaken in New

Zealand, unlike Japan, and I know of only three examples where archaeological sites have been preserved *in situ* for public display. Of these sites two are in Wellington and the other is in Dunedin. New Zealand's archaeology is mostly subsurface and the most acceptable form of preservation and conservation of archaeological sites are leaving the sites protected underground.

Continuing on from maintenance and management of archaeological sites, lectures and workshops on documentation of archaeological artefacts were held. These three sessions were very practical and were good for updating skills, but were not core to my position at the NZHP.

After the sessions on documenting archaeological artefacts, sessions on prospecting of archaeological sites using non-invasive techniques were given. While non-invasive survey methods such as GPR are employed in New Zealand they are not in the mainstream and only a handful of people are skilled enough in using these techniques. In New Zealand archaeological sites are often only identified via excavation which is destructive to the archaeological remains and does not leave many options to preserve the site from destruction. People not properly identifying the potential for archaeological remains, and beginning work not knowing what to expect, are two fundamental problems of my job at the NZHPT as issues which arise when important finds are made. Utilising non-invasive methods prior to development and construction work would give people a better understanding of what may be encountered, as well as help put procedures in place to deal with important discoveries. Once back in New Zealand I shall highlight the need for more use of non-invasive analysis such as GPR and other prospecting techniques.

The following sessions, after prospecting of archaeological sites, included treatments of environmental archaeology and photography. Both sessions were very interesting in different ways. Environmental archaeology was good for refreshing my knowledge but was not essentially relevant to my position at the NZHPT as I deal mostly with legislation and advocacy. The photography session was relevant and useful, as I am often out in the field taking photographs of archaeological sites or buildings. The session added to my knowledge and understanding of techniques used in photography, as well as explaining technical elements and terminology of cameras. The session updated my skills and gave me new understandings of how to take photographs, which I shall utilise in New Zealand when in the field.

The sessions on conservation science and dendrochronology were interesting and contained very valuable ideas, as well as highlighting issues for New Zealand archaeology which shall be mentioned directly below. The conservation techniques in relation to wooden artefacts, and use of dendrochronology are relevant to New Zealand as the most common items discovered during excavations in New Zealand are wooden artefacts. Soil analysis is also relevant, as often it is the change in the soil that indicates the presence of an archaeological site in New Zealand, especially in relation to Maori gardening and pre-European disasters. This session highlighted a very large issue that New Zealand has, which is the lack of resources and skilled people to undertake particular tasks such as GPR or wooden artefact conservation. Presently there are only two archaeological consultancy companies skilled in undertaking GPR and magnetometer surveys. Both companies are based in

Auckland which can cause issues if work needs to be undertaken in the southern part of New Zealand. There is only one person who works in wooden artefact conservation in New Zealand, and if this person happens to be away on holiday when a wooden artefact is found then there is no one else who can be contacted to look at the item. There needs to be more people skilled in undertaking GPR and magnetometer surveys and being able to interpret the results. Other techniques such as dendrochronology and soil analysis are not well utilised. Dendrochronology has been utilised in historic sites for dating possible historic house construction, but little else. This dating technique has further potential for aiding in archaeological work in New Zealand.

In the final two sessions, risk management and utilising heritage sites for the public were discussed. Both these sessions were relevant to my work, as New Zealand is a disaster prone country and the NZHPT owns and manages heritage buildings which are also archaeological sites as defined by the HPA 1993. Issues relating to disasters such as earthquakes and flooding are constantly raised, as are issues from visitors to not only NZHPT sites but sites all over New Zealand.

Relevance of the training programme to conservation work in New Zealand

A number of issues covered during the six-week course were extremely relevant to New Zealand, in particular the session on risk management. New Zealand is a disaster prone country with many floods, earthquakes as well as other threats like fires. In my position of Regional Archaeologist as the NZHPT I commonly encounter situations where urgent stabilisation or repair work is required on an archaeological site due to flooding, landslides, storm activity and earthquakes. The most important aspect that was taken from this session, and which will be highlighted to my colleagues, is the concept of identifying risk and how to manage the various types of risks that may eventuate in relation to archaeological sites during disasters.

The sessions on legislation were extremely relevant to conservation work in New Zealand. While the Japanese and New Zealand legislations are similar, the Japanese legislation extends further than the HPA 1993 by protecting all sites and artefacts as well as cultural landscapes. The HPA 1993 only protects sites defined as archaeological while the POA 1975 only protects artefacts of Maori origin. I would like to see the HPA 1993 extended to include cultural landscapes as well as protect all sites considered archaeological. The POA 1975 should also be extended to protect artefacts of European and other non-Maori cultures. These are ideas I shall take back to New Zealand in order to be discussed.

Listening to other participants talk about their countries and the types of issues that they encounter was extremely relevant. Many countries share the same issues such as development, legislation issues, population growth, natural disasters and climate change issues. This created a forum in which participants could further discuss their countries and how to manage the variety of issues that are commonly encountered. The discussion led to the identification of the need for people to collaborate and work together in order to achieve the goal of archaeological and historic site preservation. The idea of collaboration and working together can be applied to the situation in New Zealand. While the

NZHPT administrates the HPA 1993, there are other stakeholders involved in heritage management and the protection of archaeological sites. Regional and local councils are obligated under the *Resource Management Act* 1991 (RMA 1991) to look into the effects of any development on historical and archaeological values. Local *iwi* groups have a vested interest in the management of their cultural history that relates often to their very identity. Historical societies, consultant archaeologists as well as research archaeologists based at Auckland or Otago University also have vested interests in the archaeological record of New Zealand. However, while all of the above mentioned groups have vested interests, there is presently not enough cohesion or discussion among the different groups. A better working relationship and understanding of each others' positions and functions is needed in order that better collaboration may happen which will result in the protection and preservation of archaeological sites in New Zealand. One of my goals once I return to New Zealand is to foster better working relationships and understanding between the different stakeholders.

On a larger scale, collaboration between groups in New Zealand with organisations in other countries needs to occur. New Zealand does not have the resources or training to undertake reconstruction or preservation of archaeological sites in many of the ways undertaken in Japan. This is clearly seen in the treatment and conservation of wooden artefacts in New Zealand, in which there is only one specialist in the whole country.

After learning about the Japanese system, it feels as if Japan is better organised, has strong government support and funding, as well as strong legislation protecting archaeological sites. Japan is also very proactive in preserving and managing its cultural heritage, with large-scale excavation, reconstruction and preservation work led by the government. These are attributes that I would like to have in New Zealand. The NZHPT is the lead heritage agency in New Zealand but in saying this, the NZHPT is underfunded and understaffed for such a large task. Work at the NZHPT tends to be reactive instead of proactive. Not only that, but the NZHPT is not funded to undertake preservation work like that seen in Japan. Archaeology in New Zealand is presently led more by development than for research or reconstruction/preservation purposes. The focus of archaeology in New Zealand needs to change from mitigating the effects of development by excavation to advocating for preserving archaeological sites. While it is acknowledged that the world changes and that development cannot be stopped, it is important to try and preserve and protect archaeological sites and to identify what is the limit of acceptable change that a site can withstand. More incentives need to be given to landowners to protect and preserve archaeological sites on their properties, and more support is needed from the government as well as regional and local councils.

Conclusion

In conclusion the training course has been most beneficial and many ideas and concepts identified during the course can be applied to New Zealand. The Japanese government and the Japanese people have a real appreciation of their cultural heritage and it shows in their attitudes and the way sites are cared for and preserved. There is a sense of pride in the history of Japan and the in archaeological sites that show this history, which is also part of the Japanese identity. This is not so in New Zealand as

people do not seem to appreciate their heritage, claiming our country is too young for our heritage to be important. New Zealanders miss the point that because we are a young country which was colonised last in world history, we are extremely unique. The archaeology in New Zealand is found nowhere else in the world and for this reason alone it needs to be protected and preserved. The disregard for our cultural heritage is not helped by a pro-development government and local and regional councils that will not fulfil their duty in terms of the RMA 1991.

The ideas and practices that I will take back to New Zealand include advocating for more use of non-invasive prospecting techniques, further collaboration and education with groups who have a vested interest in archaeological site protection as well as international collaboration, identification of risk and how to manage risk in relation to disasters, and finally, identifying areas where there are skill shortages and looking at how these shortages can be rectified. It is clear that the issues faced in New Zealand are also faced by other countries. We share common problems and wish to obtain the same goal of archaeological site preservation in order that future generations may enjoy learning about their past and the interesting histories of their country as well as the world. By working together and applying the ideas, techniques and concepts learnt on this course to our own countries we can move forward, change ideas and perceptions and preserve more archaeological and historical sites for future generations.

Acknowledgements

I would like to thank ACCU Nara's Cultural Heritage Protection Cooperation Office, ICCROM, Nara National Institute for Cultural Properties, and the Agency for Cultural Affairs of Japan for organising and accepting me on this training course. I would like to thank ACCU Nara for looking after us participants and making sure our needs were met and our stay in Japan comfortable.

Pakistan

Asadullah KHAN

It was very beneficial for me to have the chance of participating in the Training Course on Cultural Heritage Protection in the Asia-Pacific Region 2010. Through this training programme I learned various conservation techniques, and it enabled me to enhance my knowledge and broaden my vision. Moreover, I also got the chance for interaction with training participants from fifteen other countries. It also provided me an opportunity to closely observe the traditions and cultural traits of Japan. This training will be helpful and beneficial to me in various ways in my profession as an archaeologist. An overview of various conservation problems and techniques for resolving them will be highlighted here, noting to what extent these conservation techniques are applicable in my country.

From the very first day of the training programme, I found that many things of which I was not aware regarding heritage, its protection, conservation and utilisation, were thoroughly introduced by Gamini Wijesuriya. He also delivered a detailed lecture about the types of heritage, its value, risk conservation, and utilisation, and addressed how to protect cultural properties for future generations.

Presentations by all the participants from different countries enlightened me with new trends and terms used for the preservation of tangible and intangible cultural properties. For example, Ulaiasi Motonikumi, the participant from Fiji, used the term “cultural mapping” in connection with the preservation of their intangible cultural properties. And I found quite interesting the ways and procedures for recording, documenting and preserving their customs, to keep these customs alive for future generations. In a country like Pakistan a large degree of cultural diversity exists. Different peoples have different customs, traditions and cultural traits while living within the country. Very small-scale initiatives have been taken by the Ministry of Culture to protect intangible properties, but these are not yet well established.

At the end of the presentations from all sixteen participants, a detailed lecture was delivered by Inaba Nobuko, Professor with the University of Tsukuba, regarding the history of legislation for protection and conservation of cultural properties, scenic beauty and cultural landscapes. Suzuki Chihei also presented the legislation and regulations for protection. In his presentation some terms which were used for cultural properties were very confusing, such as the term “monument” when used for scenic beauty and some unique species of dogs and deer. But a monument to me should be a structure, built by humans, having the age of one hundred years or more. Regardless, while focusing on the legislation for the protection of cultural properties, it seems to me that there is no provision to protect cultural properties from encroachments. For example, Pakistan has the Antiquity Act 1975 for legal protection

and preservation of the tangible cultural heritage. One clause of the Antiquity Act 1975, which is very important for preserving cultural property, I would like to quote here: “No development plan and work on or within two hundred feet of the archaeological site is allowed. Whosoever found guilty must be punishable for at least three years imprisonment and fine.”

I asked many times this question to various lecturers as to whether any provision exists in the legislation of Japan for preserving the tangible cultural properties, which prohibits development on or within some distance of an archaeological site. And the answer to my question was always no. According to the lecturers the land is usually under private ownership, and once the research work is completed then the owner of the land is allowed to construct or carry out any sort of development. In my view the tangible cultural properties need strong legislation and its implementation. Otherwise archaeological sites are subjected to being completely ruined and their physical appearance will no longer exist, and all sorts of values are lost, such as historical, architectural and spiritual. Physical existence is very important and necessary for visitors, to provide them with some sort of idea about the essence of ancient history.

Throughout the training course, it came to my attention that in Japan very small sections of archaeological sites are excavated, with the help of a researcher and latest and advanced archaeological tools and equipment, while keeping research objectives in view. Though this sort of excavation can be appreciated for the minimal disturbance to the remains, the practice is not seen of dividing the site into equal trenches, usually 5x5 m each, and the excavation is not carried out to the virgin soil, which is very important for the recovery of full periodic data. Lacking this technique can cause missing some of the archaeological data. The practice of excavation in Pakistan is that an archaeological site is divided into 5x5 m grids, and then excavation is carried out down to the virgin soil, and each and every artefact is documented on the spot by using finds tags and cards, with the measurement of depth from the bottom and by indicating the layer number and orientation. It would be much better if the same pattern of excavation is practiced in Japan.

Regarding the Nara Heijo Palace site, which is of course a large and important cultural property of Japan, it is well maintained and provided with all the basic facilities for the public. But still this massive complex is not presenting the essence of conservation. According to Shimada Toshio the original surface and remains lie some 80 cm below the present surface level of the ground. And the existing palace is a reconstruction based on the old features of the Heijo palace. When the word “conservation” is used for a cultural property, then it means that the cultural property and archaeological sites must be treated in a way that shows its authenticity, and must be similar to the original in all aspects, whether it is a question of material or appearance. But in the case of the Heijo palace, nothing looks like conservation work but each and every structure gives the impression of being a new construction. During our visit to the site I did not feel anything related to any sort of value,

such as the architectural, historical, spiritual and cultural values. While listening to the lecture of Shimada Toshio, he stated that it is very difficult to reconstruct the building 100 percent with ancient technology and traditional materials, but here is a matter of conservation and reconstruction creating very conflicting perspectives to be applied as conservation. The term “reconstruction” can change everything about the site by defining one’s own imaginative approach to the ancient structures. Excavations are carried out at various places at the Heijo palace, and they have been refilled after the research work. Features of the ancient structures are thus not visible, and concrete has been applied and there are only the pillars indicated either by applying round concrete shapes or by planting trees. In my view this is not the right procedure of conservation, and there must be some original structures, clearly visible for the public to get an idea of the ancient architectural features. Another drawback at the Heijo palace is the presence of the railway track, which separates the main Suzaku gate from the rest of the palace complex, and in my view it is a severe encroachment on the site, and a main hurdle for the visitors in approaching the palace complex.

Continuing on the topic of preservation, conservation, maintenance and utilisation of cultural properties and heritage, I found the Yoshinogari archaeological site, which is known as Yoshinogari Historical Park in Saga prefecture, quite interesting and very attractive as compared to other ancient sites of Japan. Though all the structures are reconstructed, maximum effort has been made to give the site an ancient architectural touch, and especially the moat all around the site has been given excellent conservation work. The northern burial mound at the Yoshinogari site is impressively conserved and preserved by providing a roof shelter to protect it from weathering. The ventilation system used to control the humidity is also very interesting. For this purpose devices are installed on either side of the mound, and air enters from one side and is exhausted on the other side. The Yoshinogari site also has the characteristic of having all personnel of the basic facilities and the guards wearing ancient traditional costumes, which provide the spirit of the Yayoi era.

The Haniwa Factory Park is an ancient kiln site we visited during our training course. This site had the function of producing *haniwa* burial pottery for the Imashirozuka burial mound. This site is certainly well preserved and maintained. The main kiln is well sheltered and protected from damage which is usually caused by rainwater. The two workshop places are also covered, erecting shelters on an imagined base, while the original features of the workshops have been refilled after research and analysis. Although the site is well preserved and maintained, it has no sign boards in English for foreign visitors, and the site is exposed to threat due to the massive buildings which have been erected very near the site, and these buildings have a severe adverse effect on the view of this historical site. But in a country like Pakistan such development works are strictly prohibited under the Antiquity Act 1975 and its Section 23. Another place of our visit was Imashirozuka burial mound. Though we did not have ample time to observe the site thoroughly, an overview of the site showed it was in presentable condition. This site is well protected by providing a boundary wall.

Next, an excursion was made to Asuka village. We received leaflets about Asuka village, on which it is written that “history you must see” and “scenery you must feel.” This is very much true about the village of Asuka, and it was the combination of historical and natural beauty that impressed me. This village has left strong images in my mind due to its high and lush green mountains with dense bamboo forests. As far as the historical remains of Asuka village are concerned, almost all of the sites are well preserved and have been refilled after excavation and research work. Ishibutai *kofun* was the first site we visited. Though such sites are well preserved, the defacement of some mural paintings at another site is a great loss of cultural property. However, it can be appreciated that the paintings are being restored to some extent and will be preserved by the authority of Asuka Historical Museum. Asukadera temple was another historical site on our visit. The original surface of the temple is 70 cm under the present ground surface. Reconstruction of the temple is based on the old plan. Though the temple is reconstructed, up to some extent it presents historical and spiritual value. The original features of the temple were refilled after excavation and research work. And the old plan of the temple is marked either with round stones or concrete, and the Kwaradera temple site has been treated with the same technique of conservation. Another beautiful site in Asuka village is the Sakafunneishi site. This site is of course very well maintained and preserved and shows real conservation work. This archaeological site has immense importance due to its aesthetic value, and because in the ancient time this spring was used for religious rituals. A unique characteristic of this cultural property is that tortoise-shaped and oval stones were recovered, joined with each other for the flow of water, and they can be observed and preserved in the same condition. Next to this we visited Sakafuneishi, which is a large and massive stone and was used perhaps for making liquor or wine. This stone is partially damaged, but still it has its original shape. For better preservation it is necessary that this stone be shifted to the Asuka Historical Museum.

Our visit to Fukuoka city in Kyushu was also interesting, and enlightened me with ancient cultural properties like the site of the Dazaifu Government Office, which is a National Historical Site, and the ruins of the Mizuki and Ono fortresses. The site of Dazaifu covers quite a large area, and after the excavation and research work this site has been conserved by refilling.

The plan of this archaeological site is indicated by putting large round stones at places where the pillars stood. To the north of Dazaifu, ruins of Ono fortress are situated on a mountain top. Partial excavation and research work has been conducted on a small scale. The original ruins are visible in some places, specially the fortification walls of the fortress. The construction material is stone. If this site is fully excavated and massive structures exposed and preserved, then this place will be a centre of attraction for visitors and researchers.

Korokan was the last archaeological site we visited. This site is yet not fully excavated, and excavation and research work are still in progress. Part of the excavated section is well sheltered and well

preserved from weathering. This was quite interesting, and a display of a small number of artefacts with an audiovisual system is also installed.

Besides the visits to various archaeological sites and cultural properties, many lectures and workshops were held concerning the documentation of sites and artefacts. It was a good experience for me, as I got exposure to methods for documenting artefacts, especially the drawing of pottery and stone tools. We also observed the research and conservation laboratories for pottery and wooden artefacts as well. Here one cannot deny that these laboratories are fully equipped with modern devices for documentation and restoration of these artefacts. But here the question arises: how to utilize this training programme? Because in a country like Pakistan there are no such archaeological research laboratories for restoration and documentation of such artefacts. We usually rely on manual methods and techniques of documentation and restoration. Here I would like to add that during the course of training we have not been provided the chance for ample time to learn in practice all of these things, and of course we have not been involved in learning to use the latest technology for documenting artefacts.

The topic and lecture of archaeological prospection/survey was interesting and broadened my vision about collecting preliminary data on an archaeological site using various scientific devices. In the archaeological prospection the subterranean data of a site is collected without doing any harm and damage to the remains. This practice in Japan is very interesting and very helpful before conducting excavation and research work. Various devices are used for this purpose, such as GPR, electric resistivity equipment, electric probe placement array, fluxgate magnetometer and magnetic and electromagnetic devices. Pakistan and almost all the countries where survey and excavation are done should have this system of archaeological prospection, and all the relevant devices and skilled staff.

Environmental archaeology, which includes the study of artefacts of wood, nuts, seeds, and human and animal bone, is another interesting subject. Documentation and conservation is done with the help of various scientific devices in well-equipped and well-maintained laboratories by skilled professionals. Radiocarbon dating, for determining the age of bones, and DNA tests are applied. In Pakistan, environmental archaeology is not developed in the Department of Archaeology, but there are zoological and botanical laboratories in various educational institutions which can help for establishing the systematic study of environmental archaeology.

A workshop on photographic documentation of sites, remains and artefacts was conducted. This session on photographic documentation was very informative and useful for all of the participants. Due to this workshop I learned various techniques and the right use of cameras and lighting for professional photography. Various cameras from a small to large were introduced to us by defining the resolution and mega pixels of the different formats. It was shown to us in practice how light plays an

important role in photography, especially for the photographing of small artefacts from various angles. In my country photographic documentation is always done by a skilled professional, and the officer in charge of excavation is always least concerned with the photography. But it is very necessary to have adequate knowledge of photography, for all professionals who conduct fieldwork and research.

Next was a lecture and workshop on the conservation of sites of archaeological remains. The lecture was very informative, and various aspects of conservation science of archaeological sites and remains were discussed. A few devices and chemicals for use in conservation were shown in practice, but still there was not ample time for learning the use of devices and chemicals for the purpose of preservation.

Furthermore, a good presentation was delivered on the subject of dendrochronology by Okochi Takayuki, which is an important branch of archaeology for the study, analysis, and determination of the age of wooden artefacts. Though this system is not established in the archaeological department of Pakistan, there are certain botanical laboratories which can help us in establishing independent research centres for dendrochronology.

During this training course we visited four museums, the Nara Palace Site Museum, Asuka Historical Museum, National Museum of Ethnology, and Kyushu National Museum. All these museums are very impressive with outstanding displays of objects, audiovisual guides, and obviously all sorts of public facilities. These can be considered as a model for establishing new museums in my country.

In the last days of the training course, we were given detailed presentations on the topics of public heritage and heritage at risk by Monitra Horayangura Unakul. I found this session very interesting and conducted in a very friendly manner. During this session, the world cultural and natural heritage was highlighted. Group discussion and group tasks were conducted for the purpose of considering how the public heritage should be managed. And the issue of heritage at risk was also discussed, including how cultural heritage in different parts of the world is at risk, and what strategies are adopted for safeguarding this heritage. The presentation by Monitra Horayangura Unakul was very comprehensive and broadened my vision about heritage and heritage-related values.

It was an interesting and precious time for me in Japan for these thirty days. I got exposure to many things. It is quite obvious that this training programme has enhanced my knowledge about so many things involving cultural heritage, natural scenic beauty, conservation and the relevant laws and regulations.

What I have learned about the conservation of cultural property is that various means for the preservation of heritage and artefacts might not be applicable directly to some of the movable and immovable cultural properties in my country, but at the same time, they maybe applicable to some

extent, because it depends upon the nature of the cultural properties and artefacts. For example in a country like Pakistan, most of the cultural properties and archaeological remains are solid structures, and we are always carrying out conservation in traditional ways. But in Japan, the cultural properties were wooden architecture, and these are either burned in part or were fully demolished. In Japan, the practice of reconstruction of cultural properties exists, but there is no such practice in Pakistan. The conservation/documentation work can be indirectly applied to movable cultural artefacts like pottery, and objects made of stone or metal.

The relevance of this training programme is that I can utilize what I have learned in Japan about the conservation of movable artefacts like pottery and stone objects. One thing that has broadened my vision and is very relevant to me is the museum management and display. As an Assistant Curator it is my duty to manage the museum and its display.

Philippines

Mary Grace Lualhati Dolatre BARRETTO-TESORO

This Training Course on Cultural Heritage Protection in the Asia-Pacific Region 2010, focusing on 'Research, Analysis and Preservation of Archaeological Sites and Remains,' has been very helpful in providing me with ideas that I can apply in my work as an archaeologist in the Philippines. I shall discuss below what I learned from the programme, the problems and comparisons with the current practices in my country, and evaluate the relevance of this training programme to conservation. I shall also be offering suggestions that can be considered in future training seminars.

I have learned that it is important to recognise the community's needs and its own goals. I think it is also important that that we should address issues and concerns of the community to see that relevant conservation management policy is made. In this manner, policy making is not just coming from the heritage workers. In order to make this successful, the training of locals is ideal. Workshops should be provided so that the locals would be able to recognise and write basic descriptions of heritage areas. They should also be trained in basic conservation concerns. In addition, they should have access to the sites and materials recovered. I think the matter of public access contributes to the success of heritage management. In this manner, the site and materials will create meaning for the people, which might assist in reinforcing site protection.

For some people, archaeological sites are different from heritage sites. Although not all archaeological sites have structures, they should still be considered heritage sites. In archaeology, you need special training to excavate, which provides data for conservation management. In the case of the site I am working on, the ruins of a stone settlement are exposed, and thus vulnerable. People collect stones thereby destroying the site. The foundations, however, are intact. The site was a quarry, a source of stones used for gardens, fishponds, and other functional purposes. Locals knew its history but see it as having a practical function. The site gained value as an archaeological resource when excavations started in 2008. The locals now see it as a historic, scientific, and educational site that is part of a much greater area of significance. Two field seasons have been conducted at this site, but it still badly needs a conservation programme. The last field season illustrated that despite of our efforts to promote the protection of the site, the landowner still sees it as a source of materials for domestic use. He forcibly stripped *in situ* terracotta tiles that were in perfectly good condition. The archaeological, historical, and heritage value of the site was not truly comprehended by some of the people in the community. The destruction led some to openly criticise the landowner. It takes some time for some locals to fully grasp the excavation's purpose, precisely because our perspectives of the site differ. There should be meetings to discuss this, which I think will fully benefit both the researchers and the

community. I discovered that our presence at the site was both an imposition and appreciated. For conservation management to be successful, we have to engage with the locals to learn what they think about the excavation.

I think we should feel a moral obligation to ensure the protection of archaeological sites. We have long agreed in my institution, the University of the Philippines-Archaeological Studies Program, that it should be the duty of the excavator/archaeologist to protect sites. If archaeologists are not knowledgeable, they should learn the basics of heritage protection. Disseminating information is the best solution, making people know what the site is, making them understand that the excavation has multiple benefits that may not necessarily translate into monetary returns. For some, heritage and archaeology are two different things, but I believe they should go hand in hand. It becomes difficult when meanings are not relevant to the community. It is the duty of the archaeologist to convey the meaning to the locals while learning simultaneously from the latter what the site means to them. The challenge is to not force or impose the archaeologist's meaning but for the members of the community to realise that meaning.

One issue that came up was 'How does intervention change the meaning of the object or site?' Dr Bhuvan Vikrama, the participant from India, said that there should be minimal intervention. I agree with Vikrama, as maximum intervention affects the authenticity of the site. This clashes with what I observed here in Japan, where reconstructed and recreated structures are considered authentic under the Nara Document. Most of the archaeological features at sites we visited here in Japan were hidden from view. In one way, the sites are really protected but the public does not get to see the actual features. I appreciate more the covered areas showing excavated portions of the sites. I do not however fully appreciate the magnificence of the site when viewing the recreated structures on top of the actual remains. The problem lies in the presentation of the site. I think it would have been better if scale models, rather than full-scale reconstructions, are presented, and the actual excavated features shown to the public. The full-scale recreations deprive the viewers of making out for themselves what the site could have looked like in the past. The interpretation is thus imposed by a scholarly elite, making the interpretation one-way. Relevance is accordingly one-sided. I believe that interpretation should not be restricted and the public should be able to make a story with the data provided them. This method engages the public, making people think and draw their own conclusions, creating relevance for themselves. In the Philippines, we make it a point to include the locals in discussions about the site so they do not feel that their ideas are disregarded. This type of inclusion offers plural and dynamic interpretations of a site.

I found the country reports interesting. I was introduced to Asian archaeology in two days. It made me aware that the 16 countries represented share similar problems and needs for cultural heritage protection and restoration. I also was able to learn some methods documentation, restoration, and

conservation techniques practised in other countries that can be applied to the Philippines. Other methods we have been performing already. Traditional methods combined with modern materials or modern technology for reinforcement was the common process used in most of the countries. The reports likewise demonstrate the status of archaeological research, conservation and restoration activities in each country.

I found it interesting that the Longmen Grottoes Academy in China specialises in the Longmen heritage site. One institute dedicated to the protection of one site. I have learned that in China there is commonly one institute for a single site. These institutes are then governed by an overall organisation. There are 38 World Heritage Sites in China which means that there are 38 institutes also! The government and tourism are the source of the funds on which these institutes operate. In the Philippines, there are local branch museums which are responsible for storing and displaying artefacts. They do not take any part in active research or restoration activities. These are all centred in the National Museum or university-based units. This is unlike China, as already mentioned, and Japan, where the Kyushu National Museum and the Nara National Research Institute for Cultural Properties are both research institutions and museums. It is difficult to change the system but as Wijesuriya said we must be 'proactive and productive in the existing system to succeed'.

A key solution to the 16 countries' concerns is collaboration among ourselves. One of the objectives of this training is to build a research network where foreign colleagues who have access to information and technology can provide assistance. It should be made clear what the interests are of the local and foreign archaeologists and conservators. Partners should work using similar terms and reconcile their objectives to prevent unnecessary inconsistencies and misunderstandings later. My institution in the Philippines has long-term research collaborations with foreign universities. These activities are mutually beneficial. Funding is generated, students get training, and scholars from both parties are updated with new data, excavation techniques, and methods of analysis. New findings are published in international and high-profile journals that generate more interest, promoting the growth of archaeology as a discipline among the local, regional, and global archaeological communities.

Lack of legislation pertaining to heritage management and protection is one of the major problems mentioned by most of the participants. In the Philippines, we have adequate laws but their implementation is wanting. I found Professor Nobuko Inaba's lecture on Japanese legislation very interesting. It surprised me that the Japanese had such early legislation on cultural properties and treasures. Legislation has multiple levels from the national to the city government agencies which guarantee the conservation of sites. To ensure the continuation of intangible culture, Japanese experts practising specific crafts or arts receive two million yen annually. The purpose is to train people in their craft. Such monetary incentives may be applied in the Philippines.

It gets confusing for me when certain terms used in Japanese legislation have definitions that I do not agree with, such as monuments, cultural landscape, and scenic beauty. I appreciate the new information I learned from this training, but it feels that there is an imposition of criteria for heritage on the participants. The call for its application to other countries may be futile as there are different social and cultural conditions that determine how heritage legislation is formulated, regulated, and implemented. I do not agree with the definitions used during the lecture on the 'Cultural Property Protection System in Japan' by Suzuki Chihei. The lecture focused on features, monuments, statues, and structures. I felt that 'monument' was not clearly defined, as it includes animals that are considered cultural properties. I still cannot fully comprehend why certain animals are defined as monuments. Perhaps if they are protected because they are endangered, then it would be understandable. I define 'monument' as a structure that serves to commemorate an event or ritual, and 'cultural properties' as those objects that were manufactured by humans. Most sites discussed had structural features. How about sites that do not have such and where only small artefacts were found, but provide a wealth of material information about the past? In the Philippines, we do not have monuments and temples similar to those of India, Japan, Pakistan, China, Cambodia, and Indonesia. How do you convey the heritage value of such sites? It becomes a challenge for us to advertise and convince the public of its value. Perhaps ICCROM and UNESCO through ACCU can address such issues in future workshops or training.

Site visits such as the one to the Heijo Palace Site illustrated that conservation and restoration are ongoing processes that should be carried on even after the initial conservation procedures. Maintenance of site museums and heritage sites and the impact of disaster management and tourism should also be considered. I have realised that heritage management is an ongoing process. Even after the initial stages of conservation, sites and artefacts should be monitored continuously to ensure that their original form and design are safeguarded. It means additional work but the results will be invaluable.

The lecture/workshop on pottery and stone tool drawing was challenging for most, as they did not have the sufficient background. I suppose that was the reason for including them in the training programme. I later learned that there were only two or three archaeologists (including myself) among the participants. I expected that all had background in archaeology or were practising archaeologists as the training was on archaeological sites and remains. It would have been better if separate training workshops were conducted for archaeologists, conservators/restorers, and architects. There are also engineers who are engaged in restoration, but who have no formal training in heritage or archaeology. I think some activities became challenging for some and uninteresting for others as the backgrounds of the participants were too diverse. Those whose work is not related to archaeological activities such as survey and excavation had basic questions that others found unexciting. Some lecture topics were

already known and applied in some of the participants' countries, so the topics were no longer fresh. If all participants shared similar work backgrounds and formal training I think that discussions would have been more engaging. The level of each participant should be the same. I found it tedious that some of us who have been drawing pottery and stone tools for years should learn how to draw them. Such training can be aimed at those who do not have adequate background. My suggestion is that participants should have similar work and educational experiences. I would also like to suggest that all participants have a high level of proficiency in oral and written English. This would allow better interaction among the participants. The lectures in Japanese were very interesting, however, I think it would have been better if the Japanese lecturers also delivered their presentations in English. The time spent in translating them would have been better used in doing practical work related to the lectures. I believe that many concepts and ideas were lost during the translation from Japanese to English and vice-versa. The programme can also be shortened and participants should be those early in their careers, perhaps up to 30 years of age. The big gap in the current ages of the participants limits interaction as they have different interests and backgrounds.

The lectures on archaeological prospection of sites, environmental archaeology, photography of sites and remains, conservation science, soil moisture characteristics, dendrochronology, and site management were very informative. These lectures demonstrated that heritage management is multi-disciplinary in nature. However, I think the lectures should be transformed into separate training programmes instead of lumping them as one. Practical work should also be included.

The various equipment and laboratories we viewed are very impressive. It would have been more helpful for us if we had practical training in using this equipment, but the absence of such equipment in our home countries would make the training futile. If there are future research collaborations between Japan and the participants' countries where such equipment would be made available, then this training programme will truly be successful.

The last two lectures on 'Future Issues on the Preservation of Sites and Remains (Risk Management and Utilisation for the Public)' were very informative. I enjoyed the group activities since we were forced to interact with the other participants, and it was very helpful exchanging ideas with them. This type of workshop or similar activities should have been conducted throughout the programme. Interactive activities would have made the training more engaging and interesting rather than us being passive participants where learning was one-way.

Lastly, I would like to suggest that there should be a follow-up meeting or seminar after a year or two with the *same group of participants* to assess what changes they have introduced in their home countries based on what they have learned from Japan and other delegates. This will be a good measure of the training programme's success.

Sri Lanka

K.K.D. Kamal BOWATTA

This is the final report after completing the Training Course on Cultural Heritage Protection in the Asia-Pacific Region 2010, “Research, Analysis and Preservation of Archaeological Sites and Remains,” held in Nara, Japan. The course was held from 7 September to 7 October 2010, with the participation of 16 members from different countries of Asia and Oceania.

The programme has mainly concentrated on global and Japanese trends in conservation, cultural heritage management, maintenance and management of archaeological sites, documentation, conservation, photography and photo documentation, environmental archaeology, etc.

In addition to the presentations, lectures and workshops, hands-on training was provided in photography and the drawing of artefacts. Study tours and site visits to several museums and archaeological sites were also made.

The training course helped me immensely by providing me a broad awakening to various aspects of conservation, and it always reminded me of the present situation of conservation-related matters and cultural heritage management issues in my country, Sri Lanka. During the programme, I understood that the knowledge accumulated can be applied greatly in my country, where thousands of archaeological sites are still awaiting proper management and conservation. Accordingly, I concentrate here on four thematic areas out of the numerous ones taught in the course, which could be immensely useful after returning to Sri Lanka. Upgrading our conservation, management, and maintenance in these four areas to meet international standards has become a dire necessity.

- Museums
- Conservation of archaeological sites/artefacts
- Maintenance and management of archaeological sites
- Methods of scientific dating

The visits and study tours made to different museums, such as the Asuka Historic Museum, Yoshinagari Historic Museum, Kyushu National Museum, and the Heijo Palace Site Museum have enlightened me on how to arrange a modern museum. I paid particular attention to the following areas while visiting these museums.

- Museum collections

- Museum publications
- Guided tours
- Availability of qualified and trained staff
- Security systems
- Information centres
- Facilities provided to visitors and school children
- Museum shops

The museum at the UNESCO World Heritage Site, the Heijo Palace in Nara, displays objects obtained from more than forty years of excavations at the site. There were displays of earthenware, demon tiles, coins, wooden tablets used in the Nara period in place of paper, daily utensils, and so forth, in a well organized manner. Opened in 1970, the Heijo Palace Site Museum shows pictures of the excavations, and the actual structural remains are on display at the Excavation Site Exhibition Hall of Heijo Palace, along with models of the original buildings as reconstructed. Each and every object contained a descriptive tag telling its story. It clearly shows us that the museum is well equipped with properly conserved and protected cultural resources, as well as qualified and trained personnel. All the museums have been well planned and organized, and the facilities provided for the visitors, especially for researchers and school children, were attractive, and writing tables were arranged in front of the displays for jotting down the important facts.

Among a number of archaeological museums situated in Eastern Province of Sri Lanka, the Dighavapiya site museum can be developed as a model following methods and techniques used by the Japanese museums we visited. The existing museum will be rearranged to reflect the architectural process or schedule adopted, the conceptual plan through schematic design, design development, etc.

In addition to displaying conserved artefacts that have been unearthed, models of the original buildings, and reconstructions of the superstructures of the buildings could be exhibited in the museum. In the proposed museum, a detailed description of the artefacts displayed will be provided as seen in the Heijo site museum. The display design process will build on the interpretive plan for exhibits, determining the most effective, engaging and appropriate methods of communicating a message. Suitable lighting should be provided for the displays. Several types of display cases, such as glass-fronted enclosures kept on the floor to show the objects clearly, will be utilized. A security system with alarms, closed-circuit cameras, fire extinguishers and emergency exits will be established in the proposed museum. Information centres where all the visitors can obtain detailed descriptions about the site and the artefacts will be established. There will be informative videos, audiovisual rooms, lecture rooms, etc. A museum shop with souvenirs and replicas of the displayed objects will also be opened. The study tours made to those museums clearly showed the contributions made by the staff in enhancing the quality of each museum. All the members of the museum staffs were very well trained,

polite and friendly towards visitors. Since this aspect is lacking at Sri Lankan museums, we need to develop our human resources and expertise. The help, support, and advice needed for training our staff we hope to acquire under the supervision of ACCU, Nara, Japan. Facilities provided for visitors such as park areas for leisure, parking facilities, restaurants, and waiting rooms, are special features of the museums visited in Japan.

The visit to the National Museum of Ethnology, which displays the cultures of different communities of the world, provided the idea for introducing an ethnological museum in Sri Lanka. Although the Colombo National Museum displays some of the features of the ancient communities, the new ethnological museum would be completely reserved for the ancient aboriginal communities of Sri Lanka. The new museum can be established in the Eastern Province, where different indigenous communities, including the Sri Lankan aboriginal Veddahs, are living. In addition to the Veddahs, the Thelingu, Ahikuntaka, and Muhudu Veddah communities are presently living in the area. The subsistence and behavioural patterns, hunting and gathering methods, rituals, etc., of these communities can be displayed. One of the main focuses of the museum will be to provide the general public with accurate and updated information about various societies in Sri Lanka, in order to facilitate understanding of peoples with different cultural backgrounds living together in the modern world.

I was able to obtain good knowledge regarding the global trends in conservation after participating in the series of lectures in conservation and the hands-on training.

Sri Lanka is facing problems in conservation of moveable and immovable artefacts due to a lack of training, expertise and funds, etc. Therefore, knowledge received from the training can be utilized especially to conserve and protect the artefacts in Eastern Province. Because the Eastern Province was under war for more than thirty years, and has recently received damage from the tsunami, archaeological sites and artefacts there have not received proper attention. Some of these are situated along the beaches. Stone images at the beaches face the threat of deterioration from salt water. Also, the stone objects lying in archaeological sites such as Rajagala, Magul Maha Vihara-Lahugala, and Deeghavapiya badly need proper conservation and protection, since they have been exposed to all conditions of weather throughout the ages. The knowledge acquired during this programme could be used in recognizing the different stone types, including limestone, sandstone, and marble, and determining different treatments needed to keep them safe and in good maintenance. In addition, by understanding the causes of decay, measuring the extent of decay, remedial and preventive treatments, cleaning, consolidation, and surface coating methods could be followed step by step.



Broken Buddha image at Magul Maha Vihara-Lahugala

The conservation of stone buildings and monuments requires not only a good understanding of the essential repair techniques, but an ability to diagnose problems and identify the appropriate remedial action, and ability in decision making. Most of the Eastern Province Buddha images and figurines are made of stone. While there are numerous stone masonry images present in Sri Lanka, opportunities for stonework conservation training are limited, and many conservators must learn on the job. Therefore, a good training programme will help them to develop practical craft skills.



Moonstone at the entrance to Magul Maha Vihara

Heijo, Asuka, Fujiwara, Yoshinogari Historic Park, and Haniwa Factory Park at the Shin'ike kiln, were visited to study the maintenance, management, and utilization of archaeological sites in practice.

Basic features of all these sites are their appropriate planning, good organization, proper management, and legal protection provided by the Japanese government. Sites and archaeological features were protected *in situ* and kept for public display. Reconstructions and the models of the buildings, etc., have been built without harming the natural setting of the site. This aspect could be clearly seen in the Korokan site exhibition hall.

In the case of Sri Lanka, with several World Heritage Sites, it is still struggling to manage archaeological sites and remains. In addition to the seven World Heritage Sites already listed, another three sites belonging to the natural heritage have recently been added. With the addition of these three, Sri Pada, Knuckles, and Horton Plains as natural heritage, the question arises as to whether Sri Lanka has sufficient legal coverage to protect these sites. The Cultural Property Act (1988) and Antiquities Ordinance (1940), revised in 1956 and 1998, provide legal protection to some extent for better preservation of the antiquities of Sri Lanka. With the advancement of cultural heritage management there is a need for developing strategies and policies which cover the entire range of heritage all over the country.

This programme highlighted the need for and significance of documentation, and the making of inventories, which are essential for evaluating and managing all archaeological sites and their associated collections. To understand the role of excavated remains, scale drawings and proper photographing are necessary. Also, new technology, such as scanners, etc., has been used on all possible occasions for the recording and documentation of artefacts. However, despite the presence of a large number of archaeological sites and remains, Sri Lanka makes every effort to maintain inventories to some extent. It is hoped to introduce and maintain new inventories with new features, and document all the archaeological sites and objects at least in the Eastern Province, as a first step to bridge the gap.

The common feature of all the archaeological sites visited is proper management. This feature should also be applied to Sri Lankan archaeological sites. A proposal for a management plan for the archaeological site, Magul Maha Vihara which belonged to the sixth century BC, could be developed to attract foreign and local tourists. The reconstruction techniques of the Heijo Palace site and its attractive methods of presentation to the public could be used in the Magul Maha Vihara site, which needs a major conservation and protection plan. When archaeological remains are buried for reasons of preservation, full-scale replicas of the remains can be displayed. Sometimes, the actual size of the buried buildings and their postholes are shown on the overlying layer of earth. The ancient garden of the Heijo palace has been reconstructed in its original form. It is obvious from the existing ruins in Magul Maha Vihara that there was a beautiful garden, which can also be reconstructed in the original form.



Part of a ruined garden and pond at Magul Maha Vihara

When applying the techniques and methods learned here to Magul Maha Vihara, a sustainable and effective management plan is a must in order to realize properly on-site preservation, documentation, research, exhibition and interpretation, and visitor management strategies as well as to raise public awareness and to provide economic income for the locals. Hazards of armed conflict, damage from disasters like tsunami, deterioration of the architecture, building remains and landscape elements due to natural and man-made factors, and loss of historical authenticity, will be studied. To mitigate the situation, measures will be taken to install sand barriers, plant trees and grass, and improve emergency preparedness. In particular, moats around and ponds nearby archaeological sites could be renovated to help mitigate the risk of fire. It is hoped we may get some expertise from ACCU, Nara, for enhancing the features of the site.

The knowledge received regarding scientific dating methods such as dendrochronology can be applied to date the timber constructions and wooden parts of archaeological sites in Sri Lanka. Several timber constructions have been recorded at archaeological sites of Sri Lanka, especially, in the Gampola (fourteenth-fifteenth centuries) and Kandy (sixteenth-nineteenth centuries) periods. Magul Maduwa, situated in the Kandy World Heritage Site, is a rectangular building, where the king met his ministers and carried out daily administrative tasks. It has two rows of elegantly carved pillars, each having 32 columns. A Kandyan style roof rests upon these columns. Dendrochronology can be applied to the timber pillars of Magul Maduwa to understand and place it in its proper historical context. It will support better understanding of current environmental processes and conditions, and help improve understanding of possible future environmental issues.

During the course, I realized that architectural stone conservation is not just a science. It is an art, and the decision-making process is vital in the conservation of these objects. The knowledge acquired

through the course will be very useful for me as an archaeologist in bridging the gap between theory and practice. Also this course will help me immensely in training the staff in Eastern Province in particular, and the staff of the Department of Archaeology in general. It is true that it is not possible or feasible to apply all the new technology seen in Japan to Sri Lanka. However, it will be possible to apply some of the ideas, and changes can be done in the Sri Lankan way. Finally, it should be emphasized that support and assistance are very much hoped for from ACCU Nara for developing and shaping Sri Lankan archaeological sites. Also, it is hoped to keep in contact with ACCU and sister organizations in future endeavours.

As my first experience of this kind of training, I particularly thank ACCU, Nara, Nara National Research Institute for Cultural Properties (NNRICP) in Japan, for accepting me after a competitive selection. Also I am very thankful to ICCROM and the other institutions that jointly provided funds to facilitate this course. Further, I am very grateful to the officials of Sri Lanka for granting me leave and all the other assistance to make this endeavour a success.

Viet Nam

NGUYEN Chi Cong

I. INTRODUCTION

Beginning more than 2,000 years ago, a major Asian civilization was constructed and consolidated in the Red River delta, at the intersection of the cultures of North and Southeast Asia. The long history of this region is characterized by the continuous interaction of local polities with their neighbours to the north and to the south, particularly with China, through which the major Asian intellectual traditions associated with Confucianism, Buddhism and Taoism were received, adapted and refined to suit local political and social circumstances.

In addition to the peaceful flows of culture and ideas, the region of the Red River delta was also marked by repeated struggles for independence and national unity, out of which the unique political culture of Vietnam as a nation-state has been forged and refined. The record and result of this historical process is exemplified in the archaeological record, architecture and urban morphology of the Thang Long-Hanoi Citadel, which has been at the centre of this process from its inception and the actual seat of national political power for most of the past thousand years.

This process of political consolidation coupled with the conscious building of a distinct cultural and national identity is a process that has been repeated often in many parts of the world over the past two millennia or more, and has resulted in the diverse political-cultural mosaic which characterizes not only Southeast Asia, but much of the world today.

As an example of this historical process, the two thousand year story of the emergence of Vietnamese civilization from a localized political centre to a major international power can be read at the Thang Long-Hanoi Citadel through the excavated archaeological record, standing architecture, and remains of urban design that constitute the site and cover nearly the entire time span of this process.

I greatly appreciate the chance to join the Training Course on Cultural Heritage Protection in the Asia/Pacific Region 2010, on “Research, Analysis and Preservation of Archaeological Sites and Remains,” from 7 September to 7 October 2010. For me it was not only an honor but also a responsibility. After the training course, I will take the knowledge from this class to serve our cultural World Heritage, at the centre of Thang Long Royal Citadel (listed by UNESCO as World Heritage in 2010). This type of process will help improve the quality of preservation activities all over the world.

II. ACCU TRAINING PROGRAM

This program included lectures, workshops, and study tours. The subjects of the lectures covered introductions to scientific dating in archaeology, environmental archaeology, archaeological prospection, and explanations about the many other sciences that can give data or information relevant to the preservation of culture properties. Workshops included instruction on how to draw ceramics accurately, and how to perform conservation treatment of artifacts.

This training course also introduced me to many new technologies in conservation science that I learned of and saw for the very first time. I admire the Japanese government for giving so much priority to heritage conservation by providing research institutions enough funding to develop or acquire these new technologies to address the conservation needs of archaeological sites. I do not know if Viet Nam can ever afford such technologies. But I agree with what one of the Japanese lecturers said to us at the Kyushu National Museum, that one does not need to be rich and have the capacity to purchase all these hi-tech facilities to conduct high levels of archaeological research and conservation, one only needs to cooperate and develop partnerships with other countries, such as Japan, which have the technologies.

III. LEGAL SYTEMS AND OTHER MECHANISMS OF PROTECTION

1. Property management system

The central sector of the imperial citadel of Thang Long-Hanoi has been recognized by the Ministry of Culture, Sports and Tourism of the Socialist Republic of Vietnam as a historical site of special national importance. This site is currently subject to two levels of management: first the Department of Cultural Heritage, Ministry of Culture, Sports and Tourism; and second the Hanoi Ancient Wall-Co Loa Vestiges Conservation Centre, under the People's Committee of Hanoi. It is protected by Vietnam's legal system as defined in the Law on Cultural Heritage approved by the National Assembly in its 9th Session on June 29, 2001.

All the concerned authorities recognize the importance of having a proper management plan in place at the earliest opportunity. Several initiatives are under way. A management plan has been developed by the Hanoi Ancient Wall-Co Loa Vestiges Conservation Centre and the Ile de France Region for the Hanoi People's Committee. This management plan is supported by a conservation plan for the Ancient Citadel being developed by the RC Heritage Firm on behalf of the IMV (Hanoi) and the Ile de France in collaboration with the Hanoi People's Committee and the Hanoi Ancient Wall-Co Loa Vestiges Conservation Centre. The focus of the plan is the management of the nominated site until 2010, with some comments on the longer term possibilities. The development of this plan will place the management and planning of the site on a firm footing up to and including the expected massive influx of visitors in 2010.

For the longer term, a plan is under way for the conservation, restoration and management of the whole area of the Thang Long–Hanoi Imperial Citadel Central remains. Hanoi People’s Committee has issued Decision 3806/QD-UBND, dated September 25, 2007, which gives approval for the development of this plan. This plan will look forward for 20 to 50 years and will be completed by 2010. The Vietnamese government has committed US \$2 million to this project. The plan will have the following three main purposes.

- Planning future projects for the nominated site
- Developing proposals for promotion of the site in parallel with investment in it
- Establishing regulations on investment management

The plan is being developed by experts from the Thang Long Imperial Citadel Conservation Project. The plan provides for improved conservation via legally enforced regulations, landscape protection in the core zone and the buffer zone, monitoring and control of the condition of the site, as well as increased popular recognition of the site.

2. Legal measures of protection

The nominated site has been protected under the Law on Cultural Heritage by the following designations.

- Decision 100/VH-QD, dated January 21, 1989 by the Ministry of Culture and Information, on the recognition of Hanoi Flag Tower as a relic of national importance
- Decision 22/1999, dated April 6, 1999 by the Ministry of Culture and Information, on the recognition of Hanoi Ancient Citadel as a historical and architectural relic
- Decision 16/2007/QD-BVH-TT-DL, dated December 28, 2007 on the recognition of The Thang Long-Hanoi Imperial City (including Hanoi Ancient Citadel and Archaeological site at 18 Hoang Dieu Street) as a national architectural and historical relic site

The Law on Cultural Heritage Management was issued in 2001. It has been elaborated by the following measures.

- Decree 92/2002/ND-CP, dated November 11, 2002 issued by the Government of Vietnam, which elaborates on several points made in the Law on Cultural Heritage Management and other guiding documents
- Decision 1706/2001/QD-BVHTT, dated July 24, 2001 by the Minister of Culture and Information, on the promulgation of the Regulation on the Conservation, Repairs and Restoration of scenic spots

- Decision 05/2003/QĐ-BVHTT, dated February 6, 2003 by the Minister of Culture and Information, approving the overall planning and value development of the historical-cultural scenic spots to 2020

Article 8 of the Law on Cultural Heritage Management reads: “Protection and value development is to be provided to every single relic located on the territory of Vietnam, regardless of their origin or ownership.”

Article 13 of the Law on Cultural Heritage Management further states that each and every of the following acts are strictly prohibited.

- Illegal possession or distortion of cultural relics
- Destruction of or threats to cultural relics
- Unauthorized excavation of archaeological sites
- Illegal building on or encroachment of land area that belongs to historical, cultural relics and other places of interest

Article 33, Item 3 of the Law on Cultural Heritage Management further states: “The Ministry of Culture and Information at the notice of a relic being exposed to threats of destruction, is to provide immediate instruction to the local authority which owns the relic whose responsibility is to stop those acts and protect the relic. The case must be reported to the Prime Minister if the relic is one of special national value.”

Article 34 of the Law on Cultural Heritage Management stipulates: “Any conservation, repair and restoration work done to the relic must...be planned into the project which then will be proposed to a relevant government organization for approval and maintain to the utmost its original features . . .”

Article 55 of the Law on Cultural Heritage Management stipulates that the levels of management of cultural relics as defined by the Government are as follows:

- The Ministry of Culture and Information is responsible to the government for the management of cultural relics.
- Other ministries or organizations of ministerial status, or affiliate organizations to the government are to hold accountability for state-level management of the relics as assigned by the government.
- The provincial People’s Committees, with defined rights and obligations, are to conduct state-level management of local cultural relics as entrusted by the government.

3. System for protecting culture properties in Japan

During this training in the ACCU program, I was surprised to learn about the system for protecting culture properties in Japan, especially for the management of each site. The legal framework in Japan is very good.

Viet Nam could use a similar framework to provide protection for its cultural heritage, as there are currently a number of problems in this area. I was intrigued by the site museums, and the national system in Japan. A museum is an educational place for all people to visit in ways similar to a library. After our visits we understood the value of cultural heritage through exhibitions at the museums. Previously, I had little understanding of the history of Japan, but this was well explained at the site museums. I think that in Japanese museums the exhibitions are easy to understand, which means the management systems for education in Japanese museums and the exhibit functions are very good.

IV. APPLICATION OF THIS KNOWLEDGE IN MY COUNTRY

I come from Viet Nam, a country with a long history covering many periods. I am working at the Centre for Preservation of the Co Loa Historical Site and Hanoi Ancient Citadel.

All of this knowledge from the course will be applied in my daily work to conserve our collections, as well as to artifacts during archaeological excavations. I will also see that this new knowledge and skills will be shared in Viet Nam. Such new ideas and knowledge will be very useful for me in helping to improve the methods of archaeological conservation and surveys for Viet Nam.

We shared the problems of our country in presentations and discussions, which was helpful for us in comparing the situation of each country and selecting the optimum solutions for our country's problems.

V. CONCLUSION

This training has broadened my view on many important issues. I am very grateful for the opportunity to be a part of this training and to have met such wonderful people during this month. I would like to say that this training course was the first one that I attended abroad, and it was my first experience to travel outside my country. It was also first time that I got the chance to participate in a training course in which experts in the cultural heritage field of different countries participated. This was a unique experience for me. At the end of this training course I felt that I obtained much knowledge about archaeology, conservation, and international trends in cultural heritage, but I need to learn more. When I go back to my country, this knowledge will help me to perform my duties better. I was very inspired by the way in which the ACCU people organized this course; the people worked very hard for the success of this course and the hospitality and kindness they extended to us was a valuable experience that I am taking with me.

VI. ACKNOWLEDGMENTS

I would like to thank all the lecturers and the experts, from Japan and other countries and from the various agencies involved in the training, for sharing their time, their knowledge and experiences with us, and for enhancing my understanding on many topics and issues.

Finally, I would like to say thank you to Mr. Nishimura, Director of ACCU, for providing me the chance to participate in this training course, and in closing I would like to say thank you to all the staff members of the ACCU office for your cooperation and help whenever I requested it.

Appendix

- A. List of Participants
- B. List of Lecturers
- C. List of Interpreters and Tutors
- D. Staff Members, ACCU Nara

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