



ACCU Training Reports 2020

Cultural Heritage Protection in the Asia-Pacific Region

- Investigation, Preservation, and Management of Archaeological Sites
- Management in Use of Heritage
- Photography Techniques for Cultural Heritage

Preface

The Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO (ACCU Nara) has been conducting various programmes on human resource development for cultural heritage since it was established in 1999. We usually organise the Group Training Course and Thematic Training Course in Nara, Japan and the Regional Workshop in a target country in the Asia-Pacific region. In 2020, however, we implemented all the programmes online due to the impact of COVID-19.

This volume contains the country reports that participants present the current situation and challenges regarding cultural heritage protection in respective countries and the final reports that summarise the training outcomes.

The contents of each programme are as follows:

Group Training Course (Online)

- Target participants: young professionals with 5-10 years' experience
- Training period: 2 September – 1 October (for a month)
- Theme: Investigation, Preservation, and Management of Archaeological Sites
- Number of participants: 13 from 13 different countries

Thematic Training Course (Online)

- Target participants: mid-career professionals with 10-15 years' experience
- Training period: 9 - 20 November (for 2 weeks)
- Theme: 'Management in Use of Heritage'
- Number of participants: 22 from Bhutan who belong to the Department of Culture or other relative sectors of Royal Government of Bhutan

Regional Workshop

- Target participants: young professionals (depending on the situation of the host country)
- Training period: 25-27 January (for 3 days)
- Theme: Photography Techniques for Cultural Heritage
- Number of participants: 20 from Sri Lanka who belong to the Department of Archaeology or the Department of National Museum

Contents

I. Group Training Course

Country Reports

Final Reports

II. Thematic Training Course

Country Reports

III. Regional Workshop

Training Reports

I. Group Training Course

Country Reports





Current Status of Heritage Management of the Archaeological Sites of Bangladesh

Md. Morshed RAYHAN

Assistant Professor

Department of Archaeology, Comilla University

Bangladesh is rich in cultural heritage. There are a number of archaeological sites and settlements consisting of different monuments in various forms and locations throughout the vast landscape of deltaic Bangladesh. The purpose of this study is to highlight the issues related to protection of archaeological heritage sites in Bangladesh.

Lack of Specialists in Cultural Heritage Protection and Restoration

The Department of Archaeology or DOA started the practice of archaeology in Bangladesh. This department is the primary organisation for the archaeological research and protection of cultural heritage under the guidance of the Ministry of Cultural Affairs of the Government of the People's Republic of Bangladesh. DOA has four regional offices located across the country including the head office in Dhaka. Since the independence of Bangladesh, about 50 archaeological sites have been excavated. Apart from this, the department also implements the renovation and conservation of ancient monuments, organises seminars, conferences, and training sessions, and issues publications. There are three universities in Bangladesh that conduct archaeological research in the country. Apart from this, few private organisations are involved in archaeological research. Excavation and conservation form an important part of archaeological research. The archaeological excavations and conservation works in Bangladesh are not scientific in many ways, and we do not have skilled or expert level manpower to do this.

Staff Problems

A shortage of official staff dealing with protection and management activities at archaeological sites is another problem. The DOA works with only 445 officers and employees countrywide. The Department of Archaeology conducted a survey and found that there were more than 7,000 archaeological sites in the country, but only 176 have been preserved and only 519 archaeological evidences have been identified for conservation so far. Therefore, necessary measures must be taken in terms of both security and identification of problems in related areas to minimize any undesired vulnerability that may be affected by locals or tourists.

Financial Resources

Available financial resources for conservation and development of ongoing management plans are not sufficient for the numerous archaeological sites of the country. Each year, a specific amount of funds is allocated by the government for archaeological research and conservation of these areas. However, these allocated resources are inadequate to meet the needs of areas compared to their importance.

Legislative, Regulatory and Contractual Protection Measures

Bangladesh has laws for the protection of archaeological sites, in particular the Bangladesh Antiquity Act 1968 (amended in 1976), which is responsible for the protection, preservation, and documentation of Bangladesh's national archaeological heritage. However, in practice the law is not always effective or properly implemented. Moreover, several sections of the law are very outdated. New laws need to be enacted by amending many sections of the existing law to keep pace with the present times.

Destruction of Archaeological Sites

The destruction of archaeological sites is a big problem in Bangladesh. In a recent research (Sen, 2008: 336-37), it is mentioned that "According to A.K.M. Zakariah, Bheloya, in Kaharol Upazila, possessed several

mounds and archaeological deposits in late 1960s. Our survey could not detect any of them except a portion of a mound which is now a place of a small locally built temple”. The destruction is caused by several reasons, such as: (i) local people destroy ancient sites to build new structures over ancient remains, (ii) villagers demolish archaeological sites by turning them into cultivable land, and (iii) villagers destroy archaeological sites by digging them up to sell the soil and/or building materials obtained from the sites.

Moreover, rapid urbanization and development is one of the key problems in Bangladesh causing the loss of archaeological sites. Large areas of complex archaeological landscapes are becoming more fragmented, modified and destroyed. There are also several structures made for various purposes in the site areas characterized as temporary, permanent, and remains. The presence of such structures that are discordant with the environment damages the impression of the archaeological sites and monuments.

Tourists coming to the area visit the archaeological site in an unrestricted and undefined fashion (e.g., climbing over ancient monuments, drawing graffiti on the surface of monuments and objects) and cause serious harm to archaeological ruins.



Fig.1: Collecting bricks from an ancient mound, Mahasthangarh, Bogra



Fig.2: Unauthorized digging that turned a site into cultivable land, Mahasthangarh, Bogra



Fig.3: Development pressure, Lalbag Fort, Dhaka

Deterioration of building materials

The deterioration of building materials, bricks, panel ornamentation, terracotta plaques, etc. is increasing due to several external factors. Environmental processes and weather events can have a significant impact on the preservation of archaeological sites. Heavy rainfall and flooding change the relative humidity that erodes the building materials of archaeological sites and monuments. River erosion during the rainy season causes destruction of sites. A vast majority of archaeological sites are near the coast, which are vulnerable to coastal processes such as wave action that cause erosion and consequently the loss of archaeological material out of situ. Archaeological sites near coastal areas also face the problem of salinity, which causes serious damage to the building materials.



Fig.4: Erosion due to flooding, Damril Nabaratna Temple, Satkhira



Fig.5: The effect of salinity on a building, Saroshsoti Atchji Bari, Satkhira

Restoration

It was mentioned earlier that different monuments and architectural complexes were restored for protection and conservation. However, some monuments have lost their original structure due to inappropriate restoration work. In many cases, restoration work was carried out with substandard materials. Due to a lack of appropriate experts, non-specialists have conducted most of the restoration work in recent years. Conservation efforts are being conducted on an individual basis instead of in an integrated manner. Restoration work practices for some small-scale structures have been of low quality and not in accordance with international standards. This situation has caused irreparable problems to monumental structures. The restoration of the monuments in many cases failed to maintain the integrity of the sites.

Tourism/Visitor Management Plan

Protected areas, particularly archaeological sites, are some of tourism's main attractions, and are subject to growing visitation. Every year, large numbers of visitors visit the archaeological sites of Bangladesh. There is no appropriate public use plan (tourism/visitor management plan) for the archaeological sites in the areas. Thus, tourists are not forced to visit the area in a careful and restricted manner. This situation increases the risk of damage to historical ruins and natural values of importance.

Local People's Attitude Towards Archaeological Sites

Community participation in cultural heritage conservation has been a concern ever since the Venice Charter (1964) and is still to this day (Salmela, U, 2017). Surveys reveal that local people in many cases are ignored during the implementation of heritage management programs. On the other hand, local people residing in surrounding areas of archaeological and cultural importance are poorly aware of their values and heritage status.

COVID-19, Cultural Heritage Tourism and Sustainable Development

Archaeological heritage sites are places that are also tourist attractions. Cultural tourism plays a significant role in the development of the socioeconomic conditions of any area. At the archaeological sites of the country, local people are engaged in different kinds of tourism-based activities for economic, social and community development. They sell various gift items to visitors. They also manage food shops. Some are involved in bringing visitors to the site using three-wheelers and rickshaws. The country's economy and public life have almost come to a standstill as a result of the lockdown during the COVID-19 pandemic. Archaeological sites with tourist attractions are also closed. People who depend on tourism are not able to earn money and their lives have become extremely difficult.

Recommendations

Recommendations and suggestions have been made based on collected data during fieldwork. These can be outlined as:

- The Department of Archaeology and government authorities should initiate necessary guidelines and measures for the protection and proper management of archaeological sites. It is also important to minimize issues of concern so as to retain the lost integrity value of archaeological sites and monuments.
- The fundamental reason for the problems related to archaeological heritage management is lack of an adequate Management Plan. It is necessary to prepare appropriate management plans with effective implementation for archaeological sites and monuments in order to deal with the above-discussed issues specific to each site. It is necessary to establish a committee specific to these issues to carry out management practices related to these sites, such as conservation and development, more quickly and effectively. A participatory and holistic approach to prepare management plans for sites and monuments is necessary to deal the related issues more efficiently.

Bangladesh

- It is necessary to develop and implement an effective Visitor Management Plan in the framework of the Management Plan for archaeological sites. In this way, visitors would be required to travel in an informed and restricted manner by improving their knowledge, attitudes and behaviour towards the protected status of the sites. Thus, historical ruins and natural values can be protected from harmful effects due to an increased number of visitors.
- Strong efforts should be made to increase the awareness of the local population living in the vicinity of the archaeological sites and monuments on their significance. For this purpose, information regarding the values and benefits of sites must be advertised in an effective manner. The participation of relevant organizations, institutions and agencies in arranging public training programs on conservation activities can contribute a lot in this regard. It is impossible to conduct conservation activities in a steady manner without the support of the local population.
- Problems concerning these issues can be resolved more easily and promptly by the formulation of continuous active protection measures and consistent allocation of financial resources.

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

Sukriti GUPTA

Training Coordinator

IHA-INTACH Heritage Academy, Conservation Department,
INTACH (Indian National Trust for Art and Cultural Heritage)

In India, heritage and culture have always been an essential part of our lives, both in active and passive forms and as a conservation professional, I understand the vitality and significance of them. Passed down the generations, in various and vivid forms of culture, traditional practices, folklore and other knowledge systems, this is what that defines us, our being. India has been a cradle to witness such a phenomenon for centuries and the country still resounds with the rumination of its cultural past. Being a student of conservation and now as a working professional, I have had the privilege of traveling across the country, observing, experiencing and being engrossed by the country's magnificent culture and heritage, making me feel the responsibility of being a carrier, to pass it further down to the upcoming generations.

Understanding tentatively the working of the heritage sector in India

At present, there are more than 3,650 ancient monuments and archaeological sites and remains of national importance in India. These include both living heritage sites such as temples, mosques, churches, cemeteries and other sites of national, historical, architectural and archaeological importance such as tombs, forts, palaces, step-wells, rock-cut caves, and secular architecture as well as ancient mounds and sites. The actual number of these sites, however, goes beyond what is mentioned here.

These monuments and sites are maintained and preserved through various circles of the Archaeological Survey of India (ASI), which works under the Ministry of Culture. The ASI is spread all over the country; each state has its own Department of State Archaeology, which furthermore keeps a check on the status of recognition and protection of such sites on a more micro and local level. Many sites also have heritage byelaws, which are specially prepared keeping in mind the importance and protection of these sites. Also, each city has its own municipal corporations along with other government agencies, which look after the local cultural heritage sites and practices.

Other than these government agencies, various other private organisations and NGOs such as INTACH (Indian National Trust for Art and Cultural Heritage) are actively involved in identification and protection of many such sites which are still not recognised by the government and are "unprotected".

All these institutions mainly look after various activities related to cultural heritage conservation and protection in India. The various activities involve surveys, explorations and excavations, and preservation of monuments and antiquarian remains. The major aim of all the institutions revolves around the maintenance, conservation and preservation of monuments, archaeological sites and remains of national importance along with the intangible practices associated with such tangible heritage.

As a young practitioner, I have tried to incorporate these issues as per my understanding while pursuing cultural heritage protection and other allied activities. Some of them are listed below along with the utmost and urgent measures that can be taken to combat the current situation.

Lack of professionals in the field and outdated practice methods:

Considering the vast span of the country and the extent of different cultures spread across it in every nook and corner, there are still innumerable sites of importance that require due recognition and safeguarding. We are still in a phase where an adequate workforce needs to be allocated to the sector or we might lose a major

India

part of the heritage. The approach is unidirectional and lacks contextualisation. Also, with current personnel and cultural heritage managers working in the field, there is a lack of understanding of the interdisciplinary nature of the field. There should be proper training and the imparting of professional expertise, which should keep on evolving with time and place.

Another notable aspect is the use of outdated practices. ASI was established by the British in 1861. Their idea of establishing the institute was to document the tangible remains and heritage properties spread across the country and 'protect them as found'. The approach was monument- and material-centric. With the passage of time, the need for improvising this approach was realised but somehow the practice modes and methods are still the same and cater to that monument-centric approach. We are still following the westernised notion of heritage instead of developing our own localised policies.

However today, many professionals have begun to see heritage holistically and understand that it goes beyond the set dimensions of materials and built forms. It involves much more complex realms than what is identified and seen. Thus, the outdated approach needs to be discarded and different modes of learning that are more about conservation practice should be encouraged, as they would provide more ground and support to our assessments as professionals. Adequate importance must be given to the traditional knowledge systems that have existed for many ages.



Figure 1: A neglected archaeological evidence outside a protected temple precinct: Monument-centric approach

Tourism: Boon or bane?

Heritage and cultural tourism is an integral part of the Indian economy and contributes heavily to employment. With the ease of travel and proper availability of facilities, India has many domestic as well as foreign tourists all year round. Another form of tourism that India experiences is religious tourism. Considering the multiple religions that the country has, there is a year-round flow of tourists all around the country.

However, in the process of increasing footfall and gaining the desired number of tourists, we are somehow forgetting the adverse effects of extreme exposure to such sites. Many heritage sites are of immense archaeological value and are at constant risk of damage done by human exposure. Thus, it becomes essential to regulate the tourist influx of such sites. In the case of religious sites, this risk persists a great deal.



Figure 3: Increase in the number of shops adjoining an old mosque because of high footfall



Figure 3: Improvement in facilities and infrastructure leading to the loss of authenticity and integrity of the site

Also, in the wake of improving facilities and infrastructure in the adjoining areas of such sites, the authenticity and integrity of the site along with its core essence is lost. This leads to homogenisation of the character of such sites, ultimately leading to complete loss of the site's uniqueness and exclusivity.

Also, many sites with low footfall are neglected in the process.



Figure 4: An important site, remotely located, neglected because of low footfall

Vandalism, insensitive interventions and poor management by the general public and government bodies:

Many heritage sites play an important part in working economic models and support micro and local economies. The local people are benefactors of the immense potential that these sites have and are dependent on it. But in the process, they tend to damage these sites and their value by encroachments, unsympathetic additions and also, at times unknowingly by carrying out activities in and around them which are harmful.

Government agencies, on the other hand, carry out many activities under development schemes that pose a great threat to such sites. As much as it is essential to improve the existing infrastructure, such measures and activities should not be carried out at the cost of damaging heritage. Thus, a check on such development activities should be carried out before their approval.



Figure 4: Shops, vendors and encroachments abutting a historic gateway and a temple complex



Figure 5: Unsympathetic interventions done by government agencies under a development scheme



Figure 7: Poor management of protected sites

This will only be possible when conservation of archaeological and cultural sites are not sidelines but form part of regular development activities.

Negligence of local stakeholders:

The decisions regarding management and maintenance are mostly taken by the responsible authorities in seclusion. The models should include the local key stakeholders who are directly linked with the site and its prospects. There should be a people-centric approach towards decision making, where heritage is not simply regarded as an isolated entity but considered to have potential to play an active role in the lives of communities and bring benefits to people. The suggested changes must be ingrained in a local understanding of needs and opportunities so that they bring long-lasting benefits to the stakeholders. The communities'

traditional management systems and maintenance practices can be taken on board, making the process more contextualised.



Figure 8: An abandoned complex used by local children and people to rest



Figure 9: A vermillion seller outside a temple precinct. The heritage which is offered inside is a source of livelihood, and also used for prayer and protected by the stakeholders

Way Ahead - Training and propagation of heritage awareness at the local level will help fill the gap in the longer run.

Cultural heritage has been created by people for themselves. One can say heritage to be “of” the people, “for” the people and “by” the people. Thus, it becomes essential to not only sensitise but to educate the people concerned if we aspire to conserve these archaeological and cultural sites. In doing so, we are not only addressing the immediate need of catering to these sites at the local level but also helping to create a society where people will be more sympathetic to the heritage surrounding them and take measures accordingly to safeguard it. The local stakeholders are much more aware of the problems and requirements pertaining to the area and would be the best judge of how to deal with any scenario they encounter.

This will thereby reduce the effort needed for safeguarding the heritage and will help in achieving better management of the sites as well. Along with this, strong communication and coordination between the departments, civil bodies, and communities concerned are required for successful implementation of the measures.



Problems and Needs for the Protection and Preservation of Archaeological Landscapes in Indonesia

Yosua Adrian PASARIBU

Material Culture Heritage Analyst

Directorate of Cultural Safeguarding,

Directorate General of Culture, Ministry of Education and Culture

The law that governs material cultural heritage preservation in Indonesia is Law of the Republic of Indonesia Number 11 of 2010 Concerning Cultural Conservation. There are nearly 100,000 archaeological objects, structures, buildings, sites, and regions which are recorded in Indonesia. From that large number, only about 1,620 are listed as cultural heritages which is eligible to receive preservation treatment by the state. Archaeological sites in Indonesia are varied, from the sites of Homo erectus in Java and Flores from about 1.5 million years ago to the sites of the War of Independence from 1945 to 1949. Lately, prehistoric rock art landscapes in South Sulawesi and East Kalimantan have been dated to ± 40 thousand years ago, which places them among the earliest art of the world. Majapahit, capital city of Trowulan from 14th-16th C, is also unique because the archaeological landscapes are very large, and artefacts and structures are found in an area as wide as 92.6 km². Banten Lama, capital city of the Sultanate of Banten (16th-19th C) and Chinatown of Lasem in Central Java (17th – 20th C) are also examples of archaeological landscapes in Indonesia. Rock art sites in South Sulawesi and the two ancient cities which I mentioned earlier are located in developing suburban areas. In this report, I will focus on the problems and needs of archaeological landscapes that we are facing in Indonesia over a wide area.

Problem 1: Urbanization and Development Pressure

Indonesia is developing very fast and many rural areas are now becoming suburbs of the city. The job opportunities in cities are giving way to housing projects in suburban areas. Many archaeological sites have been located in rural areas for a long time, but in the last twenty years many rural areas have become suburban, and as a result, large areas of complex archaeological landscapes are becoming fragmented and being destroyed. To make things more complicated, city planning in Indonesia is now governed by local governments, usually city/district governments, but the preservation and management of archaeological sites is still mainly the job of the central government (Ministry of Education and Culture and its branches).



Figure 1: Kaibon Palace in Banten Lama (19th C) is surrounded by recent settlements.



Figure 2: The sign says, "This public housing is located above the Heritage Landscape of Biting." (14th C)

Problem 2: Lack of Management and Human Resources

I said earlier that heritage conservation is still the domain of the central government, even though Law 11/2010 had stipulated that city/district and provincial governments in Indonesia should be proactive in cultural heritage preservation. There is also a lack of human resources in cultural heritage preservation and management. The Indonesian Archaeologist Association has only 764 members from the country's population of 267 million. There are only six universities in Indonesia that have an archaeology program. The number of conservation offices in Indonesia is also limited, and there are only 14 central government branch offices that are responsible for preservation and management of $\pm 1,620$ archaeological sites in 34 provinces of Indonesia. There are archaeological sites and landscapes such as Rock Art Landscapes in East Kalimantan and West Papua, Chinatown of Lasem in Central Java, etc. that have only gone through the documentation process and have not yet received preservation, conservation, and management treatment.

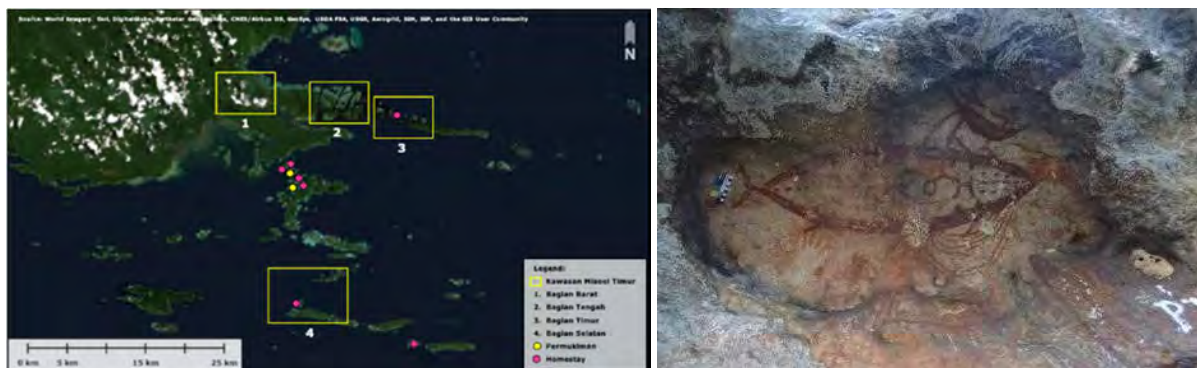


Figure 3: Rock Art Landscapes in Misool Raja Ampat with its ± 42 sites is far away from Ternate Conservation Office, which make the sites vulnerable to vandalism.

Need 1: National Coordination of City Planning

Coordination between city/district governments, provincial governments, and the central government in Indonesia is the key to heritage preservation in the urban/suburban context. During 2016-2019, The Government of Indonesia launched the One Map Policy project. The geoportal functioned as a national information portal to serve as a point of reference for land use planning by all government institutions and the public. Ministries, government institutions and regional administrations have to start using the integrated thematic maps as the main point of reference for implementing development policies from now on. With this policy, development can be more accurately planned, not only based on data, but also based on the map. The Ministry of Education and Culture has put 1,024 archaeological sites in the geoportal and the number will continue to grow. The initiatives from local governments to preserve and manage archaeological sites have been growing bigger over the last ten years. Many local governments coordinate with the National Heritage Office in their region to gain a better understanding of the preservation and management of archaeological sites in their territory. The provinces of Banten and Yogyakarta are among the most active in doing that.

Need 2: Dissemination of Information

The issue of lack of management and human resources can alternatively be solved by the publicizing of heritage values to stakeholders. The preservation of large quantities of land in an urban area as a cultural heritage region in Indonesia is relatively new according to Law 11/2010, so it is relatively new for us to work within the scope of extensive land preservation as Material Culture Heritage. Many old buildings in heritage cities in Indonesia are privately owned, so it is very important to inform the owners about the values of their buildings. In 2018 and 2019, the central government and local governments undertook a socialization campaign about heritage preservation for the owners of old buildings, collectors, and the wider public in Bandung, Palembang, Semarang, and Surabaya. The building tax for heritage buildings in big cities in Indonesia is usually discounted, and the value varies, between 50% and 100%. Governments are still

struggling to help heritage building owners preserve, conserve, and manage their buildings according to the law. The central government is also publicizing the concept of cultural heritage to the wider public by creating signage that contains information about the heritage value of archaeological sites and buildings.



Figure 4: Cultural heritage signage in Istiqlal Mosque, Jakarta



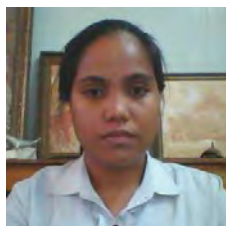
Figure 5: Owners of old buildings in Semarang register their buildings during the Heritage Campaign

Conclusion

This is a brief report about problems and needs for the protection and preservation of archaeological landscapes in Indonesia. The most challenging issue of archaeological sites in Indonesia is the preservation, management, and utilization of privately owned heritage buildings/sites on large amounts of land (regions) in urban/suburban areas. We are now struggling to conduct better coordination with local governments and building owners/landowners to work on the preservation, conservation, and management of heritage structures, buildings, or sites in archaeological landscapes.



Figure 6: Old Houses in Chinatown of Lasem, Central Java are abandoned because the younger generation have moved to big cities



Problems and needs for the protection and preservation of cultural heritage sites in Kiribati

Teraaiti EUTA

Senior Museum Officer

Culture and Museum Division, Ministry of Internal Affairs

Kiribati consists of 33 atoll islands except for the island of Banaba in the Gilbert Islands, which is a raised limestone island. Each island has its own history, which has been passed down from one generation to another in oral form. For information, some stories and myths link one island to another, which to date can be seen in the form of monuments, cultural sites and historical sites. The management and protection of these sites is the main obstacle currently faced by Kiribati due to the following factors outlined below.

Lack of capacity for archaeological research

Cultural mapping is one of the major activities carried out by the Division, involving the mapping of both tangible and intangible cultural heritages for all islands. The activity only records and documents a number of cultural and natural heritages as told by the islanders but without accurate evidence. For instance, the year or period given regarding the lifespan of an object collected during the mapping is an assumption, so there is a need to conduct more research to provide more accurate evidence. Among the cultural heritages found on the islands are navigational stones, skeletons of human remains from World War II, old buildings and others. The management and protection of these cultural heritages are lacking due to the fact that the division has no expertise in this area.

No regulations or by-laws for the preservation and management of cultural sites

Currently, Kiribati has no regulations or by-laws developed so far for the protection and management of cultural sites. There are a number of heritage sites that have been identified and documented as part of island information but the management of this is weak. This is due to the fact that people believe that when they destroy cultural sites or any site that has cultural or historical value, they will suffer no penalty since there are no relevant regulations or Acts under which such action can be taken.

In other cases, some sites have been destroyed as a means of accommodation when the area has enough space for a number of people to live in. For instance, on South Tarawa, which we call the capital of Kiribati, one area in Betio village used to be occupied by many houses. Nowadays, all of these houses have been destroyed as it was found out later by the Americans that soldiers who died during the battle of Tarawa during WWII were buried in this area. The research in this area is ongoing to collect human remains. Recognizing the importance of regulations or by-laws that can be imposed will contribute to the preservation and management of the sites.

Limited funding

One of the government's visions for the next 20 years is to restore the large number of cultural, natural and historical sites on all of the islands. The rehabilitation of such sites may require a lot of money. As it currently stands, the proposal related to these rehabilitation activities cannot be funded under the recurrent budget, and the government is seeking support from its development partners. At the moment, the activities have not yet started as we await the availability of funding.

Disaster risk and human activity

In Kiribati, some cultural heritage sites have become endangered by climate change as well as by human activity,

Kiribati

which means they need urgent safe guidance and protection.

Components of disaster risk

- Sea level rise – tidal forces
- Strong wind

Components of human activities

- Building of infrastructure development on areas that have cultural and natural values that are supposed to be protected
- Using some of the areas that have cultural and historical significance as a dumping ground
- Destruction of buildings or sites that are supposed to be retained for cultural and historical purposes
- Pollution

Photos of some of the cultural and natural sites that are important for archaeological research.



Rhizophora stylosa mangroves from Aranuka Island, one of the islands from the central part of Kiribati

In brief, Aranuka Island is known for its old stand of *Rhizophora stylosa* mangroves that have grown as tall as coconut trees and form an outstanding high mountain feature and dense mangrove on the island. Notwithstanding its scientific value, the Aranuka Island Mangrove Forests are nationally known as a cultural heritage site. According to the native people of Aranuka, two clans of semi-deified ancestors have long dwelled in the mangrove forests. The belief is that those ancestors have been dwelling there since ancient times up to the present. According to indigenous Aranukan, the mangrove forests are somewhat interesting in the history of Aranuka. One side of this mangrove forests area is very noisy with birds whilst the other side is seemingly to calm and peaceful. Through the eyes of our culture, this local knowledge may contribute to help the organization undertake academic studies as the Government of Kiribati is preserving and conserving cultural heritage sites for future generations.

Kiribati

Protection of the Nnabakana is warranted on the grounds that:

- the Nnabakana are made of loose coral stone slabs that can be easily broken up by fishers and passers-by.
- the site is very rich in marine resources. The passages on either side of the islets are full of small fish at high tide and octopus at low tide; reef worms, and clams. Can be identified as a marine protected area for marine resources.
- the Nnabakana are located at the edge of a coral-reef shoreline of two islets and are most vulnerable to sea-level rise. Many of the lost stone warriors have been washed away by tidal forces;
- the communities involved are unaware of the significant value of the Nnabakana as endangered cultural heritage; and
- the Nnabakana is a unique cultural heritage site that if protected, preserved and promoted will raise awareness and boost future focus on endangered cultural heritage.

Some significant features of cultural heritage are encompassed in the Nnabakana stories: **the building of large oceangoing sailing canoes, the skills of navigation, traditional weather forecasting, warfare of the people, and consultation with the spirits.**



A broken Nnabakana

Conclusion

In conclusion, the challenges and needs for cultural heritage protection in Kiribati mainly come from lack of capacity, regulations, funding, and disasters and human activities.



Problem and Needs for Cultural Heritage Protection and Restoration Activities in Mongolia

Nandintsetseg NARMANDAKH

Researcher/Conservator

Division of Fund and Laboratory, Institute of Archaeology,

In Mongolia, we have many problems and needs for cultural heritage protection because we have a variety of culture. Although we must decide the best way to address each case, this paper will show only the main problems and needs.

Lack of specialists in cultural heritage protection and restoration

In Mongolia, the main organization to protect, restore, store, research, develop and utilize cultural heritage is the National Centre for Cultural Heritage, although it is not sufficient to protect all cultural heritage sites.

The Institute is taking a leadership role to undertake archaeological investigations in the territory of Mongolia and to formulate key concepts of Mongolian ancient and medieval history. Its scientific activities are carried out by over 40 archaeologists and seven main departments. The variety of artifacts has been greatly increasing due to annual archaeological surveys, and this situation requires professional conservation. It is impossible for the Institute to restore all of them in the laboratory, so some objects have been sent to foreign countries for conservation treatment. **International projects for conservation or techniques:** The Institute of Archaeology is implementing joint research projects with 54 organizations including universities, museums and institutes in 16 countries. Fragile and rare artifacts found in the joint archaeological research fields needing immediate restoration care have been sent to Russia, Germany, France, South Korea and other countries to undergo conservation and restoration works. This Institute was in charge of doing basic tasks such as cleaning and restoring the from the beginning of the archaeological conservation and restoration process.

Restoration of archaeological artifacts in the laboratory

In storage, the Institute of Archaeology has been preserving various kinds of archaeological objects, including metal and wood objects, potteries, ceramics, stones, bones, and textiles that have been excavated since 1940. Almost all of them have been excavated from nomadic burial sites, and they are usually damaged due to environmental factors such as temperature, humidity, light, and indoor pollutants. Currently, we do not have specialized microscopes and tools, but we are restoring the objects through cleaning, bonding and consolidation work at the archaeological sites and in the laboratory. The Division of Fund and Laboratory at the Institute of Archaeology was established in 2006, and now there are two staff in charge of conservation treatment of metallic and ceramic objects. We are studying conservation and restoration of ceramic and metallic objects in the Republic of Korea.



Treatment of archaeological site



Restoration in the laboratory

Mongolia

The project “Provision of conservation equipment to Mongolia” from CHA, KOREA

The Memorandum of Understanding was signed in Seoul on November 7, 2006 under the mutual agreement of the Ministry of Education, Culture and Science of Mongolia and Culture Heritage Administration of the Republic of Korea.

The Institute of Archaeology has been interested in collaborating with international institutions of cultural heritage protection to improve the situation of Mongolian tangible historical-cultural properties. The National Research Institute of Cultural Heritage (ACPCS) has been playing a significant role for this purpose.

In 2006 and 2010, researcher R. Erdenetsetseg studied at the Conservation Science Centre for metal conservation treatment in accordance with the co-operational contract between the two Institutes. Some metal artifacts, which are preserved at the Institute of Archaeology, were brought and restored there. At the Metal laboratory of the NRICH, conservation treatment was carried out for three months on fifteen metal objects.

In 2011, I participated in the ACPCS Program, which provided me with both theoretical and methodological knowledge of conservation and restoration science, and the advantages of the use of new technology. Since that training, I've been interested in and studying preservation and conservation of archaeological artifacts made of ceramic.

In December 2011, the Cultural Heritage Administration of Korea provided conservation equipment to the Institute of Archaeology. This technical assistance was a great event and well-timed support for Mongolian archaeological science. The provision of conservation equipment was a follow-up to the National Research Institute of Cultural Heritage (ACPCS), a training program conducted by the NRICH. This project is creating a new stage of conservation advancement in Mongolia. The equipment is being utilized for metal conservation treatment according to the Korean methods learnt at the National Research Institute of Cultural Heritage. Recently we carried out our first conservation treatment of iron objects in a laboratory of the Institute.



Destruction of archaeological sites

The destruction of archaeological sites is a big problem in my area of responsibility. It is due to the following reasons:

- Thieves steal antiques from tombs and archaeological sites to sell them on the black market
- The local people have destroyed archaeological sites on public land by digging up the soil for sale.

Although Mongolia has laws for the protection of archaeological sites, it is difficult to stop or restrain these illegal activities.

Mongolia



Destroyed archaeological sites

In conclusion, the problems and needs for cultural heritage protection and restoration activities in Mongolia mainly come from the lack of specialist budget knowledge and understanding about the true process to protect and preserve cultural heritage. As researchers, we aim to focus on the ethics of preserving cultural heritage, correcting misconceptions among the public and disseminating knowledge, and being involved in educational work to pass on this knowledge to future generations.



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

Shova MAHARJAN

Architect

World Heritage Section, Department of Archaeology,
Government of Nepal

In Nepal, many archaeological sites belonging to different periods and cultures may be identified within the territory. But due to lack of detailed research, the actual number of archaeological sites is not yet accurately known. Among those archaeological sites few have been explored and excavated, while some are in the process of being studied, and others are still unknown and remain unexcavated. The **Department of Archaeology** under the **Ministry of Culture, Tourism and Civil Aviation** is the main authentic government body for handling exploration and excavation work. As an architect, I get opportunities to participate in several excavation projects, where we deal with many challenges and issues:

1. Archaeological Sites and Their Condition

Archaeological sites (Panditpur, Fa-khel) in which I have been involved are very rich in cultural history. But due to various reasons they are facing a variety of problems. The main reasons are:

- The lack of awareness of local people about archaeological sites, resulting in their starting different illegal activities.
- Construction of roads, sewer lines as a modern development at archaeological sites.
- Digging and excavation works for creating big ponds and structures. Those ponds are used for fishery work and the structures are for poultry farming for the economic benefit of locals.
- Encroachments onto sites and developing structures for habitants and cultivation works.



Figure 1: Cultivation and habitation



Figure 2: Risk of stone extraction

- Extraction of stones and bricks for economic benefit
- Effect of floods, earthquakes and landslides as well as soil erosion
- Vegetation growth is a common problem at many sites, which are not well conserved or managed.

2. Human Resources for Archaeological Site Excavation and Conservation

The Department of Archaeology is the main authentic and central body for exploration, excavation and conservation works. In spite of that, the DOA has some limitations:

- It is impossible to carry out archaeological works with individuals only; the process needs multi-disciplinary professionals (e.g., archaeologists, anthropologists, curators, draft persons, art

historians, conservators, sociologists, heritage site managers, trained photographers, and chemists). But the DOA has a very limited numbers of professionals.

- Professionals working directly in this field rarely get the chance for further study and to participate in training programs
- In the case of prehistoric sites and excavations, due to lack of specialists (trained and skilled manpower), excavation works are not able to be conducted. The only works carried out are in coordination with foreign resource persons or specialists making their own efforts.

3. Management of Cultural Heritage Sites

The management of cultural heritage and archaeological sites is quite challenging in Nepal. We are doing our best to achieve good management.

- Most excavated sites are well demarcated with wire fencing, and notice boards are placed which contain proper information and its preservation measures
- Listings of sites are done after proper study, exploration and excavation with proper documentation so that proper decisions can be taken according to the priorities of each site for future planning.
- Most of the sites are filled back or covered with earth after excavation. This sort of covering is one of the best measures for preserving sites. However, some are exposed with proper management and conservation. For example:



Figure 3: Excavation work



Figure 4: Filling of trench after documentation

- Lumbini is the best example of conservation: it is the place where Buddha was born and the finds are conserved and exposed.
- Panditpur is also a Buddha-era archaeological site where excavations were carried out in two different sessions. All finds are well documented in drawings, reports, and photographs. Mud walls, post holes, NVP ware, potteries/figurines and other finds are placed safely and trenches are back filled so that all the history of the site is safe inside the earth.

4. Challenges in the Management and Conservation of Archaeological Sites

Due to a lack of trained manpower and limited budgets, many sites remain unexcavated, and excavated sites are too difficult to conserve.

- In the case of prehistoric excavations, in our country there is a limited number of trained personnel, so we need to depend on experts from neighbouring countries
- Sites are excavated and documented, but due to lack of scientific data, in most cases average dates are determined by typology of materials.
- Long term planning is very rare for the protection of archaeological sites

- According to the physical and geographical characteristics of a site, it may be believed that the site is very ancient, but when excavated it is found to be relatively new. Hence in many cases, objectives are not fulfilled as expected due to lack of exploration and detailed surveys.
- Lack of related and multidisciplinary professionals
- Excavation is truly research work. It takes a long time for proper study, documentation and findings to be completed, but lack of workmanship and time periods appointed by law will limit the excavation work. This obviously affects the work and the findings.
- We have a federal system now, but the organizational setup is not decentralized yet. Planning is going on for appointing archaeologists and conservation architects to each municipal-level unit.
- Archaeological excavation and monument conservation are the two main objectives of the Department of Archaeology. But due to necessity and the disaster of the 2015 earthquake, the focus has been on conservation and preservation of monuments as the first priority and archaeological conservation works as the second priority.
- Most of the budget allocated to our department is focused on firstly, conservation of monuments, and secondly, archaeological works, so excavation and exploration work need to be done with a very small budget.

The April 2015 Nepal earthquake affected many cultural heritages in Nepal. In the post-earthquake period, the main objective of the Department of Archaeology was to restore, conserve and renovate the monuments. During that hectic time, the DOA also carried out rescue excavation works at various monuments in order to know the chronology and historical background of the sites, as well as the condition of the foundation. At that time experts from different countries also helped a lot. Various rescue excavations at World Heritage Sites (e.g., Pashupati Monumental Zone, Hanuman Dhoka Palace) were carried out to know the condition of foundation. Similarly, excavations were also carried out at various Tentative World Heritage Sites as required.

In conclusion, as Nepal contains many virgin and prehistoric sites, maximum exploration should be done while preparing an inventory. The sites which are explored should be conserved well and unexplored sites should be conserved under the ground for future generations. The Department of Archaeology needs to be strengthened for better archaeological site preservation and conservation works.

- Staff/professionals of the DOA should be trained and should be involved in training programs nationally and internationally.
- Sufficient budgets should be allocated with appropriate timeframes for exploration, excavation and conservation.
- All research, exploration, excavations and conservation works should be published so that information will be disseminated
- The formulation of proper rules and regulations and their effective execution
- A strong political commitment is also required for a better future for excavation works in Nepal.



Problem and Needs for the Protection and Preservation of Archaeological Sites in Pakistan

Zahida QUADRI

Assistant Director Excavation

Culture, Tourism, Antiquities and Archives Department,
Directorate of Antiquities and Archaeology, Government of Sindh

1. Introduction

Cultural and heritage property in Pakistan is protected under the Antiquities Act 1975. After the Eighteenth Amendment of the Constitution of Pakistan was passed in 2010, several institutions were transferred from the domain of the federal government to the control of provincial governments. The Department of Archaeology was also devolved to the provincial governments. Since then, all provinces have been responsible for the management of the archaeological and heritage assets of their province. Each province has its own separate archaeology department, which is functional and authorized at the provincial level. In addition to the federal laws, all provinces except for Baluchistan have enacted their own heritage policies and laws. The provincial archaeology departments have sufficient autonomy to make and implement decisions regarding heritage and cultural property without any intrusion from the federal ministry.

This report mainly describes the problems, needs, and activities of the Culture, Tourism, Antiquities, and Archives Department of the Government of Sindh, where I belong and about which I am authorized to share information, based on my own experience. However, all these are mostly common issues that are faced by other provinces as well.

Sindh province of Pakistan is home to nearly 3,000 sites and monuments, of which 1,600 are protected under the provincial Sindh Cultural Heritage (Protection) Act 1994, while 1,200 remain unprotected.

2. Problems in Site Management

2.1 Vandalism

Looting and vandalism around cultural properties are some of the most common problems and the biggest threats to the cultural property of Pakistan. Illegal construction and burials have been noticed many times inside and around archaeological sites; however, those sites are protected under the Antiquities Act 1975. The act disallows new construction, burials, and other such activities. Through continuous monitoring and strict security measures the problem has been overcome to some extent. Another problem is encroachment and the destruction of cultural property by local communities and builders. Some pre-historic sites of Karachi have now vanished under the Mega City Project of Bahria Town. During my survey of the archaeological site at Mansurah, I reported regular cultivation of and encroachments onto the site. After this, a boundary wall was constructed [where possible] and a fence erected for the protection of the site. However, despite warnings and cautions, tourists—especially schoolchildren—walk on the wall for fun and stand or sit on it to snap pictures. In the images below, at Islamic period sites of Mansura and Chukandi, in Fig. 1, a clear road/path over the ruins of the site is visible. While in Fig. 2, a tourist is standing on the remains and taking a selfie.



Fig.1: A clear road/path over the ruins of the site is visible



Fig.2: Tourist posing for a selfie on the remains



Fig.3: Farms and field at the site of Mansurah



Fig.4: Destruction of historical grave at Chukandi



Fig.5: Bricks of the site used for making road

2.2 Lack of Coordination between Provincial Archaeology/Heritage Departments

Due to the Eighteenth Amendment of the Constitution of Pakistan, the heritage sector is one of the areas which have been facing challenges after devolution in terms of coordination and collaboration within provinces. The overall performance of provincial governments has greatly improved but the sharing of best practices concerning the protection of cultural properties is somewhat lacking. Besides, many senior archaeologists and experts have been posted back to their provinces, and this situation has created a serious management crisis in Sindh and Baluchistan. The guidance and field training from senior experts which we (young employees) seek is missing, although whenever I contact them on a personal level for their advice, I find them very kind and cooperative. But this cooperation needs to extend to the provincial level.

2.3 Lack of Professional Capabilities [equipment-training-new trends/techniques]

There is a lack of specialist expertise among professionals/government officers, especially in the case of Sindh and Baluchistan. The heritage sector of these provinces is dependent on foreign archaeological missions and international training but unfortunately, all officers are not capable of attending international training, therefore they cannot play their role as required or expected. Due to the shortage of staff and lack of technical assistance after every excavation, we need to re-bury the excavation area to protect the remains, which takes both time and energy. See Fig. 6.



Fig.6: Re-burial of an excavated area in Chahunjo Daro and Banbhore



Fig.7: Preservation of sites from rain



Fig.8: Drainage for rainwater



Fig.9



Fig.10

For the preservation of sites from rain (Fig. 7) and bushes (Fig. 10) we use human resources. Traditional techniques approved by UNESCO are put into practice for the conservation and protection of cultural property (Figs. 12-13).



Fig.11



Fig.12



Fig.13

2.4 Lack of Research and Laboratory Analysis

Also, equipment and labs are insufficient. Therefore, excavations at major sites proceed under the supervision of foreign missions. Due to the lack of scientific labs, samples are requested to be sent abroad for testing and analysis purposes. In this scenario, local officers including me do not possess the requisite knowledge of emerging trends in testing/analysing cultural heritage with new disciplines, subdisciplines, and emergent digitalization and their protection technologies.

2.5 Lack of Sufficient Budget

The purchase of required equipment and construction of advanced scientific laboratories is possible if cultural heritage departments allocate sufficient budget for it. The budget that is granted to provincial heritage departments is inadequate for the preservation, conservation, and protection of cultural properties in Pakistan.

3 Needs

3.1 Security and Preventive Measures

Risk preparedness for the protection of cultural heritage needs to be a priority in Pakistan. It is essential to set up an all-province network or working committee on the protection of cultural properties. Pakistan is a country that is the victim of terrorism and armed conflict. A few very important sites in Northern Province have been destroyed or otherwise adversely affected due to armed violence, while looting is the biggest threat in Sindh and Baluchistan. The mission of that all-province working committee would include the protection of cultural properties from damage, vandalism, illicit trafficking of artifacts, and looting, including in the event of armed conflict. The all-province working committee would be responsible for coordination and act in emergencies. In this regard, provincial government departments along with the national committees of international institutions, for example, ICOM Pakistan, IUCN Pakistan, and ICOMOS Pakistan can play an effective role.

3.2 Trained Staff

Before training staff/officers of archaeology and heritage departments in Pakistan, it is important to understand that not all of them are fluent English speakers with the confidence to attend international training sessions. There is therefore a need to set up training camps on a local level. For this purpose, senior experts in Pakistan can be engaged. Again, coordination is required on the provincial level.

3.3 Social Awareness

In the protection and management of cultural heritage sites in Pakistan, street protests, social media, and conferences can play a vital role. I have seen huge participation by Pakistani youth and civil society in heritage-related workshops and projects. For example, one important cultural property in Karachi city, the 100-year-old building of the Jufelhurst school, has been restored as the result of a protest by civil society against its bulldozing by local land developers due to its high property value. The destruction of cultural properties can be prevented through the volunteering efforts of school students and civil society.

3.4 Laboratory

There are many universities in Pakistan which, if they collaborated with government institutions, this problem would be able to be addressed. The labs and equipment of geology, botany, environmental science, and related departments of universities might be useful for this purpose. The Archaeology Department Khyber Pakhtunkhwa is linked with universities; however, this is needed to be put into practice in other provinces as well.

4 Activities

4.1 Training of Staff and University Students

Concerning the above-mentioned issues, government archaeology and heritage departments have started the training of staff and university students (Figs. 14, 15, 16). For this purpose, workshops have been organized by federal and provincial departments, where senior experts from different provinces are invited for lectures and practical sessions. A one-week training course on basic conservation and analytical techniques in the preservation of the tangible cultural heritage of Sindh was organized at the Water and Soil Investigation Laboratory, Mohenjo Daro in 2019 (Fig. 17). Another workshop at Mohenjo Daro was organized on Indus script. Also, an informal meeting of government officers with an international archaeology mission was held within government offices for discussion and exchange of ideas (Fig. 18).



Fig.14



Fig.15



Fig.16

For the 2020 season at Banbhore and Chahunjo Daro, students from Shah Abdul Latif University, Khairpur; Sindh University, Jamshoro; Quaid-e-Azam University, Islamabad; and Bahria University, Karachi were encouraged to participate.



Fig.17: One-week training course at WASIL



Fig.18: Government officers and Italian mission



Fig.19: Training camp at Chahunjo Daro

4.2- Community Involvement

To prevent the site from looting and illicit trafficking of the artifact, which is usually done by local villagers, our department and Heritage Foundation of Pakistan jointly initiated a project to involve the community in site management at the world heritage site of Makli. It's an effort to engage male and female of the local community in conservation projects as masons, kasha tiles making *fig [20]* and making handicraft for visitors. *fig [21]* We are now looking forward to engaging local women as guides and males as a watchman.



Fig. 20. Making kasha tiles



Fig. 21. Handicrafts for sale

4.3 Conferences and Technical Sessions for Social Awareness

On both the provincial and federal levels, we are organizing lectures, conferences, and workshops. I have moderated two sessions where I received an overwhelming response from the public regarding in-person involvement in heritage activities.

4.4 Coordination on a Regional Level

It is not possible for just one department to tackle the management, security conservation, and protection issues of cultural property. Coordination within the regional department is necessary. At the Sindh level, my fellow officers and I are personally coordinating with the police and rangers of different districts. In case of destruction or any kind of disturbance, stern action has been taken against the culprits. Although we have

heritage and antiquities laws that can be implemented, we need to build a connection with law enforcement agencies. The cooperation between our department and the security department is expanding day by day and unprecedented steps have been taken for the safeguarding of historical places.

5 Conclusion

During my service of six years, I have observed that many of our site management problems have occurred due to the lack of professional staff. We need technical experts and assistance, and for Goal 17 of the SDGs, partnership in the cultural and heritage sector between provinces, neighbouring countries, and international institutions such as UNESCO, ICCROM, ICOMOS, and ICOM is one of the best ways to deal with these problems. Expert opinions will help us to make better decisions. There is a strong need to focus on policies and good practices for the protection of monuments and archaeological sites. I am very much interested in building a heritage protection network in the region.

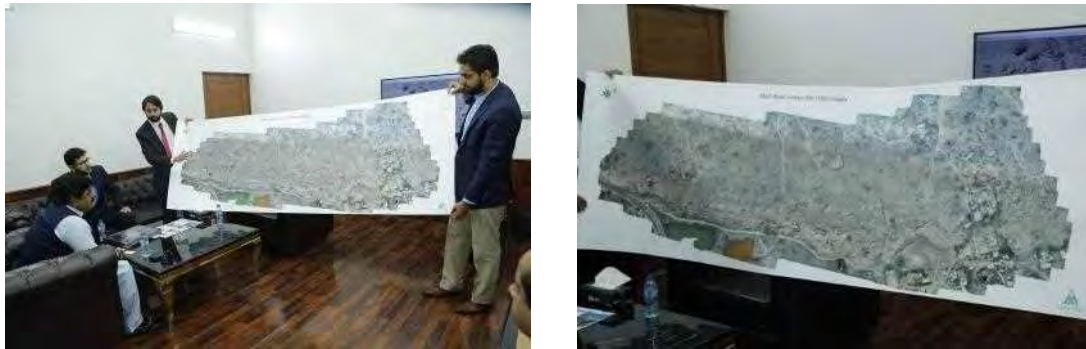


Fig. 22. First digitalized map of the World Heritage Site of Makli



Baselining the Risk and Vulnerabilities of Philippine Cultural Heritage Sites

Kristine Kate A. LIM

Committee Head/ Board Member

Research and Publication Department,
Kapisanan ng mga Arkeologist sa Pilipinas, Inc.

At present, there are less focused research and policy initiatives that aim to systematically assess the risk and vulnerability of cultural heritage sites in the Philippines (Fig. 1). While there are a handful of impact studies directed at built and intangible cultural heritage, this is still not enough to categorically lobby for the inclusion of cultural heritage protection in the national disaster risk agenda. In this report, I have documented several sites in the country that demonstrate this pressing issue and the need to protect our cultural heritage sites. As an archaeologist, I have presented sites here that I have explored which exhibit long-term evidence of cultural and environmental value for past and present communities. The report basically outlines three main challenges: geophysical and climate change-related hazards and anthropogenic activities that put cultural heritage sites at risk. It is proposed that generally, having an integrated framework and transboundary perspective can enable more proactive responses in determining and managing risk and the vulnerabilities of cultural heritage sites in the Philippines.

Problems

Geophysical-Related Hazards

Philippines lies along the Pacific Ring of Fire, an area where 75% of the earth's volcanoes are located and thus, where intense volcanic eruptions and strong earthquakes occur. The related consequences of this include tsunami, liquefaction, ground shaking, and landslides, which can lead to site destruction, besides loss of life.

The Budiao Church Ruins (Fig. 2) and the Camiguin Sunken Cemetery (Fig. 3) are products of the violent volcanic eruptions of Mt. Mayon (1814) and Mt. Vulcan (1871), respectively. These events instantly turned these traditional sites into archaeological sites that were only investigated more than a century later. Although not an archaeological site, the 2013 7.2 magnitude earthquake which shook the Visayas region crushed mainly the belfry and façade of the oldest church in the Philippines and a National Historical Landmark – Basilica Minore del Sto. Niño (1565) (Fig. 4). Restoration works were initiated by a team of heritage conservation architects, engineers, and archaeologists after this event.

Climate-Related Hazards

The country is extremely vulnerable to the effects of climate change because of its geographical location and developmental context. Events related to climate change in the Philippines are extreme heat, extreme rainfall, prolonged drought and dry spells, ocean acidification, sea level rise, and water scarcity.

Present-day shorelines are more susceptible to erosion and flooding, placing more than 60 percent of the country's population that lives in the coastal zone at greater risk. This is also one of the reasons why I focused on investigating our maritime cultural landscape and the impact of climate change, because of the material evidence of maritime traditions that can put these sites and materials at risk of destruction. Such can be seen in burial grounds (e.g. Fig. 5), shell middens (e.g. Fig. 6), lighthouses, ports, harbours, etc. that are almost inundated or flooded as the highest tide points to higher and higher levels. This has also been noticed by several community members when their coastal houses (Fig. 7) are flooded, especially during exacerbated typhoon or increased rainfall scenarios.

Anthropogenic Activities

Human activities such as looting/treasure hunting, pollution, mining, tourism, poor land, sea, and coastal use management applications, and other local security issues have also significantly altered the environment. Much can be said about cultural heritage sites that exhibit damage because of various land, economic, infrastructure, educational and policy-related issues and concerns.

In a survey I conducted last year, I asked archaeologists working in the Philippines of their perception regarding the threats archaeological sites are facing, then and now. The 35 respondents listed treasure hunting, lack of public archaeology, illicit trade of cultural property, antique collecting, miseducation about cultural resources, and lack of policy implementation as common issues they encounter which put archaeological sites at risk. With this, the most pressing issues that they think should be addressed immediately are treasure hunting, miseducation, and lack of implementation of the law.

This can be seen in various excavation sites, where even after years of archaeological campaigns and the passage of the National Cultural Heritage Act in 2009 (Republic Act [RA] 10066), we still have not prevented treasure hunting. This was the case in the Bubog Site, Occidental Mindoro (Fig. 8) where some of the locals we hired also acted as informants for treasure hunters, who thought they could possibly retrieve gold or whole pottery artifacts, common materials looted in the Philippines. In another site, years of pot hunting in Del Carmen, Siargao (Fig. 9) may eventually cause the collapse of a coastal rock shelter where more than 10 m of illegal excavation exposed human remains and associated burial goods (according to local narration). This was similar to the discovery of the Tuhian, Catanauan wreck (Fig. 10) by local fishermen. Because it was severely looted prior to our scientific investigation, we found only the lower hull and a few artifacts of the vessel, which if investigated intact, may have revealed more information about the Philippines' role in Island Southeast Asia maritime trading.

Treasure hunting at both land and underwater cultural heritage sites has been on-going since the 1900s and is persisting still today. Through our informal interviews with some locals who engage in this type of activity, a common answer as to why they do it is economic motivation. Moreover, treasure hunting is still legal in the Philippines and is supposed to be regulated by the National Museum of the Philippines (NMP). Unfortunately, just last year, two officials of the NMP were caught in an entrapment operation involving extortion in exchange for the issuance of treasure permits (<https://news.abs-cbn.com/news/08/23/19/arrest-of-2-officials-stunsnational-museum>).

In relation to the lack of implementation and enforcement of the law and local policies, this can be demonstrated by vandalized archaeological sites where high touristic and land development activities occur (e.g. Figs.11, 12). Moreover, archaeological impact assessments (AIA) for land development sites are only done in certain parts of the country where a strong heritage zone is declared or when a private company with foreign collaborators requests an AIA. Given the lack of information or miseducation about cultural resources and the implications of RA 10066, these problems put cultural heritage sites at risk, endangering their potential to live up to their true relevance in helping us to understand our past to be able to apply lessons for the present and future.

Needs

Policy review/revision and a well-coordinated and educated bureaucracy/public

Treasure hunting, if considered the number one threat to archaeological sites, reflects deeper problems in our society (e.g., poverty, corruption, lack of education, etc.) which make us more vulnerable to disasters. Currently, the legal protection of cultural heritage falls under RA 10066. However, policy and institutional studies should be pursued as to how this law conflicts or overlaps other existing laws and local policies. The fact that treasure hunting, while regulated, is still allowed is a blatant disregard of the said law, which mandates the state to “conserve, develop, promote and popularize the nation's historical and cultural heritage

and resources, as well as artistic creations” (RA 10066, Article 1 Section 2). If potential archaeological sites are looted, then no one can know their true national historical and cultural value. With regards to policies and protocols, miseducation of the heritage law and the lack of a well-coordinated bureaucracy causes the destruction of potential archaeological sites when AIAs are not pursued by land developers or government officials. Currently, AIAs are not explicitly mentioned in RA10066; instead, there are references to Environmental Impact Assessments (EIAs). However, the nature of EIAs means that they are focused on environmental technical data, with little or no comprehensive assessment of cultural heritage and social impact. In addition to this, we should have an intensified educational program for the public that encourages or institutionalizes cultural regeneration, especially when culture is fully integrated in an area study.

Support/strengthen efforts in developing professionals, baseline data, and assessment tools/methods

The Philippine Registry of Cultural Properties (PReCuP) was only established in 2015; thus, the database of our cultural materials and sites are not yet fully incorporated into this system. In effect, how will we protect and conserve our cultural properties if we do not know the basics of what and where they are. Conservation management plans (CMP) are only implemented by a few heritage conservation architects at only two historical sites (San Sebastian Church and Intramuros, Manila). Assessing the risk and vulnerability status may help in realizing the state of our cultural resources, and in turn garner more support for the cultural heritage community and demonstrate the field’s relevance for the Philippine nation.



Fig. 7. Semi-submerged contemporary church in Obando, Bulacan



Fig. 11. Example of vandalism in a National Cultural Treasure site in Callao Cave



Fig. 8. The aftermath of a treasure-hunted site at Occidental Mindoro



Fig. 10. The remaining materials of the Tuhian Wreck (photos taken by the author and processed in Agisoft by E.Robles)



Fig. 12. Example of vandalism in a National Cultural Treasure site in Balobok Rockshelter

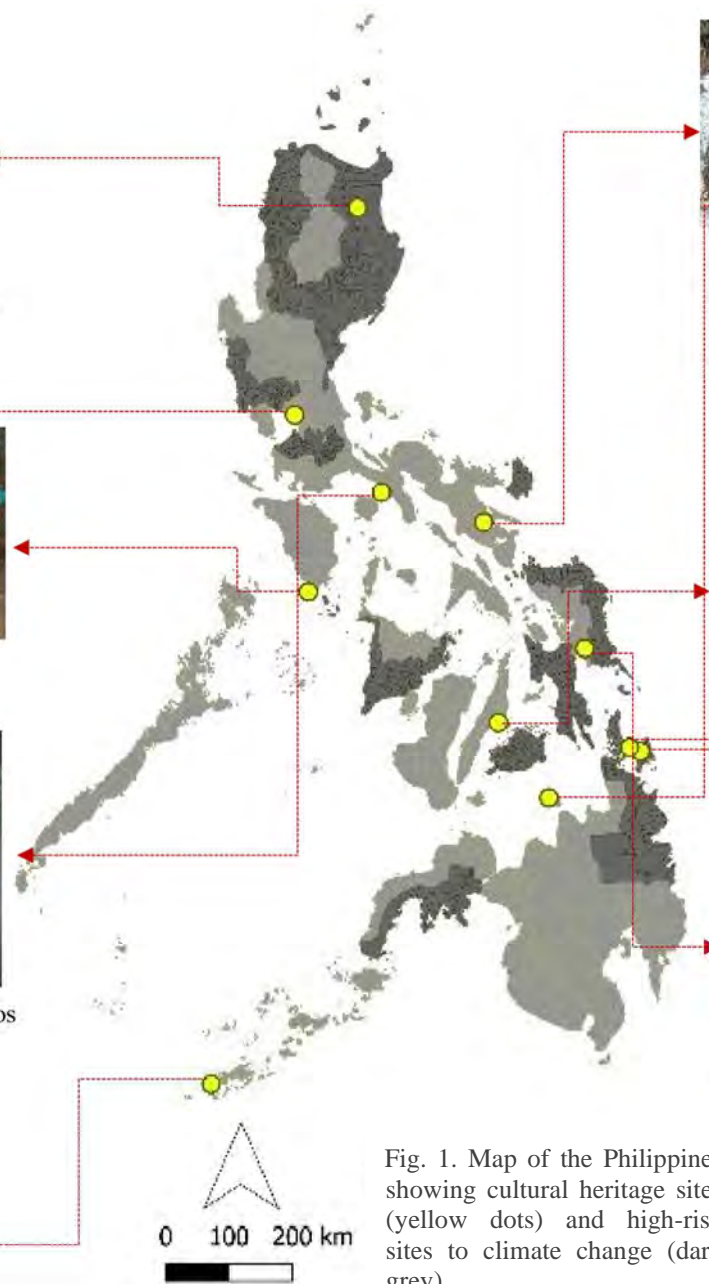


Fig. 1. Map of the Philippines showing cultural heritage sites (yellow dots) and high-risk sites to climate change (dark grey)



Fig. 2 & 3 (L-R): Exposed remains of the Budiao Ruins and Camiguin Cemetery



Fig. 4. Collapse part of the belfry of Basilica Minore del Sto. Niño de Cebu



Fig. 6 & 7 (T-B): A tomb semi-submerged in sand and a shell midden inundated by river water



Fig. 9. Treasure-hunted coastal rock shelter with exposed sediment





Challenges and Needs for Protection of Archaeological Heritage in Singapore

CAI Yinghong

Senior Manager

Heritage Research and Assessment Division,
National Heritage Board, Singapore

This report identifies the challenges and needs for the protection and management of archaeological heritage in Singapore, from my perspective as a heritage officer managing archaeological projects in Singapore.

As an island-state with limited land and natural resources, there are competing needs to cater to the growing population while maintaining liveability in Singapore. Over the years, urban development has transformed Singapore's landscape rapidly, with iterations of construction and de-construction works. It is within this context of competing needs for urban development and planning for living population that the safeguarding of archaeological heritage is required to be considered.

Archaeology excavations have been conducted in Singapore since 1984. The archaeological research has helped to uncover the pre-colonial history of Singapore, providing insights on early settlements, trade, and cross-cultural interactions.

My division, the Heritage Research and Assessment division at the National Heritage Board, is tasked to work on efforts to safeguard and promote archaeological heritage in Singapore. These initiatives are part of Our SG Heritage Plan (2018-2022)—a five-year blueprint for the heritage sector in Singapore. The division coordinates archaeological matters and partners institutions to implement archaeological projects but does not directly carry out archaeological excavations or post-excavation processing.



Figure 1: An archaeologist team from ISEAS-Yusof Ishak Institute (ISEAS) working on an archaeological site at Empress Place, Singapore, in 2015

The following paragraphs highlight the challenges for archaeology in Singapore:

- Lack of Archaeological Expertise

There are a limited number of archaeological professionals available in Singapore to implement local archaeological projects. These professionals are currently tied to three main Institutions of Higher Learning: the ISEAS-Yusof Ishak Institute (ISEAS), the Nanyang Technological University (NTU), and the National

Singapore

University of Singapore (NUS). Archaeological expertise is embedded within one or two members in each of the institutions, and projects are assisted by volunteers or students. There is uncertainty on whether there is sufficient capacity within these institutions to support the conduct of archaeological excavations and projects in the long run.

- Backlog of Materials and Lack of Storage Space

A large amount of excavated archaeological materials has accumulated from the projects conducted over the past three decades, and many of the materials have yet to be processed. There is a lack of trained manpower and resources to conduct post-excavation processing or to follow up with research and analysis of the materials.

With continued excavations and recovery of more archaeological materials, storage has become an increasingly pertinent issue. There is a need to review frameworks and strategies for post-excavation recording, selection and dispersal of archaeological material to reduce the storage load.

- Lack of Legislative Framework and Guidelines

There is currently a lack of legislation or regulatory frameworks for protecting archaeological heritage in Singapore. Based on feedback from members of the archaeology community, key gaps include the need to clarify ownership of recovered archaeological artefacts, put in place regulations or guidelines governing how archaeological excavations are conducted, and to protect archaeological sites and artefacts.

As part of efforts under the Heritage Plan for Singapore, NHB is exploring legislative changes to the NHB Act to address the issues. The aim is to improve the protection of archaeological heritage in Singapore, by strengthening the Act and introducing a framework to regulate archaeology in Singapore.

With the challenges highlighted above, the following paragraphs elaborate on the needs and prospects for archaeology in Singapore:

- Need to Develop Archaeological Capabilities

There is a need to further develop archaeological technical expertise in Singapore, including building up the skill sets required for archaeological fieldwork, documentation and recording, and conservation of archaeological materials.

This could involve bringing in overseas expertise, as well as building up local capabilities. There could also be efforts to work with local educational and research institutions to create greater interest and awareness, and to train the next generation of potential archaeologists.

NHB initiated archaeology training workshops for public officers in 2019 to engage agencies on initiatives to safeguard and promote archaeology in Singapore. It has also partnered with the Nanyang Technological University (NTU) to support tertiary students to conduct research on archaeology in Singapore and work on the analysis of past site excavations. Through such collaborations, it is hoped that they could be a pipeline of personnel with relevant expertise that could support future archaeological projects.



Figure 2: Professor John Miksic sharing his knowledge of archaeology in Singapore with workshop participants in 2019

- Need for Archaeological Data Management

With the pertinent issue of lack of storage space for the accumulating archaeological materials, it is important to put more effort into archaeological data management, including post-excavation recording and analysis of archaeological assemblages. There could be greater focus on the management of archaeological data, including the use of digital databases.

- Need for Integrated Heritage Planning

In view of the rapid urban transformation in Singapore, there is a need to work closely with land development agencies to ensure that archaeological heritage is sufficiently considered prior to redevelopment. NHB has been working with stakeholders to map out sites of archaeological interest and to ensure that archaeological investigations are carried out at an early stage or in tandem with development works where necessary. Nonetheless, with the limited archaeological personnel and post-excavation resourcing available, a careful balance is required to be struck to prioritise sites and to develop methods that can safeguard archaeological heritage with limited resourcing.

Dialogue and collaborations with museums and heritage institutions are also important to facilitate the use of archaeological assemblages for public education. Lastly, the safeguarding of archaeological heritage also requires the involvement of the public, in order to make the protection of heritage meaningful and relevant for communities.

In conclusion, the safeguarding of archaeological heritage involves working closely with various stakeholders—including public agencies, museum and heritage professionals, research and educational institutions, heritage interest groups or community groups, as well as the general public.



Problems and Needs for the Protection and Preservation of Archaeological Sites in Sri Lanka (Ceylon)

K.G. Mahinda Karunaratna

Development Officer

Section of Archaeological Explorations,

Regional Office (Central Province), Department of Archaeology

Introduction

Sri Lanka, or Ceylon, is a teardrop-shaped island, located off the southern tip of the Indian subcontinent in the Indian Ocean. The island has a total area of 65,610 km² and is called “the Pearl of the Indian Ocean” due to the size, and economic and cultural values of the country.

Historical Background in Sri Lanka

The history of the country goes back to the *Paleolithic* period of the Prehistoric era (250,000-150,000 BP). According to archaeological investigations in Sri Lanka, nine main cultural periods have been identified . They are the Prehistoric Period, Protohistoric Period, Neolithic Period, Early Historic Period, Medieval Historic Period, Later Medieval Historic Period, Kandyan Period, Colonial Period and Modern Period.

Archaeological Sites in Sri Lanka

According to the Director General, Department of Archaeology, there are 215,000 archaeological sites that belong to the above cultural periods in Sri Lanka. There are 2,642 registered protected archaeological sites, 174 registered archaeological reserves and 8 World Heritage Sites on the island. Although Sri Lanka is a very small country, the density of archaeological sites is very high.

Problems of Archaeological Sites in Sri Lanka

Treasure Hunting

The main problem that faces archaeological sites is “Treasure Hunting” or looting of the sites or artefacts. There is about one case of treasure hunting reported to the Department of Archaeology daily on average. According to a survey of the Department of Archaeology, 20-25 cases are reported monthly and 250-300 cases reported annually.

Destroying archaeological sites and artefacts in order to find treasure is a tragedy in the field of archaeology today. The perpetrators destroy invaluable artefacts without any thought to the consequences . Sometimes they destroy images of the Lord Buddha or images of gods or goddesses. About 75% of Sri Lankans are *Theravada* Buddhists, and most of the sites are also Buddhist archaeological sites, but unfortunately, these Buddhist sites also face this tragedy daily.

Treasure hunters damage or dig into the head, chest or other parts of ancient Buddha statues to find hidden treasure. According to the *Theravada* Buddhist tradition of the country, Buddhist devotees often enshrine sacred relics of Lord Buddha or *Arahath* Monks with semi precious or precious gemstones, gold, ornamental metal Bodhi trees or leaves, and small Buddha statues in the image of Lord Buddha. The treasure hunters want to loot items like these from the bodies of the ancient statues of the country.



Figs.1&2: The chest area of the statues have been destroyed by treasure hunters.

Fig.1 (left): Samadhi Buddha Statue of *Gadaladeniya Rajamaha Vihara* (Temple) (1344 AD), *Kandy*;

Fig.2 (right): *Keulegma Rajamaha Viharaya* (1469-1815), *Teldeniya*.

Stupa or *Dagaba* are also sacred Buddhist archaeological sites in the Sri Lankan context. Treasure hunters destroy these heritages also to find the treasure. Most of the *stupas* are archaeological sites, and our ancestors enshrined sacred relics of Lord Buddha or *Arahath* Monks and other offerings inside the stupas for devotees to worship. Unfortunately, ancient stupas have become the main target of looters today.

Myths and Mythical Texts of Ola Leaf

Nidan Wadula is a book (Ola leaf) that was written in the 13th century AD. The main objective of this text is to describe the places where mythical treasure was deposited in the past. The information described in the *Nidan Wadula* misleads the treasure hunters. Unfortunately, they use this book as a guidebook for finding treasure, and as a result of this activity, archaeological sites are being destroyed daily.

“*Nidan*” or “Treasure” is a very popular myth in Sri Lankan society today, and the *Nidan Wadula* has helped to spread this concept to the community. Most people in Sri Lankan society accept this myth as truth, and due to this dangerous rationale, they destroy valuable archaeological sites to find this mythical treasure.

Civil War and Effects

Archaeological sites located in the North and East provinces faced three decades of civil war (1983 -2009) in Sri Lanka. Some archaeological sites were damaged or destroyed due to the battles between government forces and LTTE terrorists. The Dutch Fort in Jaffna (1618 AD) is a remarkable example of this. The fort was badly damaged and some parts demolished by attacks in the Dutch Fort area in 1990. Most of the ancient religious archaeological sites were located in hilly areas. Both the terrorists and government forces built their camps on this archaeological site for military purposes. It also caused damage to some other archaeological sites of the area.

Archaeology and Politics

There should be a good relationship between politicians and archaeological sites for proper heritage management in any country, because they represent the main stakeholders of the country, as are those in the field of heritage management. Sometimes they create acts and regulations for protecting heritage, But, unfortunately, most politicians violate the rules that they make. Sometimes, the decisions that they obtain work to destroy the valuable heritage of the country. The Mayor of the Urban Council of *Kurunagala* demolished a Royal Audience (Royal Assembly Hall) of *Kurunagala* Kingdom (13th century) in July 2020. The Department of Archaeology of Sri Lanka did not give permission to remove this ancient building from its location; unfortunately, the Mayor demolished the building without the permission of the Director General of Department of Archaeology. He violated the law, but the current government has not yet taken any legal action against the Mayor.



Figs.3&4: Royal Audience in *Kurunagala* Kingdom,
Fig 3 (left): Before the destruction
Fig.4 (right): After the destruction

Protection and Preservation of Archaeological Sites in Sri Lanka

Protection, Conservation and Preservation of Archaeological Sites and other Antiquities

The Department of Archaeology is the pioneer organization that protects the archaeological heritage of the country, with its main objective being to promote proper management of the archaeological heritage of Sri Lanka. Developing human and institutional resources; protecting and unearthing archaeological sites, monuments and movable artefacts; enhancing public awareness; conserving archaeological sites and monuments, and movable artefacts; and carrying out research are some responsibilities of the Department of Archaeology.

In 1980, the Central Cultural Fund (CCF) was established under an Act of Parliament [Act No. 57 of 1980]. CCF is one of the principal heritage management institutions in Sri Lanka. Archaeological investigations; conservation of built heritage, artefacts, murals and other decorative works; scientific research related to heritage conservation; and provision of heritage information, and development of visitor infrastructure utilized at heritage sites are some responsibilities of the CCF. CCF is currently handling 30 major archaeological projects located throughout the island. The World Heritage “Ancient City of Sigiriya” and “Rangiri Dambulla Cave Temple” with murals are some examples. The Maritime Archaeology Unit (MAU) of the CCF at Galle is the pioneering research centre on underwater archaeology in Sri Lanka. Underwater archaeological exploration, excavation, underwater cultural heritage management, conservation, establishing and maintaining the Maritime Archaeological Museum, and publications and public awareness activities are some responsibilities of the MAU. The *Godawaya* (oldest shipwreck in the Asia Pacific region - about 2000 years old) project is handled by the MAU under the supervision of the Department of Archaeology.



Fig.5: *Godawaya*, 2000-year-old shipwreck excavation, 2019

Sri Lanka

Acts and Amendments

The Antiquities Act No. 09 of 1940, Antiquities (Amendment) Act No. 24 of 1998, Enhancement of Fines (Amendment) Act No. 12 of 2005, Recovery of Govt. Possession Act No. 07 of 1979, etc. are used for the purpose of protecting archaeological sites and other antiquities on the island. The Department of Archaeology takes legal action to protect archaeological sites and other antiquities, making use of the Antiquities Ordinance and other Acts incidental to it and taking legal action through the courts to punish persons who violate the provisions of such Acts.

Needs for Preserving Archaeological Sites

Developing the human resources of the Department of Archaeology and the CCF is a major need for preserving the archaeological sites on the island. Increasing public support for the protection of archaeological sites, enhancing public awareness of the value of archaeological sites and other antiquities, achieving greater efficiency in legal tasks, and obtaining international cooperation and support are some of the needs to protect and preserve archaeological heritages on the island of Sri Lanka.



Salinity and Climatic Impact on the Conservation Status of Archaeological Monuments in the Territory of Uzbekistan

Omon Uktamovich MAMIROV

Archaeologist

Landscape Archaeology,

National Archaeological Centre of the Academy of Sciences

Today, 8,788 objects of cultural heritage are included on the national list in the territory of the Republic of Uzbekistan, of which 4,208 are archaeological monuments.

The ruins of Ancient Khavas are not only the oldest and largest archaeological monument of the Syrdarya region, but also of the entire Mirzachul. The magnificent remains of this place, which were part of Ancient Ustrushana, are now located in the southwestern part of the present-day town of Khavas, opposite the Karvonsaroy neighborhood. Today, the total area of the monument is about 12 hectares. The monument is made up of two parts, namely the huge arches in the northwest, which are distinguished and separated by adjacent walls. The main center of the town, the arches and the remains of the town have been fully preserved up to the present day. The location of Ancient Khavas in the Southern Banokat network of the Great Silk Road determines its historical significance.

Archaeological research on the monument began at the end of the 20th century and continues to this day. As a result of the research carried out in recent years, some achievements have been realized.

Archaeological research conducted here testifies that life in the monument lasted almost without interruption from the 4th century BC until the 20th century AD.

Today, the surface of the monument comprises a thick, salty soil layer affected by very strong salinity. This situation strongly impacts the deterioration of the monument and the work carried out by archaeological research teams.

It can be said that the most of the archaeological monuments in the Central Asian region were built of clay. Since ancient times, clay was the most widely used raw material in the architectural sphere. Its primary processed form is clay pellets (*guwala*), mud walls (*pakhsa*) and raw brick, which have been used in construction works in this region since the neolithic period.

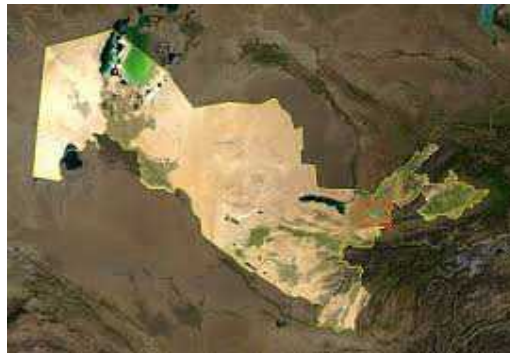
One of the peculiarities of the monument of Ancient Khavas is that as a result of active life and residence over many years, a very thick cultural strata has formed. By the time of the developed Middle Ages and the last Middle Ages, the climate in the region became dryer, and the ancient stream located there began to dry up. This was clarified by research carried out in the remote areas of the monument. In particular, the monument grew a little in the 11th to 12th centuries BC, and houses began to be built on the upper side of the old stream banks.

Archaeological studies have shown that in the area of the monument that was developed in the last medieval period, clay for construction was obtained from the same land itself without being transported from another place. Our conclusion was arrived at due the discovery of a large number of excavated sites for economic purposes and potholes for obtaining clay for construction. In this regard, it can be said that the presence of various organic wastes and ash residues in the composition of the raw brick and mud walls confirms this.

These factors led to a strong degree of salinity and soil depletion in the monument area over the following centuries, and as a result, the monument area was abandoned.

In other monuments with this problem, especially in archaeological monuments consisting of one or two cultural strata, this case is better than the case of conservation, without a strong reflection to this extent. Almost all the monuments in the steppe and steppe climatic regions of the territory of Uzbekistan are on the verge of destruction today due to the impact of a strong degree of salinity. Climate change, aridization and salinity are largely attributable to anthropogenic influences. It can be said that many archaeological monuments in the steppe territories have for many years served as a wintering site for a nomadic herdsman population. Traces of semi-basement and economic activity identified in the territory of the monument in Ancient Khavas are an obvious example of this. In most cases, migratory breeders found it desirable to use only the interior, without touching the foundation and main walls of the houses where they had previously lived, the second time to change the interior of the housing or use household items.

There has been a cultural closeness between Fergana Valley and Ustrushana territory since ancient times. These links are evidenced by material evidence. Today, even in the archaeological monuments in the valley territory, salinity is becoming more and more prevalent. The high population density in the valley territory has caused an increase in the number of trees and agricultural crops around the archaeological monuments. Local peasants plant trees such as mulberry and date in order to fight against salinity. They also wash salt from the soil with the help of running water.



In the territory of Syrdarya, in the winter season, salt washing is carried out with the help of running water in the fields, and in the summer they use a “drainage” system of underground water. The drainage system pulls up underground water and salinity from a 400-500 m radius and discharges it through the trenches. Although this system exists near the archaeological monument, it cannot completely eliminate the salinity in the monument area. Therefore, the search for effective measures to prevent salinity is an urgent problem.

Several archaeological monuments have been opened in the territory of the Republic in the last 20-25 years and are being conserved. In particular, the old Kuva monument was opened in 2004 and the monument was fully conserved. However, important artifacts are being destroyed due to the effect of sand and salinity in places where archaeological research has been conducted. At this time, if the necessary measures are not taken, the monument may lose its historical status and value.

Installation of a planting and drainage system involving trees such as mulberry and others in order to fight against salinity in the border zones around the archaeological monuments can help us in this situation. However, a system of preserving the territory from salinity, which was conducted for archaeological research, has not yet been developed.

Uzbekistan

The purpose of my participation in this training is to further enrich my knowledge of the preservation of monuments and artifacts which should be preserved for future generations. It is also to study factors which are a threat to today's archaeological monuments, and to identify effective prevention methods.

Considering the fact that several innovations are coming into play in the course of archaeological research in the next few years, it will be possible to achieve great success with the deeper study of such problems and the preservation of archaeological objects by eliminating them.



Conservation Staff in Vietnam Museums: Challenges and Cooperation

NGUYEN Quang Khanh

Vice Director

Management Board, Kien Giang Museum,
Department of Culture and Sports

Abstract

In the development of the Vietnam museum system, the role of human resources in the preservation and promotion of the collection values is vital in providing long-term solutions for the preservation of artifacts, objects and documents. Preservation of these materials will enable better research, display of artifacts and wider dissemination to the public. To do this, the museum conservation staff have to do their museum work with good skills, appropriate qualifications, and professional conservation techniques. The article analyses the current situation of human resources in Vietnam museums responsible for carrying out conservation, and attempts to provide solutions in training museum personnel to improve their capabilities to meet the required quality and standards relating to the integration and development of museums in Asia.

Keywords: Human resources, conservation, Vietnam museums, conservation, conservation staff.

Introduction

At present, Vietnam has 154 museums including 123 museums belonging to the government (State museums), and 31 private museums (non-State museums). The system of Vietnam museums is made up of a large team of professionals and systematically trained officials. These staff teams have access to modern science and technological advances as they contribute to the enhancement of museums aligned with the latest trends, with possible integration and collaboration with other museums in the region and around the world.

However, it can be seen clearly that there is not enough staff in the field of conservation in Vietnam. Moreover, many areas in Vietnam are still very weak in terms of proficiency in foreign languages. Also, the ability of conservation staff to be in line with the requirements for international integration in museum development is insufficient.

Vietnam envisions having many modern museums in the future. In order to manage and operate those museums effectively, we need to develop human resources and equip them with the necessary skills and knowledge. In Vietnam, it has been confirmed that training them is necessary to address urgent and long-term problems and plans.

* Table 1: Distribution of Vietnam museums

No	Names	Northern Vietnam	Central Vietnam	Southern Vietnam	Total Museums	Notes
1	State museums	45	35	43	123	
2	Non-State museums	14	11	6	31	
3	Total	59	46	49	154	
4	Percentage (%)	38.3%	29.9%	31.8%	100%	

Assessment of the Current Situation of Human Resources in Vietnam Museums and the Field of Archaeology

In 2019, there were more than 3,000 persons working in Vietnam museums and the field of archaeology, including more than 1,800 people with university degrees and 200 people with postgraduate degrees. Over 50% of the museum staff had conservation-museum qualifications, about 4.5% had master's degrees, 1.2% doctoral degrees, and about 0.3% Associate Professor or Ph.D. degrees.

The current human resources are unevenly distributed, resulting in uneven operational efficiency among regions. Accordingly, the large museums located in the city centre have 70 to 90% of staff with university qualifications, while this rate for museums in rural areas is only 20 to 40%.

The number of human resources working in museums and the field of archaeology is not currently able to meet development requirements. In terms of quality, the museum system lacks people with a high level of expertise. For example, the National Museum of History has technical means for preserving archaeological artifacts of copper and ceramic; Ho Chi Minh Museum has the means for preserving paper documents, photographs, and fabrics; Vietnam Fine Arts Museum can preserve artworks of oil painting, lacquer, silk, etc.—but they lack real professionals in the field of object preservation. This situation has already existed for quite a long time.

Human resources working in the conservation field in Vietnam currently do not meet the working requirements of modern museums. Current staff possess only part of the specialized knowledge needed, and do not yet meet the international standards of knowledge, ability, and application of the necessary skills in a museum setting. Human resources in the contemporary context comprise the following: display design staff and relevant titles; scientific preservation staff; artifact and document conservation staff; building educational programs staff (currently mostly guides); marketing staff; project development staff, media-communication staff.

There are not many persons working as scientific experts or professional researchers in the conservation field in Vietnam. Vietnam is interested in experts and well-trained personnel in the conservation field to work in archives, heritage sites, and museums.

Human resources working in museums still lack the soft skills needed for effective communication, promoting teamwork and collective strength, and connecting with people through museum activities. The specialized sections of museums still lack methods for recognizing and evaluating artifacts, as well as in conserving and displaying museum objects. In addition, some people do not have English language proficiency, which makes it difficult for them to conduct research using documents from other countries and to take advantage of opportunities to learn and update their knowledge with the latest issues and new developments relating to museums.

Human resources involved in conservation need to have training in multi-disciplinary fields. In Vietnam, training institutions currently do not have any specialized training courses on conservation activities. What they have are mainly from conservation-related disciplines, such as cultural heritage, history, archaeology, ethnography, cultural studies, literature, folklore, foreign languages, fine arts, architecture, construction, and chemistry.

The conservation field in Vietnam now forms one of the aspects of museum studies being offered at two universities in Vietnam: Hanoi University of Culture in the North and Ho Chi Minh City University of Culture

in Southern Vietnam. Furthermore, human resources for conservation are also trained by other universities in related fields such as history, archaeology, heritage management, etc.

Concerning staff working at the museum, the staff have primarily trained themselves through on-the-job experience, and very few people are allowed to study in short-term or long-term courses. Although there have been many attempts to develop and train conservation staff, human resources for conservation tasks in Vietnam are still in a very low position and face many difficulties as compared to other countries in Southeast Asia.

In recent years, Vietnam has been involved in innovations in many fields, but human resources working in the field of museum and heritage conservation still have insecurities because of their slow development. Currently, Vietnam does not have a concrete strategy to train high-quality human resources for conservation work at heritage agencies, archival centres, and museums. For conservation specialization, the highest level comes from a university bachelor's degree. If an employee wants to study at a higher level such as a master's program, he or she must change to another equivalent field, for example, history, cultural management, or cultural studies.

The object collections will be promoted effectively in the future if the conservation staff have creative activities. It can be seen clearly that training human resources is necessary for Vietnam in the present day. For training, the following basic requirements are needed: general skills, heritage conservation skills, management skills, media information, and artifact management skills, as well as competence in regularly updating the latest achievements in conservation from around the world.

On the one hand, Vietnam is a developing country. According to a report in 2019, only 1,800 of 3,000 staff working in the conservation field had bachelor's degrees, and this is the highest-level qualification of conservation staff in Vietnam. Vietnam is aiming to increase the training quality and improve postgraduate qualifications. However, the conservation field in Vietnam does not have any postgraduate training and education. Therefore, investing in Vietnam is the right strategy to increase the training of staff working at conservation, museums and cultural heritage institutions. The staff should be sent to other universities outside Vietnam.

The percentage of conservation staff studying and undergoing training in conservation-archaeology courses at the postgraduate level needs to increase from 10 to 20%, especially, in the Mekong Delta region in Southern Vietnam. Human resources in conservation working at Vietnam museums are in urgent need of coordination and connection to help the development of conservation in Vietnam to at least meet the needs of preserving the country's heritage over the next 20 years.

** Table 2: Percentage of human resources working at Vietnam museums*

No	Names	Bachelor's	Master's	Ph.D.	Others	Total
1	Staff numbers	1,800	200	09	991	3000
2	Conservation – Museum degrees	1,800	00	00	00	1800
3	Other degrees	00	200	09	991	1200
4	Percentage (%)	60%	6.7%	0.3%	33%	100%

Conclusion

Vietnam's museum-archaeology system is considered the backbone of the national strategy for heritage conservation and promotion in the country. In this system, conservation plays a significant role in the maintenance and development of heritage collection values. Human resources are an indispensable element in the development of the museum system.

The present findings indicate the most common causes of limited human resources in Vietnam museums. Most museum staff were found to have bachelor's degrees. However, this educational background was found to offer little variation across disciplines. Hence, the training should continuously concentrate on the development of human resources, including the quantity and quality of staff for undertaking assigned tasks effectively. In the field of museums and archaeology in Vietnam, training human resources at the postgraduate level is a priority cooperative mission of local institutions.

The present findings indicate the most common causes of the limited human resource capacity of Vietnam to be (1) the pressure for collection preservation and pressure within conservation and area development, (2) the lack of conservators and archaeologists, (3) limited human and institutional capacity (4) the international integration of conservation.

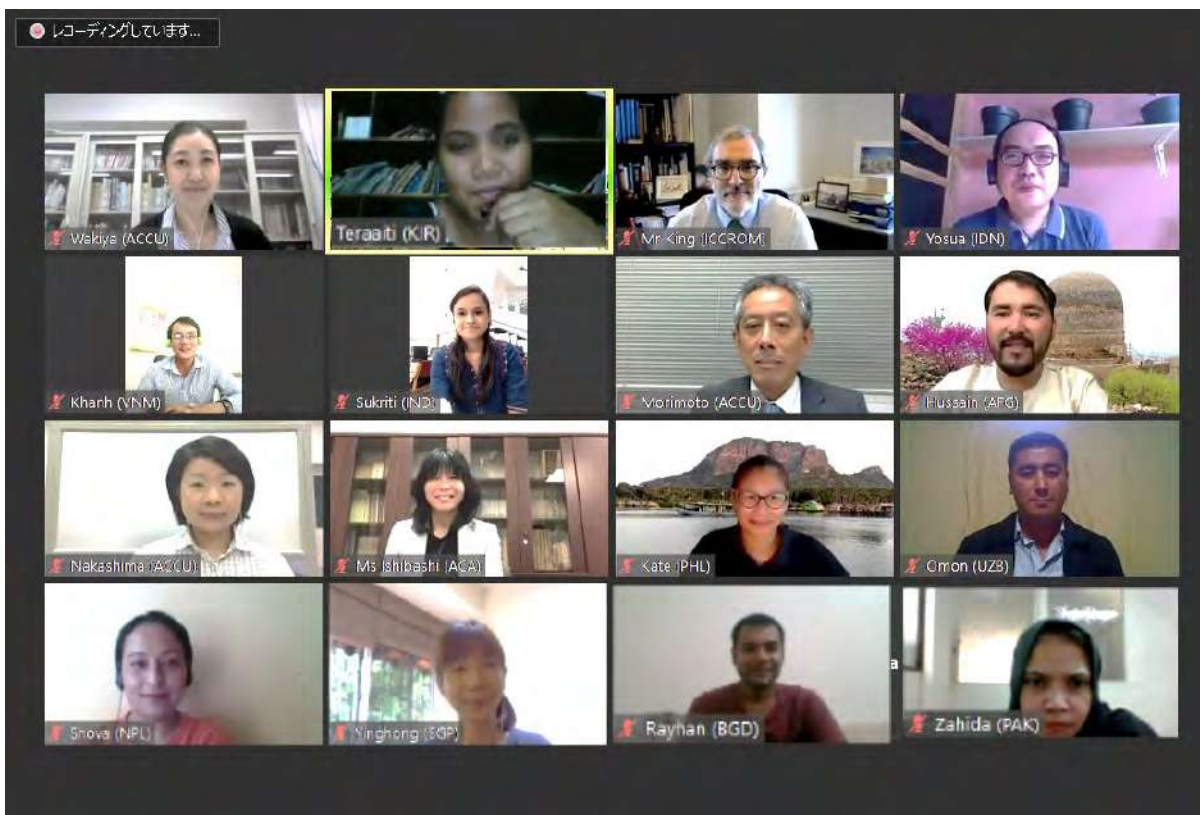
In summary, the demand for training human resources in conservation is huge in Vietnam, especially for postgraduate programs, because Vietnam does not yet provide higher education qualifications in this sector. In the development trend of the region, Vietnam is looking forward to cooperating with other countries in providing training in specialized conservation, archaeology, cultural heritage and museums at the postgraduate level. This will not only to provide opportunities for Vietnam but also establish connections with other nations for greater understanding, cultural exchange, and especially, the development of conservation human resources to serve the community in awareness-raising and contributing to the progress of countries and regions in the near future.

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II. Group Training Course

Final Reports



Final Report

Md. Morshed RAYHAN (Bangladesh)

The long-term action plans are:

1. Save and protect our cultural and archaeological heritage for future generations from further destruction.
2. Build skilled human resources in the field of archaeology to ensure an effective heritage protection practise and utilise our archaeological heritage.
3. Build institutional collaboration among universities and public and private organizations to adopt a scientific approach in the field of archaeological research.
4. Build a cultural heritage protection policy for Bangladesh.
5. Develop people-centric heritage management plan to protect the cultural and archaeological heritage as well as initiate projects to ensure the benefits of heritage to the local community.
6. Become a leader in the sector of archaeological conservation and heritage management and subsequently build a strong network with the national and international communities to uphold Bangladesh archaeology.
7. Work with Department of Archaeology and other heritage protection authorities, local governments, site managers, local communities and other stakeholders in order to support their conservation activities.
8. Conduct a detailed archaeological survey project in Bangladesh to ensure conservation of sites and monuments as well in situ preservation.
9. Conduct a Heritage Impact Assessment project at World Heritage Sites and other Archaeological sites of Bangladesh.

Short-term action plans are:

1. Report and share the training outcomes with the Bangladesh National Commission for UNESCO and Department of Archaeology regarding the completion of the Group Training Course.
2. Share the gained knowledge with my colleagues and students.
3. Make a team to practice the techniques learnt from the training to gain further skill on several technical aspects like photography, 3-D documentation and restoration and management of different artefacts.
4. Conduct field research projects and case studies where the obtained knowledge from the training could be implemented and publish the research outcomes in national and international journals.
5. Comilla, where my workplace is located is a city of historical importance. More than 50 ancient Buddhist settlements of the 7th to 12th century AD exist in this area that are listed in the tentative list. I will work with the Comilla Regional Office of Department of Archaeology, Local Government, Site Managers, Local Communities and Other Stakeholders to protect and prepare a management plan for the archaeological sites of the area.
6. Continue to interact and exchange information with ACCA after completion of each project initiated on the basis of training outcome.

2. Possible solutions for the challenges mentioned in the country report

The major challenges in Bangladesh archaeology are destruction of archaeological sites due to rapid urbanization, turning archaeological sites into cultivable land, building new architecture over the ancient

remains, reuse of ancient construction materials by local people, lack of public awareness, improper visitor management plans, climate change effects etc. In many cases the techniques and methods of archaeological research are not so much scientific. Management, storage and treatment of excavated artefacts also lacks in proper scientific approach. Several sections of the 'Antiquity Act' are outdated regarding protection of the archaeological heritage of Bangladesh.

The Public plays a significant role in the protection of cultural heritage. It is important to make aware the public about the significance of archaeological heritage and utilise our archaeological heritage, bringing the benefits of heritage to the local community. This could be achieved by implementation of people-centric heritage management plans.

Proper documentation is key to archaeological research. Photographic documentation is an integral part of archaeological research. The techniques of shooting high quality photographs can be implemented here in our country. 3-D and digital documentation can help us keep records of archaeological sites, monuments and other artefacts.

Cultural Properties Protection is closely dependent on legislative protection measures. The legal system of Japan regarding cultural properties is one of the best practice guidelines to define, protect and manage archaeological heritage. Bangladesh needs an amendment in the 'Antiquities Act' that could be done after reviewing several international legal systems including Japan's.

Protection of cultural heritage depends on a systemic archaeological research program and Japan sets an example of efficient and effective archaeological research. The techniques and methods applied in the process of identification of sites, excavation, recording of features, analysis of excavated data, report publication and projects to utilise the archaeological sites could be implemented in any area of the world. Adopting these techniques in practice would certainly help Bangladesh archaeology.

Lifting techniques of fragile artefacts from the excavation site is very much effective for artefact management. Techniques to temporarily increase the strength of artefacts using different resins or other materials is an effective way to collect artefacts with good condition. This methodology will also be beneficial to the collection of artefacts during excavation in our country.

The practice of washing excavated artefacts, joining and reconstructing their shape, recording and storing is carried out in a classy manner using various scientific tools and techniques. This procedure will certainly benefit any country especially Bangladesh in the process of artefact management.

Being a tropical country, heavy rainfall, flood, and fluctuation of temperature during day and night time affects our cultural heritage. The impact of Global climate change also plays a role in deteriorating cultural and archaeological properties of Bangladesh. Though Bangladesh is not a land of frequent earthquakes like Japan, the case examples of utilisation of buried cultural properties are very much encouraging for us to face natural disaster challenges and devise new techniques to protect our cultural heritage from climatic issues.

Final Report

Sukriti GUPTA (India)

The training programme on Cultural Heritage Protection not just dealt with the investigation, preservation and management of archaeological sites and artefacts but also gave a general idea of cultural Heritage protection in Japan. It was indeed a learning opportunity to understand the practice modes and methods of the country and imbibe such best practices in our regions too.

There are a lot of things that should ideally be done in either the regions or worldwide but are practically not feasible due to several constraints and limitations. However, with my understanding and learning from the course, here are certain short-term actions that can be initiated and can be followed by long term plans which would deal with cultural Heritage Protection in my country.

SHORT-TERM PLANS

Introducing and incorporating subsidy schemes and incentive plans for general public

In order to generate interest in the initial phase, introduction of subsidy schemes and various incentive plans to not only hand over important cultural property to the govt. and the concerned authorities but also encourage them to maintain and manage the cultural properties, tangible and intangible both.

We do have certain schemes for heritage property owners, where they are encouraged to manage their properties with the help of financial aid by the govt. but that needs to be expanded more. Given the opportunity of working with many live sites, we can suggest certain schemes. After assessing the response, we can come up with standardised practices.

Improving the “Cultural Quality” and shifting the approach from ‘Preservation’ to ‘Utilization’

The aspect of focusing on Cultural property’s Utilisation must be focused on rather than just its preservation and protection. Not only will this approach give a sense of connection to the people associated with it, but will also make it more relevant with the changing times increasing the exposure of its value to more and more people.

Self–Evaluation of the conservation and management practices

It is really essential to keep updating the practice techniques with the changing times and assess the techniques and processes simultaneously. We do have practice models where we carry out impact assessments before commencement of the work and also evaluation of the processes once it is finished up to a certain period of time, but this needs to be mainstreamed and carried out everywhere.

Training, Awareness and Capacity Building of Stakeholders and Heritage Professionals

To make the heritage relevant, it is essential to encourage public participation in not only the protection of cultural properties, but also in decisions regarding their protection by govt. In order to do that, the people should be sensitised of the responsibility and made aware about their role in heritage protection.

Likewise, heritage protection is a multidisciplinary field, where a lot of people from different disciplines

are involved for safeguarding the heritage. Thus, it becomes necessary for each professional to have a multidisciplinary approach to do that and there should be training courses to impart that knowledge and seek better workability as well as co-ordination.

LONG -TERM PLANS

Formulation of a Cultural Policy and laws for heritage protection

We have Conservation Policy in place which elaborates on a certain set of rules but is based on the ideology of the archaeological survey of India which was laid down by British. It is very monument centric and does not cater to cultural property protection holistically. The laws are different for different states and cities and there is no coinciding point for them. Thus, there needs to be a national cultural policy that overcomes problems like these and a standardised set of rules and regulations like in the case of Japan.

Proper Co-ordination between people, managerial bodies and the Govt.

Once, the local context of heritage and cultural properties protection is in place and is taken up by the local govt. and people accordingly, there will be a proper and systematic interstate work flow exchange.

Seeking partnerships from different countries

In the current scenario, most of the countries engage in knowledge exchange which needs to be encouraged more. It is essential to exchange ideas and views in the fraternity which gives us a better understanding about different situations. We might be even able to build up an organisation or a community which can actually take actions in cases where heritage is at stake rather than just formulation of guidelines.

POSSIBLE SOLUTIONS

Practice of outdated practice methods can be overcome by constant upgradation of working methods which can be achieved by exposure to practice of other country's professionals. For this, such training programmes are a boon and shall be encouraged more and for different disciplines.

Training and propagation of heritage awareness at local level will help fill the gap in the longer run. Cultural heritage has been created by people for themselves. One can say heritage to be "of" the people, "for" the people and "by" the people. Thus, it becomes essential to not only sensitize but to educate the people associated, if we aspire to conserve these archaeological and cultural sites. In doing so, we are not only addressing to the immediate need of catering to these sites at the local level but also will be able to create a society where people will be more sympathetic to the heritage surrounding them and will take measures accordingly to safeguard it. The local stakeholders are much more aware of the problems and requirements pertaining to the area and would be the best judge of the scenario.

This will thereby reduce the efforts taken for safeguarding and will help in better management of the sites as well. Along with this, a strong communication and co-ordination between concerned departments, civil bodies, and communities is required for successful implementation of the measures.

Final Test Format

Yosua Adrian PASARIBU (Indonesia)

1. Long-term and short-term action plans developed from the training outcomes.

In the first week of this training, I was promoted to Head of the National Tangible Cultural Heritage Designation Team. I am happy because I can use all the subjects in this training in my long-term and short-term action plans in this new position. My long-term action plans are to create a proper and ideal process of designation of National Tangible Cultural Heritage such as the documentation of the designated objects and their management plans. I will use the People-Centred Approach and the nature-culture interlinkages in the National Cultural Heritage designation process. The knowledge about how Japan manages their Cultural Properties is very useful to me in my long-term action plans about National Cultural Heritage management in Indonesia, especially the Council of Cultural Affairs and its subdivision of Cultural Properties, which investigates important issues concerning preservation and utilisation of cultural properties as an advisory body for the Minister of Education, Culture, Sports, Science and Technology. I think Indonesia should have the same advisory body in the future.

I'm working in the Directorate of Cultural Safeguarding, Directorate General of Culture, Ministry of Education and Culture, so I can evaluate how we can do our best to protect and utilize our cultural heritages. I will try to cooperate better with owners of cultural heritages, local communities, local governments, and the private sector in the broadest possible spectrum in the preservation and utilization of Indonesian Cultural Heritages. The philosophy of presenting Cultural Properties as scientifically accurately as can be to the public in Cultural Properties management in Japan is very attractive to me. Indonesia is a very big country and has been decentralized for twenty years, with 34 provinces and 514 districts/cities. Although we have our relatively new Law for Cultural Heritage Preservation (2010), it is challenging to implement the law to so many autonomous districts/cities. There are many districts/cities which already have their own regulations according to the National Law about Cultural Heritage Preservation, and I will try my best to communicate and create productive coordination with local governments in terms of cultural heritage preservation and utilization. It can be in the form of national training for their young professionals like this ACCU Nara training.

My short-term action plans are to make documentation of national collections in the state gallery and museums in Jakarta next month and make a designation plan of the Old City of Lasem in Rembang, Central Java as a National Cultural Heritage Region. I will cooperate with gallery and museum curators on making photographs of the collections with the new knowledge from this training. I have already been cooperating with the district government of Rembang and Lasem local communities since last year about its destination as a National Cultural Heritage Region. The district's law about preservation of Old City of Lasem will be launched at the end of this year. We will be working for the next months to create its management plans with new knowledge from this training. I am planning to coordinate with stake holders in Misool, Raja Ampat, West Papua about its rock art prehistoric landscape designation as a National Cultural Heritage Region next year. I will use the nature-culture interlinkages approaches there because Misool is a protected marine area.



Figure 1: Old Town of Lasem Delineation Plan



Figure 2: Cu An Kiong Temple, 18th C, Lasem

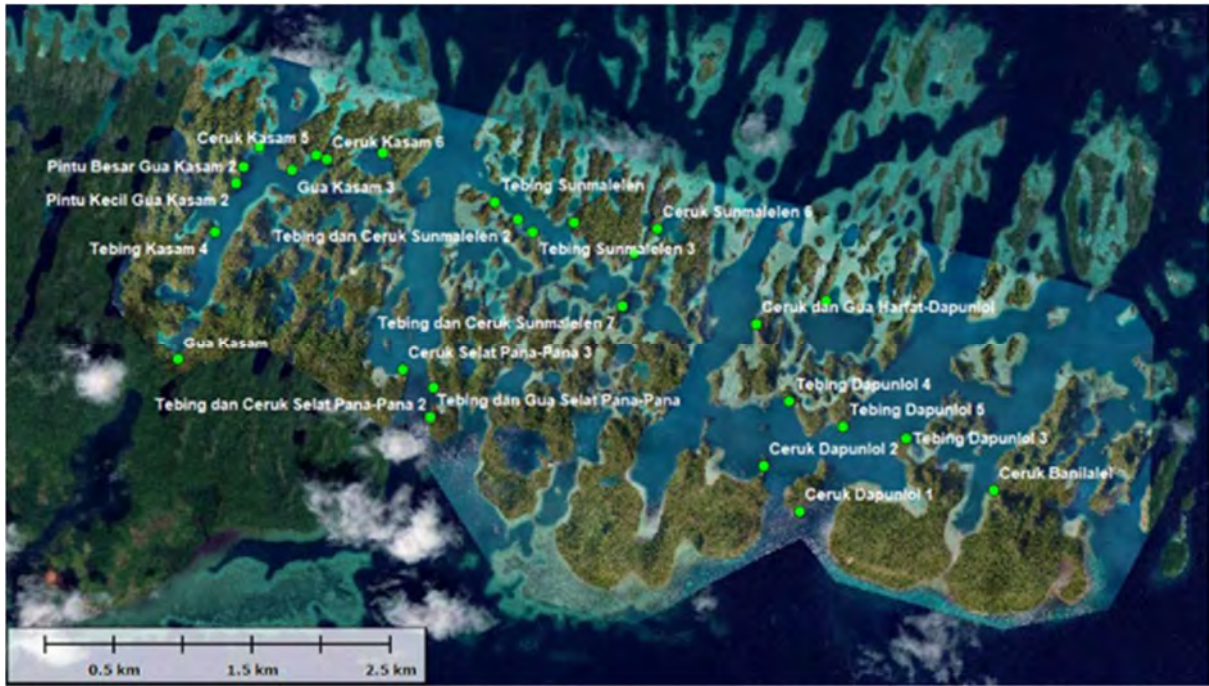


Figure 3: Rock Art Sites in Central Misool, Raja Ampat, West Papua



Figure 4: Depiction of Tuna (*Thunnus*) in Prehistoric Rock Art Region of Misool, Raja Ampat, West Papua

2. Possible solutions for the challenges mentioned in the country report

I mentioned about urbanisation and development pressure as a challenge in my country report. I did mention too that National Government is working hard to coordinate development in many sectors with the One Map Policy, which is done to make better decisions on planning development in cities which have cultural and natural preservation assets. As I have learned in this course, I am also working on the National Development Project on Old City of Lasem. This project is a collaboration between the Ministry of Public Works and Housing, Ministry of Education and Culture, Central Java Province Government, Rembang District Government, related experts, local communities and the private sector. The approach of this project has been harmonious with the People-Centred Approach by ICCROM. I will try my best to implement and communicate what I have learned in this course in the project. I think communication is the key in Cultural Heritage Management in a big and decentralized country like in the Indonesian case.

I am really thankful that I could participate in this course, especially in the discussion about philosophies behind Cultural Properties Preservation and Utilisation. In Indonesia, Central Government is periodically doing the same courses for local governments or private professionals in Cultural Heritage sector, but from my experience, we are so rarely speaking about the philosophy behind the preservation and utilisation. I don't mean that technical aspects are not important, they are very important, but with so many people from many autonomous local governments or companies, it is more important to discuss about why we are preserving and utilise cultural heritages. It will be more productive to Indonesia, if the young professionals in cultural heritage sectors can have the same levels of knowledge and understanding about current national and global laws, situation, and issues of cultural heritage protection. These young professionals in the future can inform and persuade their local governments and stake holders to preserve and utilise their cultural heritages in the proper and desired manners.

I mentioned about the preservation, management, and utilisation of private-owned heritage buildings/sites in large amounts of land (regions) in urban/suburban areas as the most challenging issue of archaeological sites in Indonesia. We are now struggling to do better coordination with Local Governments and building/landowners to work in preservation, conservation, and management of heritage structures, buildings, or sites in archaeological landscapes. I learned in this lecture about management of Cultural Properties in Japan, and how National and Prefecture Government help to fund private-owned Cultural Properties preservation and utilisation before a Managerial Body is formed. We still don't have specific regulations about this government support of private-owned Cultural Heritage, but I realised that this is the best possible solution for National Heritage preservation and utilisation challenges in Indonesia. I will work on this issue in the long-term action plans.

Final Report

Teraaiti EUTA (Kiribati)

1. Long-term and short-term action plans developed from the training outcomes

Objective: Aim to preserve and manage the archaeological sites in Kiribati that are been affected by human and disaster activities

Strategies	Activities	Responsible	Duration	Indicators
Ratification of the Convention related to the conservation and management of archaeological sites	1. Provide a draft information paper to the Administration seeking Cabinet decision	Culture and Museum Division	1-2 years	At least one Convention ratified for the protection and conservation of archaeological sites
Improving staff's capacity	<ul style="list-style-type: none"> • Provide training to staff on the handling, excavating, appropriate methods, etc • Identifying baseline information and preparatory work such as developing appropriate research procedures and documentation tools (camera, sound recorder, etc 	Culture and Museum staff	6 months	Number of staff trained
Stock-taking number of heritage sites that are endangered	<ol style="list-style-type: none"> 1. Review cultural mapping reports 2. Categorise number of TCH & ICH 3. Heritage impact assessment 4. Create and update the database record 	Culture and Museum Division	1-2 years	The number of heritage sites that are endangered
Development Regulations and Policies for the protection and management of archaeological sites	<ol style="list-style-type: none"> 1. Meetings with stakeholders both internal and external to seek their technical advice on their areas 2. Research on relevant policies 3. Inviting an International or Local Adviser if necessary to develop the National Policy 	Culture and Museum and other relevant Ministries and island councils	2-4 years	At least a policy or regulation developed within the timeframe given

Implementation of the initiative activity or project	<ol style="list-style-type: none"> 1. Conduct meetings 2. Applying a bottom-up approach by involving people in the decision making 3. Provide a report 4. Seek funding support if necessary 	Culture and Museum Division and other relevant parties or stakeholders	1-2 years	At least 2 years given to finalise procedures for the implementation of the activity/project
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2. Possible solutions for the challenges mentioned in the country report

Possible solutions are:

1. Signing of Conventions related to the conservation and management of archaeological sites
2. Development of Regulations and Policies for the protection and conservation of archaeological sites
3. Strengthening our partnership with International and Regional Organizations for the protection and conservation of archaeological sites.

Final Test Format

Narmandakh NARMANDAKH (Mongolia)

Long-term and short-term action plans developed from the training outcomes

- This training workshop gave us a great opportunity to learn about the most advanced technology and activities, which are being applied in the conservation and restoration of cultural heritage. I believe that this experience obtained from the training workshop will be used in the conservation and restoration activities of cultural heritage in Mongolia.
- I have to do the following work:
My work sector is restoration of archaeological artifacts. I want to get familiarised with conservation treatment, restoration techniques and conservation science, especially on the organic objects of conservation and restoration techniques with detailed studies for each category, including detailed comparative studies, analysis, summaries and comments for each content.

Future plan

- Resource and theory; To translate the theoretical and methodological areas into Mongolian language to develop our country's research methodology
- Registration of excavation and storage artifacts
- Get special permission for conservation treatment of CH
- To develop human resources/prepare students with knowledge and laboratory practice
- First, I have to obtain analysis equipment and a simple microscope
- Very systematic, non-damaging and not expensive methods for conservation and preservation of cultural heritage

Possible solutions for the challenges mentioned in the country report

- The successful completion of the Programme would have a significant impact for Mongolia for accuracy and developing conservation treatment, restoration techniques, and conservation science.
- Cultural heritage is important to our culture and we are introducing laws, and correct information for legal people. We have to work together with museums and institute organisation.
- We have to prepare professional researchers. There is a need to protect and disseminate cultural heritage. Our government's focus on training human resources and budgeting for the protection of cultural heritage is a priority.

Final Report

Shova MAHARJAN (Nepal)

1. Long-term and short-term action plans developed from the training outcomes

The Group Training course on cultural heritage protection in Asia-Pacific region for young professionals was run from 2nd September to 1st October 2020. This course was conducted online (self-paced learning) with zoom sessions. The curriculum of this course contains very comprehensive basic knowledge and techniques in the field of investigation, preservation and management of archaeological sites.

I am very happy to be a part of this training course representing Nepal. Many archaeological sites, cultural heritages, and world heritage sites are the pride of Nepal, where a lot of conservation, exploration and excavation works are going on. After participation in this training programme. I am enlightened with broad knowledge in different dimensions. That knowledge can be directly applied in some of my projects while in some cases special guidance and planning may be essential.

In a short period of time, with proper co-ordination with professionals and departments, I think I can use my training knowledge and initiate short-term action plans to contribute in archaeological conservation work.

- Firstly, **awareness** of conservation work is essential. In the present day, for archaeological excavation and conservation work, locals should be well communicated with. We should arrange the meeting between the local communities. We must make them clear about what type of work we are doing and for what purpose and its benefit locally and for the whole nation. This will obviously ease our work and gain public participation.
- In archaeological sites findings are recorded, documented, reports are written and books are published. In order to let it be known by all communities excavated sites should not be filled back in all cases. According to importance, sites should be exposed with conservation.



Fig.1: Trenches showing stone wall at Makawanpur



Fig.2: Back filling of trench after documentation

- **Documentation** plays a great role in conservation; hence methods of documentation can be improved with detailed drawings, and photographic techniques learnt in different lectures of this course.
- For the conservation works in Nepal traditional techniques are used but both traditional and modern **technology** can be used with proper justification from scenarios of global practices.

- **Presentation** of sites is lacking in our case, which plays a great role so whether either surface presentation or 3D presentation is required can be decided according to the site and its value.
- Excavation works, methods, findings of artifacts, recording of data, context numbering, and photography can be **upgraded** with the knowledge shared in ACCU training program.
- **Environment control** for storage of artifacts, registration methods, and controlling deterioration of metal artifacts in museums can be upgraded with proper discussion with the staffs and heads of department and the concerned working professionals.
- Historic Sites can be managed with increasing relationships between communities, their engagement, supervision and working **together**.

After the training course I realised various important things which should be considered in our planning work for heritage conservation, which needs deep study and research work to be prepared. It cannot be implemented immediately. But we need to develop long term action plans.

- **People centric approach** in cultural heritage is a very modern approach in my opinion, as conventional (material centric) approach is still used in our case. We do excavations, record them and cover them with report publication. But all this conservation is for people of today and future generations so all conservation work should be people centric and people should benefit from practices and places. It will develop greater ownership and develop intercultural understanding.
- Linking heritage to **sustainability** is a very appropriate approach in the present day. In our thinking heritage is a gift of our ancestors, and should be transferred as it is to the future. So, protection is essential and if that heritage can be linked to sustainability it will be greater assets for us. In Nepal mostly temples are a type of sustainable in a way, as different rituals are related with them, different types of worship are carried out. But in the case of archaeological sites as well sustainability should be noted so that proper planning for it will be needed.
- **Law** for the protection of cultural properties and maintenance management is very essential in the present day for systematic development. Either archaeological sites or cultural heritage sites should be preserved with proper laws and guidelines.
- Formulation of a **Master plan** for the maintenance improvement of historic sites is guidance for the protection work. If individual sites are preserved without concern for the surroundings, heritage will lose its identity. So, focusing on holistic approach a conservation Master plan should be developed.
- **Advanced new technologies**, equipment, recording systems and digital techniques should be introduced in future as a long-term approach.

2. Possible solutions for the challenges mentioned in the country report

In Nepal, many archaeological sites belonging to different periods and cultures may be identified. Due to lack of proper exploration and detailed study, accurate numbers of archaeological sites are not known yet. Some are excavated, some are conserved while some are still unknown yet. My country is facing a lot of problems in cultural heritage protection.

As I have mentioned some of the problems in the country report that we are facing in protection and excavation work. After the participation in this training course of ACCU 2020, I think all the problems

have some solutions.

- Archaeological sites are in degrading condition due to encroachment on land, extraction of stone bricks, new construction of houses, fishery ponds and new roads over sites, and natural disasters. These problems are creating challenges for protection of sites. In my opinion these problems can be solved by formulation of laws and guidelines for protection of cultural properties, as we have not formulated yet. Hence protection law will guide to proper protection and talk about encroachment and new construction on sites. Similarly, conservation awareness of communities, engagement of people in activities and proper formulation of plans targeting community beneficiaries will also help in proper work. Disaster prevention measures also need to be introduced.
- Human resources for sites can be managed by proper training work nationally or internationally, sharing of knowledge among professionals, continuing practice and focus on research work.
- Management of sites plays a great role. For proper management, self-evaluation is needed with basic information of a site, then formulation of plan is needed. According to the heritage site preservation, conservation, and maintenance works are carried out with preservation methods, operation and improvement of management framework, information sharing and co-ordination with concerned communities or authorities, findings from excavations are stored and sent to laboratories, special artefacts are maintained and exhibited in museums after conservation.



Fig.3: Brick well as findings in Panditpur excavation



Fig.4: Sectional elevation of Panditpur site



Fig.5: Terracotta figurine from Panditpur



Fig.6: Terracotta pottery at Panditpur

After earthquake of 2015, Nepal government is much focused on monument conservation then archaeological conservation. All the cultural heritage is conserved in its original form following conservation guidelines of 2015. The value and authenticity of monuments are tried to be maintained as much as possible with use of traditional technology and materials.



Fig7: Chilanco stupa damaged during earthquake 2015



Fig.8: Damaged Shakyamuni Buddha during earthquake



Fig.9: Bihar during earthquake

In conclusion, this ACCU 2020 training program helps me to know about global trends of cultural heritage protection. In lectures we have seen different conservation projects, their presentation, management and utilisation. Even the example of Hiroshima jo-castle shifted from one place to another is remarkable. Hence maintenance policy and management of historic sites seems very effective in Japan. Cyclic model, management framework of historic sites with detailed documentation, and formulation of master plan with heritage impact assessment of historic sites are the key points of this training.

Final Report

Zahida QUADRI (Pakistan)

The ACCU Nara Training program, lectures, and topics are very useful and informative. Most of the topics addressed today's needs and current issues that we are facing while maintaining cultural properties. Japan has a very organized and systematic approach to heritage. After attending this course, I realized that limited resources are not a big challenge, but the lack of a systematic approach. Besides, this has given a few opportunities for bringing together professionals from Asian countries. The training was a good opportunity to promote this interaction, which will help to develop future heritage partnerships in the region.

Long term action plan

Government-Private Partnership

In Pakistan, there is no practice to involve/approach the private sector/institutions/ organizations for heritage or cultural property management. I am highly impressed with the role of the Gangoji Institute for Research of Cultural Property and I would like to introduce such approaches in my country as well.

Making it More People-centred

The participation of community members in the heritage conservation project is another best practice that I am interested to initiate in our region. We tried to establish links between people and culture at the World Heritage Site of Makli but that was on a small scale.

Salvage Archaeology/Excavation Practice

The concept of Salvage archaeology/excavation for documentation and preservation of buried cultural property is not so common in Pakistan. There are many sites in Sindh even, which we have lost in the name of development projects. One I have mentioned, The Bahria Town Project that has bulldozed the prehistoric past of Karachi.

Subsidies or Maintenance Assistance

This is very important to provide subsidies and maintenance assistance to the owners of cultural properties. As we cannot offer any to them, therefore they are afraid of having their cultural property listed on Protected Heritage List. They try their level best to demolish heritage secretly.

Sustainable Heritage Management

The first and the last lecture of the course were very much focused on the role of Heritage in sustaining local communities: not only reinforcing local identity, traditions, and practices but also bringing economic benefits through well-managed tourism. This approach has been implemented in KPK but not in the rest of the provinces. [Peshawar Heritage Trail project information is publicly available on the internet.]

Short term action plan

A few important strategies that are easy to implement and adopt at the initial stage:

- Use of self-evaluation sheet should be mandatory for officers in the field, the soil colour chartbook is very innovative for both work and research purpose.
- Supportive conservation or preservation plans should be part of development plans.
- The reconstruction of the Goryokaku fort from an old archival photo is an impressive success story that can be implemented.
- The thread of supervision of cultural property at a town, district, and city-level is effective to not only control vandalism but it will open avenues for jobs. We have a job problem in this sector, this framework will help us to accommodate young professionals.

Possible solutions for the challenges mentioned in the country report

1. Vandalism

It is possible to involve officers of concerned departments and human resource at the town, district, and city level to protect cultural property from vandalism. It will also open avenues for jobs. We have a serious problem with jobs in this sector, this framework will help us to accommodate young professionals.

2. Lack of Research and Laboratory Analysis

It is possible to seek help from universities and the private sector in research and development. It gives the public and private institutions a sense of ownership toward their heritage. It again will be helpful to create more avenues for students and motivates people to study and take part in this field.

3. Trained Staff

Staff training is possible through lectures and sample videos, this I have learned from this online course.

Final Report

Kristine Kate A. LIM (Philippines)

1. Long-term and short-term action plans developed from the training outcomes

Short term

What you have to do

As an archipelagic nation located in the tropics, the Philippines heritage sites and materials are vulnerable to varying disasters; anthropogenic and naturally related. While different threats place such valuable resources at risk, there are many layers of challenges one must navigate in order to address their proper care and management. At the moment, while going over this course, I realized that there are frameworks, approaches, and strategies which I can explore further that are aligned with the common issues we face in the region. In is in this respect that I have to study further and apply these techniques I learned, for ensuring the proper documentation of artifacts and in monitoring archaeological sites I work at. Furthermore, I can also do this by having to engage local stakeholders I have worked with and encouraging discussions that would lead us to knowing community perceptions on the importance and the status of certain heritage sites and materials.

Given this time of pandemic, we can still somehow do this remotely by utilizing the internet and digitally documenting local cultural properties, at least for those that have access and are open to doing this. In my workplace alone, we have numerous artifacts that need to be photographed and must be reaccessioned for conservation, research, and teaching purposes. In the meantime, I also have to present to my immediate colleagues the outcome of this training such that I will be able to share my learning and solicit further interaction and collaborative action plans which we can also plan in the short and long term.

What you want to do

In my current Ph.D. research, I aim to develop and conduct a vulnerability assessment of maritime cultural landscapes to climatic and geohazards and anthropogenic activities in the Philippines. As archaeologists, we face not just the challenge of locating sites of interest but at the same time, loss of archaeological information beneficial to present communities and future generations. From the lectures and sharing done, I want to incorporate these things learned in my study and be able to test their applicability in the field. These include taking into account differing values of heritage sites and materials and by employing people-centred approach in conservation management planning and work. When it comes to documentation strategies, at the moment while we cannot go out in the field, I can focus on rearranging artefacts and making a more systemic approach in photographing important findings.

What you can do

While we utilize our community quarantine by working at home, I will review the lessons done and see how I can organize some of my colleagues to share this experience and brainstorm on possible archaeological conservation management activities and monitoring remotely. More so, I can also start building a database of resources (written and network organizations) to refer to about this.

Long term

What you have to do

My key take-away from what I have learned in Japan's bureaucracy is the need for appropriate policies and clear and detailed guidelines on the proper treatment of cultural properties. In this regard, I have to continuously lobby and engage our archaeological community to strengthen rules and regulations, especially in a system like in the Philippines where the Cultural Heritage Law is relatively new (just a decade old) and current assessment points are just coming up. As a community, we should be able to gather the support of advocates directly or indirectly working in our field and by simply examining the significance of these sites and materials for better care and management.

What you want to do

I want to be able to map and carry out a full-blown assessment of archaeological sites in the Philippines. In doing such, I want to be able to incorporate and strengthen impact assessments into disaster risk reduction management plans. More so, I also want to develop tourism management plans that consider the technical aspect of archaeological sites and materials.

What you can do

As I gain more knowledge and experience, I can start building a network and partnership of professionals and local community stakeholders that work on archaeological sites documentation, conservation, and management.

2. Possible solutions for the challenges mentioned in the country report

Looking back at my country report and the knowledge I gained in this course, while the national law on cultural heritage is just taking place, I, together with my colleagues and heritage advocates can work on localised policies and guidelines to safeguard, document, and manage archaeological sites and materials. As demonstrated in Japan and the sharing of my other classmates, there is so much room for improvement in how much we communicate with the public and apply existing strategies to better protect our cultural properties. By constantly engaging with other people, we may also adopt and learn from good or best practices in this line of work.

Transparency in work and communication are important aspects in the heritage field such that it directly touches someone's perception in life. The importance of communicating and including different people in the archaeological work has been able to demonstrate how research, conservation, and management work can be better than by just interpreting one's findings in the comforts of one's immediate circle.

The format of ACCU and ICCROM's capacity building is something that transforms the heritage field by building on the strengths of us professionals so that we may be able to involve and connect to varying stakeholders towards the same cause or aim. Although I emphasized in my report back then the need to develop specific assessment methods and collect baseline data, I realized that this is just a short-term objective and should not be the primary and end goal. By considering or creating value of archaeological heritage for the living communities, we may be able contribute for the overall wellbeing of a society that has more lasting impact for the future generations.

Final Report

Yinghong CAI (Singapore)

The 2020 online training programme on “Investigation, Preservation and Management of Archaeological Sites” organised by ACCU Nara has provided me with opportunities to learn about cultural heritage management systems in Japan and in other parts of the world.

Though the course is anchored by the topic and specificities of archaeological heritage management, it has highlighted the crucial need to plan and manage archaeological heritage within the broader context of cultural heritage management and sustainable development. The opening and closing lectures reiterated the global trends and paradigm shift in cultural heritage protection – from what had been an experts-driven approach focusing on material culture (e.g. monuments, structures, artefacts) to a values-based and people-centred approach. This is an important point for heritage professionals to constantly keep in mind.

The specificities of archaeological heritage management were also explained in detail through the course. This involved insights into the cultural heritage protection system in Japan, technicalities related to the research and documentation of archaeological features and archaeological artefacts, as well as the management and utilisation of archaeological heritage.

Short-Term Plans

i. Sharing and Dissemination of Learning Points

I plan to share the key learning points from this online training course with my immediate colleagues working on archaeological heritage and heritage site management, and to cascade concepts and approaches to relevant teams.

The details would help to better inform us on archaeological processes, techniques and current trends, which would be useful in improving our work on cultural heritage management.

ii. Promoting use of Digital Tools in Archaeology Projects

The utilisation of digital tools for heritage documentation, such as GPR, Lidar and the Structure from Motion – Multi View Stereo (SfM-MVS) mentioned in the lectures, is an area that could be further explored in the conduct of our archaeological projects. These digital documentation techniques have not been sufficiently utilised in our current projects, and may contribute to greater efficiency in the research and documentation of future archaeological heritage works. Nonetheless, this would also depend on the availability of sufficient expertise in local industries to advise on and implement these digital documentation techniques for the purpose of archaeology projects.

iii. Refining Archaeological Protection Frameworks

The legislative framework on the “Law for Protection for Buried Cultural Properties” in Japan included mention of articles relating to archaeological excavation, discovery of remains in various situations, reinforcement and handling of excavated artefacts. The details in Japan’s framework have demonstrated

that archaeological heritage protection is a complex process with multiple stages and sub-stages, involving coordination with non-heritage agencies such as land planning authorities, civil engineering teams, the police, private land owners and private developers. From these details, I note that processes for coordination, administration and consultations will have to be carefully worked through with multiple stakeholders.

The legislative framework and articles are useful points of references for me – to contribute as learning references when being involved in the review and refinement of archaeological heritage protection framework in Singapore.

Long-Term Plans

i. Promoting Interest in Archaeological Heritage Management

The online course and discussions have highlighted that archaeological heritage management involves specialised techniques and there are a wide range of professionals (archaeologists, researchers, material specialists, specialised institutions, heritage site managers, heritage administrators, conservators, curators etc.) required to oversee, support and implement the different stages of documentation, research, conservation and utilisation of archaeological heritage. In the context of Singapore, the activation of such a spectrum of manpower and resourcing would not be possible if there is no sufficient awareness and interest in the protection of archaeological heritage.

Hence, the ongoing and long-term agenda would be to raise awareness on archaeology in Singapore and to cultivate interest, so as to continue building up a community to protect and manage archaeological heritage in Singapore.

ii. Enhancing planning frameworks to integrate heritage with Sustainable Development

The lecturers in this course have reiterated the need to plan and manage archaeological heritage within a wider context, to bring benefits to society and contribute towards sustainable development.

This would similarly be a long-term objective in Singapore, to devise approaches to integrate archaeological heritage into planning and development, and to formulate strategic heritage plans that can contribute towards Sustainable Development Goals.

Possible Solutions

i. Building Archaeological Capacities

There had been reiterations throughout the course on the importance of enhancing public understanding and providing access to outcomes of archaeological heritage work, as a way to build interest. This would be an important first step to grow the community of archaeological heritage personnel keen to contribute towards these protection efforts.

The course has also provided access to the global archaeological heritage management network, as well as contacts from institutions involved in training and capacity-building. These contacts could potentially be tapped upon for future capacity-building efforts in Singapore, to grow local archaeological capacities and skill-sets.

ii. Enhancing Archaeological Data Management

The meticulous processes for post-excavation works, including cleaning, sorting, labelling, registration and storage conducted by dedicated professionals were elaborated in detail in the lecture by NNRICP.

In Singapore, there would similarly need to be dedicated efforts and resources put into managing these archaeological records, to make the data accessible to future personnel. The use of digital tools and digital records will be explored in greater detail.

iii. Integrated Heritage Planning

As highlighted in the course, archaeological heritage needs to be planned and managed within the broader context of cultural heritage management. The lectures have illustrated that archaeological heritage should not be examined in silos, as there are often close connections with living heritage and communities related to the site. A more people-centred approach would need to be explored in archaeological projects, to ensure that the archaeological works can bring benefits to society.

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Acknowledgements

I would like to thank ACCU Nara for the opportunity to participate in this online course, and for the planning team's efforts taken in coordinating and administering the online programme throughout the

COVID pandemic. I would also like to thank the various course lecturers for delivering the videos, and Dr Gamini Wijesuriya and Dr Joseph King for the insightful sessions conducted on Zoom. I am glad to be able to virtually meet the course participants from around the world, and hope that there could be opportunities next time to meet and discuss in person.

Final Test Format

K.G. Mahinda Karunaratna (Sri Lanka)

The Group Training Course on Cultural Heritage Management Protection in the Asia Pacific Region - Investigation, Preservation, and Management of Archaeological sites that was held in 02 September to 1 October 2020 was very helpful to improve my knowledge on the above themes.

I am working for the Archaeological Exploration branch of Regional office (Central), Department of Archaeology, Sri Lanka. My main responsibility (duty) is recording (documentation) the movable artefacts of the Central Province. Describing, drawing, photographing, storing and preventive conserving are some activities of the documentation. This online course was very relevant to my subject. Therefore, this course was facilitated to develop my knowledge on artefacts documentation.

My other duties are participation in the archaeological explorations (terrestrial) and underwater archaeological explorations and excavations all over the Island, recording and registering new archaeological sites in the Central Province, carrying out the investigations on treasure hunting cases and AIAs in the region and law and legal activities on movable and immovable artefacts and monuments in the region. According to my duties at the Department of Archaeology; this Group Training Course for Young Professionals on Cultural Heritage Protection in the Asia Pacific Region 2020 was a great opportunity to develop my abilities in this field.

Long-term and short-term action plans

The exploration team of Central Province carried out an exploration in the region of Minipe, Sri Lanka due to the large scale and quantity of the archaeological sites of the area. These exploration and excavation programmes have extended as a 10 years' project. New knowledge that I earned through this course will be a great opportunity to improve the efficiency of these investigations.

GPR or Ground Penetrating Radar is a very interesting method that can be used to identify the underground, pits, foundation stones, holes, grooves etc. This technology is used in the archaeological sites in Japan. We can apply remote sensing techniques like this for the archaeological explorations in Minipe, Sri Lanka.



Fig.1, 2: *Minipe* exploration 2019 - *Asamodaganyaya* _Mesolithic Period Tool factory site

Our team plans to excavate selected archaeological sites in the Minipe area in coming years, we can apply non disturbance methods before the excavations.

In Japan (but not in Sri Lanka), they use heavy machines to excavate (test pit) in the construction sites as an archaeological impact assessment (AIA). They remove the top-level soils to find the level with archaeology features. This method can be applied for construction sites when carrying out AIAs in Sri Lanka also, because it will help to manage the time duration, because we get a very long time period to give the final decision on the site that we carry out an AIA, as a result of it, we can reduce that time duration by using methods like this.

According to my duty list at the Department of Archaeology, I plan to record movable artefacts by using the new methods and new technology. So, I would apply new knowledge and experience earned from this course for these movable artefacts documentation projects.

We have a 10 years plan to record all the movable artefacts found from the Central province of Sri Lanka. We record the movable artefacts by using traditional methods such as measured drawing, photographing etc. but we learnt new methods from this course that can be used for the artefacts documentation. New drawing methods and photographic methods that are used in Japan are very interesting. Specially, the lessons on various artefacts photographing methods are very important. We can apply these methods to our activities on documentation in Sri Lanka. Our Department has a good professional camera, but unfortunately, we did not know the methods of artefacts photography, but this course was very valuable to learn them properly.



Figs. 3, 4: Photographic documentation of *Kandyan* Period (about 300 years old) Metal Buddha Statues

The methods of pottery assembly or reassembly can be applied for the Sri Lankan context also. We unearth thousands of thousands of parts of pottery from the archaeological explorations and excavations in the Island annually. But most of the time we don't assemble or reassemble the pottery. We can apply above methods to preserve the pottery in Sri Lanka.

Using methods of 3D documentation is a new trend in the field of cultural heritage management. Long and short range stationary scanners, handy scanners, CTs are some examples. They are very expensive methods that can be used for cultural property documentation. Creating 3D models by using SfM and MVS are very interesting methods. We can apply some methods by using open source for the Sri Lankan context also.

Possible solutions for the challenges mentioned in the country report

The main problem that faces the archaeology sites is "Treasure Hunting" or looting the archaeology sites or artefacts. Destroying the archaeological sites and artefacts to find the treasure is a tragedy in the field of

Archaeology today. Enhancing of public awareness of the value of the archaeological sites and other antiquities, trying to wash up the dangerous myths from the society are also very important.

“*Nidan*” or “Treasure” is a very popular myth in the current society of Sri Lanka, the book, *Nidan wadula* also caused to spread this concept to the community. Most of the people of the Sri Lankan society accept this myth as a truth. Due to this dangerous reason, they destroy the valuable archaeological sites to find this mythical treasure.

Archaeological sites located in the North and East provinces faced the 3 decades’ civil war (1983 -2009) in Sri Lanka. Some archaeological sites were damaged or destroyed due to the attacks between state forces and LTTE terrorists. But fortunately, Sri Lanka government got a decision to record and conserve the archaeological sites located in the war areas recently. Jaffna Dutch fort is the best example for it. Department of Archaeology and CCF conserved and opened the Jaffna Fort for the public today.



Figs. 5, 6 Jaffna Fort after the conservation

Most of the politicians violate the rules that they made. Sometimes, decisions that they obtained will cause the destruction of the valuable heritage of the country. Mayor of the Urban Council of *Kurunagala*, demolished a Royal Audience (Royal Assembly Hall) of *Kurunagala* Kingdom (13th Century) in July 2020. Department of Archaeology, Sri Lanka did not give the permission to remove this ancient building from the current place, but unfortunately, Mayor broke down the building without permission of Director General of Department of Archaeology. He violated the acts of Archaeology. Sri Lankan government should make a good and strong law to preserve the heritage of the Island.



Figs.7,8: Royal Audience in *Kurunagala* Kingdom, before the destruction (left), after the destruction (right)

Increasing the public support to protect the Archaeological sites, enhancing of public awareness of the value of the Archaeological sites and other antiquities, developing the efficiency of the legal tasks, getting the international cooperation and support are some needs to protect and preserve the Archaeological Heritages in the Island, Sri Lanka.

Final Report

Omon Uktamovich MAMIROV (Uzbekistan)

1. Long-term and short-term action plans developed from the training outcomes

I will plan to conduct archaeological excavations at the Ancient Khavas site in the near future. I will use the knowledge I have gained in these archaeological excavations. I try to use modern technical tools when conducting archaeological excavations. However, we do not have technical tools and equipment like LiDAR in our country, so I use the classical style in drawing a topographic plan. The ruins of the Ancient Khavas town are not only the oldest and largest archaeological monument of Syrdarya region, but also the entire Mirzachul. The magnificent remains of this place, which were part of the Ancient Ustrushana, are now located in the south-western part of the present town of Khavas, opposite the Karvonsaroy neighbourhood. Today, the total area of the monument is about 12 hectares ("Fig. 1"). The monument is made up of two parts, namely the north-west huge arches, which are distinguished and separated by adjacent walls. The main centre of the town, the arches and the remains of the town have been preserved until today in full scale. The location of Ancient Khavas in the Southern Banokat network of the Great Silk Road determines its historical significance.

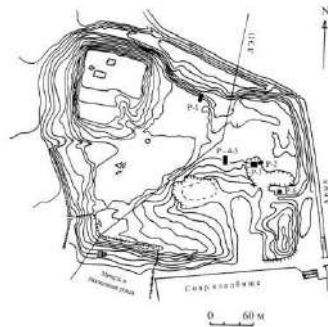


Fig.1

The archaeological research of the monument began at the end of the 20th century and continues to this day. As a result of the research carried out in recent years, there have been some achievements. Archaeological research conducted here testifies that life in the monument lasted almost without interruption from the 4th century BC till the 20th century.

Today, on the surface of the monument there is a thick salty soil layer, under the influence of very strong salinity. This circumstance strongly influences the deterioration of the monument and the work carried out by archaeological research.

It can be said that the greater part of the archaeological monuments in the Central Asian territory was built of clay. Since ancient times, clay was the most widely used raw material of the architectural sphere. Its primary processed form is "clay pellets (guwala)", "mud wall (pakhsa)" and raw brick, which have been used in construction works since the Neolithic period in this territory.

One of the peculiarities of the monument at Ancient Khavas is that as a result of active life and residence for many years a very thick cultural stratum has formed. By the time of the developed Middle Ages and the late Middle Ages, the climate of the territory began to dry up, and the ancient stream began to dry up. This was clarified by the research carried out in the remote areas of the monument. In particular, the monument grew a little in the 11-12 centuries BC, and houses began to be built on the upper side of the old stream banks.

Archaeological studies have shown that the area of the monument developed and in the late medieval period, clay in construction was obtained from the same land itself without being transported from other places. Our reaching of such a conclusion was caused by the discovery of a large number of excavated sites for economic purposes and potholes for obtaining clay for construction. In this regard, it can be said that the presence of various organic wastes and ash residues in the composition of raw brick and mud wall clay once again confirms this.

These factors have led to a strong degree of salinity and soil depletion in the monument area over the next centuries, and as a result, the monument area has been abandoned by humans. In other monuments with this, especially in the archaeological monuments consisting of one or two cultural strata, this case is better than the case of conservation, without a strong reflection to this extent (“Fig.2”).

Almost all the monuments in the steppe and steppe climatic regions of the territory of Uzbekistan are on the verge of destruction today under the influence of a strong degree of salinity. Climate change, aridisation and salinity are largely attributable to anthropogenic influences. It can be said that many archaeological monuments in the steppe territories have for many years served as wintering sites of a nomadic herdsman population. Traces of semi-basement and economic activity identified in the territory of the monument in the Ancient Khavas are an obvious example of this (“Fig.3”). In most cases, migratory breeders found it desirable to use only the interior, without touching the foundation and main walls of the houses, where they had previously lived, the second time to change the interior housing or use household items.



Fig. 2



Fig. 3

Between Fergana Valley and Ustrushana territory there has been a cultural closeness from ancient times. These links are evidenced by material evidence. Today, even in the archaeological monuments in the valley territory, salinity is becoming more and more. The dense location of population in the valley territory caused an increase in the number of trees and agricultural crops around the archaeological monuments. Local peasants plant trees, such as mulberry, date, in order to fight against salinity. They also wash salt from the soil with the help of running water.

2. Possible solutions for the challenges mentioned in the country report

In the territory of Syrdarya, in the winter season, salt washing is carried out with the help of running water in the fields, and in the summer they use the “drainage” system of underground waters. The drainage system pulls out underground water and salinity at 400-500 m radius and it is discharged through trenches.

Although this system exists near the archaeological monument, it cannot completely eliminate the salinity in the monument area. Therefore, the search for excellent measures to prevent salinity is an urgent problem. Several archaeological monuments have been opened in the territory of the republic during the last 20-25 years and are being conserved. In particular, the old Kuva monument was opened in 2004 and the monument was fully conserved. Important artifacts are being destroyed by salt in sand causing salinisation in places where archaeological research has been conducted. At this time, if the necessary measures are not taken, the monument can lose its historical status and value.

The installation of the planting and drainage system of trees such as mulberry and others in order to fight against salinity in the border zones around the archaeological monuments can help us in this situation. However, the system of preserving the territory from salinity, which was conducted for archaeological research, has not yet been developed.

The purpose of my participation in this training is to further enrich my knowledge of preserving monuments and artifacts, which should be preserved for future generations. It is also to study factors which are a threat to today’s archaeological monuments, and to identify effective methods of their prevention.

Considering the fact that several innovations are coming into play in the course of archaeological research in the following years, it is possible to achieve great success in the work of deeper study of such problems and the preservation of archaeological objects by eliminating them.

Final Report

NGUYEN Quang Khanh (Viet Nam)

1. Long-term and short-term action plans developed from the training outcomes

Thanks to the course subjects, I have seen many videos from experts and have an opportunity to learn the value of cultural heritage in archaeology sites and conservation artefacts values. Moreover, the knowledge of the course is raising my historical-cultural knowledge and promoting my eagerness to protect the local heritage.

To apply what I learned from the course, I am going to have a long-term plan, (period 2021 – 2025) for excavation of the archaeological sites of the prehistory period in a locality named Funan (Oc Eo) culture from I – VI centuries AD, and some ancient ceramics of Thailand which were found at the Phu Quoc Island shipwrecks in Southern Vietnam.

In order to research Funan (Oc Eo) culture in the Mekong Delta, I have a plan to invite many experts to make a survey excavation of these sites and using my approach of knowledge from this course, to analyse the results. In addition, I am going to invite some experts who have good knowledge of Funan (Oc Eo) culture I – VI centuries AD in Japan to participate in this project in the future.

2. Possible solutions for the challenges mentioned in the country report

On the one hand, Mekong Delta's archaeology, and museum systems are considered the backbone of the national strategy for heritage conservation and promotion in Vietnam. In this system, archaeology research and conservation play a significant role in the maintenance and development of the heritage collection values. Budget and human resource are indispensable elements in the development strategy.

On the other hand, the other findings indicate the possible solutions in the Mekong Delta other than lack of budget and human resources, to be:

- The training of skills for the heritage collection preservation and area development in the archaeology field.
- The propaganda methods to carry out the mission in heritage culture.
- The enhancement needs of limited human and institutional capacity in the international integration of conservation.

In summary, the demand for short-term and long-term training in conservation is huge in Vietnam, especially for postgraduate programs, because Vietnam is not qualified yet for higher education in this sector. In the development trend of the region, Mekong Delta is looking forward to cooperating with countries in training in specialized conservation, cultural heritage, archaeology, and museums. This job has not only to give an opportunity for Mekong Delta, Vietnam but also a connection with other nations to understand, for cultural exchange, and especially, the development of conservation human resources to serve community awareness-raising, contributing to the progress of countries and regions in the near future.

III. Thematic Training Course

Country Reports



Challenges of Management in Use of Living Heritage

Department of Culture, Ministry of Home and Cultural Affairs,
Royal Government of Bhutan

Introduction

Cultural heritage in Bhutan is the integral part of our identity, unity and continuity and forms indisputable physical records of the historical, artistic and technical achievements of the Bhutanese through many centuries. Heritage sites in Bhutan are some of the most beautiful expressions of the ancient culture of the people of Bhutan. The heritage sites in Bhutan encompass both the tangible and intangible heritage that has been passed down preciously from generation to generation.

The protection and promotion of heritage sites greatly contributes towards the preservation of culture, which is one of the pillars of Gross National Happiness, the guiding philosophy for development in Bhutan. Almost all heritage sites in Bhutan are a living heritage, a rich cultural heritage that is still in use and towards which Bhutanese have a strong affiliation, as it is directly linked to our daily life, understanding and practices.



Chubjakha Dzong, Paro



Punakha Dzong, Punakha



Dechenphu Lhakhang, Thimphu



Farmhouse in Changjokha, Punakha



Ura-Doshi Village, Bumthang



Dungkhar Nagtshang (Manor house), Lhuentse

While preserving the original fabric of the sites and other associated heritage sites and associated heritage values, the cultural traditions (often linked with these sites) have constantly evolved with time by maintaining their identity and relevance to society. With the advent of modernization and development taking place at a rapid pace and continuation of usage of the heritage sites, changes are inevitable, thus becoming a challenging issue in the field of conservation of heritage sites in Bhutan.

The Department of Culture under the Ministry of Home and Cultural Affairs has been working towards the management and protection of its heritage sites, and sustaining the cultural heritage values associated with these heritage sites in accordance with the Cultural Heritage Bill, 2016.

The Cultural Heritage Bill of Bhutan, which once enacted will be the first holistic legislative document on cultural heritage in Bhutan including heritage sites, thus aims to provide value-based protection for heritage sites in the country. The Bill is to protect not only heritage buildings but also cultural sites including rural settlements and their surrounding settings. It also recognizes Bhutan, as a whole, as a unique cultural landscape bearing witness to the distinctive history, wisdom and customs of the people. The advent of modernization, which includes the introduction of new construction techniques and materials, and changes in the lifestyle and mindset of the people, puts pressure on the conservation of heritage sites in Bhutan.

Issues and Challenges

Akin to most other countries, Bhutan faces challenges while endeavouring to protect and promote our heritage sites. The following are some of the issues and challenges faced in the field of protection and conservation of heritage sites in Bhutan.

a) No heritage act or legal document

At present there is no heritage act or any legal document governing the rules and regulations for the protection of heritage sites in Bhutan. Therefore, this poses a great challenge when defining responsibilities and accountability regarding the protection and restoration of heritage sites. However, the Department of Culture has drafted its first bill on cultural heritage, the Cultural Heritage Bill 2016, which is submitted for endorsement. Once the Heritage Act is enacted and adopted, this would govern and ensure the protection of heritage sites in Bhutan.

b) Awareness, understanding and appreciation of heritage sites

The first and foremost challenge faced is the lack of awareness, understanding and appreciation among the local public on the importance of conservation of our precious heritage sites in Bhutan. The concept of conservation is not familiar to many of the stakeholders; therefore, the public is not aware of the need for conservation and doesn't understand and realize the values of the old fabric of heritage sites, which makes it difficult for conservators while executing conservation works. Many stakeholders wish to dismantle our valuable old structures and replace them with new structures. However, the importance of creating awareness and appreciation among the public is one of the top priorities given by the government of Bhutan.

Realizing the importance of advocacy, the Department has carried out several activities to reach out to the public. In collaboration with the Royal Education Council of Bhutan, the Department has carried out the introspection of the school curriculum to strengthen the cultural heritage content focused on primary children. The initiative is to introduce primary kids to the cultural aspects of Bhutan. Information on Bhutan's culture explaining the basic idea of tangible and intangible cultural heritage has been introduced into the social studies syllabus. The Department has plans to extend this initiative to secondary and higher education in the future. Similarly, the Department produces publications of National Important Conservation Projects and distributes these to relevant agencies for reference.

c) Proposals for renovation, reconstruction and new construction

It is believed in Bhutan that making offerings to religious sites, most of which are heritage sites, earns merit, which encourages many people to make the heritage sites better. Hence the embellishment of heritage is the predominant practice and poses huge challenges to conservation work. Such embellishment is an age-old spiritual practice, and the act itself is intangible heritage. Thus, tangible and intangible heritage comes into conflict and the resolution of this is sometimes not amicable.

With the growing number of applications and proposals for renovation, reconstruction and new construction of/in heritage sites, the agency has to be more prepared and sensible about the changes. The applications are submitted to Districts by the applicants, which are then submitted to the Department of Culture for scrutiny. In doing so, the Department faces a severe challenge, especially when it comes to local professionals who lack the capacity and the required knowledge to take things forward as intended or recommended by the Department. Therefore, capacity building and professional development for local professionals in the field of cultural heritage has become critically important for the protection and management of heritage sites.

d) Change in needs

Monastic bodies are the main custodians of heritage sites in Bhutan, and are identified as the key management partners. Thus, sensitizing and educating the monastic body on the management and protection of heritage sites is one of the main challenges faced by the Department. In Bhutan, it has been the trend that proposals for changes to heritage sites are mainly brought about by the custodians (the monastic body) and it is important to sensitize the proponents (the monastic body) on the tolerance of change on the heritage sites. Therefore, it is found that it is extremely important to communicate with monastic bodies on the importance of preservation and protection of heritage sites. In order to achieve the target, the office has instituted an office with representatives from monastic body, which will serve as the bridge between the two organizations. It is also important to enhance the skills and knowledge of the newly instituted office.

Most heritage sites in Bhutan are occupied by the monastic body, and Dzongs also serve as government offices. Therefore, due to the fact that heritage sites in Bhutan are living heritage sites, one of the issues and challenges faced while executing protection and conservation work is that the people who live in heritage sites or are associated with heritage sites demand changes aligned with their current lifestyle. Some of the changes are for better sanitary and water facilities inside the heritage sites. This, when executed mostly without proper monitoring and implementation, weakens the structure and adds to the vulnerability of the structure to natural hazards, especially earthquakes. The structures, being old and designed according to the technologies and population of residents of the particular time they were built, can fail to accommodate new technologies and the growing number of occupancy and modern requirements.

Understanding the need for intervention, the Department has ventured into the preparation of a management plan for important heritage sites. As an important project implemented in the 12th FYP, the Department of Culture will prepare management plans for five important heritage sites in Bhutan. Completed with the management plan of Punakha Dzong in the first fiscal year of 12th FYP, the government has earmarked Paro Taktshang in the second fiscal year for management plan preparation, in consideration of the importance of the site and also opportunities and challenges from the tourism industry on the site. Apart from value-based protection proposals for heritage sites, the management plan also identifies management partners and addresses risk mitigation and preparedness.

e) Privately-owned heritage in urban areas

With the dawn of modernization and urbanization, heritage sites have come under serious threat. This poses immense pressure on the nation's efforts to preserve and promote our cultural heritage as old low-rise traditional structures are being replaced by new, bigger and high-rise modern structures. While state-owned

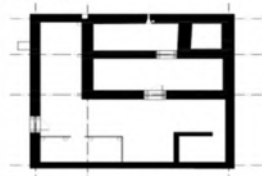
heritages are safe, it becomes challenging for privately-owned heritage sites, especially farmhouses due to the aforementioned factor.

As land values in urban areas are only increasing with time, it's only natural that one would aspire to derive maximum benefit from the small pieces of land available. There is always this push and pull between the conservation of old low-rise traditional houses and economically benefiting from the construction of modern buildings with increasing numbers of storeys and the optimum size permissible by the by-laws of the precinct (structural plan or local area plan).

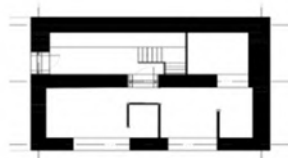
It was established during the consultation meeting with private house owners and relevant agencies on 16th January, 2020 jointly facilitated by the Department of Culture and Japanese experts from the Tokyo National Research Institute for Cultural Properties that the authenticity of the structure is very important in order to recognize a building as cultural heritage; therefore, any major intervention is not desirable. At the same time, conservation work is very expensive and would be a burden to the house owners. Since the Royal Government of Bhutan cannot provide direct financial support to private house owners even if the house is deemed a very important cultural property, the house owners are reluctant to finance the restoration of the house without major interventions to the structure. International donors also can't render support as there is no legal system in place that ensures or recognizes a structure as an important cultural property.

However, if the Cultural Heritage Bill is enacted, there are provisions for registration and designation of cultural properties irrespective of the ownership based on the cultural heritage values associated with the building or site. In that regard, state funds can be allocated for the protection of private houses if deemed important.

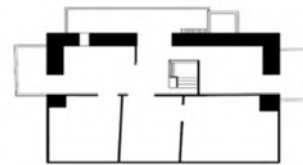
Before



Ground Floor Plan

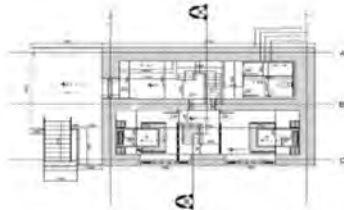


First Floor Plan



Ground Floor Plan

Proposal



Restoration and rehabilitation of a farm house in Babesa, Thimphu city, supported by the Department of Culture

Besides financial support, the Department has rendered support to house owners with documentation, preparation of utilization proposals, and monitoring, apart from the timber concession, along with other government agencies. It was found that there is a great opportunity to strengthen government and private partnership in the preservation of cultural heritage. It also motivates other private house owners to venture in the same direction and rejuvenates the pride of ownership and contributions.

The conservation of heritage in urban areas has become important as it gives a reference of comparison between modernization and the past; a constant reminder to citizens, especially the younger generation dwelling in urban areas, to comprehend, appreciate and contemplate the importance of cultural heritage and identity. In addition, the protection of heritage will be tangible evidence of the rich Bhutanese history, culture and traditions to all walks of life. While development is necessary, sound development respecting core values (cultural heritage) has become undeniably paramount.

With the trend and pace of modernization, it can be projected that before long, heritage in rural areas will be under the scope of these changes. With the effort of both the private sector and government, a better path for the changes can be demonstrated, to showcase a good example to the rest of the nation of the national interest in, and importance of, the protection of cultural heritage.

f) Tourism and heritage sites

The Department of Culture is burdened with numerous restoration and conservation projects without any funds, thus hampering the conservation and protection of heritage sites. Further, at present there is no funding provided from the revenue generated by tourism for the preservation, protection and development of heritage sites, even though the sustainability of Bhutan's tourism largely depends on the culture of Bhutan. Realizing this, Bhutan has started to issue tickets for entry to important heritage sites, with the funds raised being directed to the Monuments Fund of Bhutan.

Besides, the flourishing of tourism only puts more pressure on heritage sites, and with the increase in the number of tourists, extra amenities and facilities have become necessary. For enhancing the trekking experience, different agencies are proposing with various developmental activities, with the Tourism Council of Bhutan in the forefront. These developmental activities pose threats to the landscape and sanctity of the heritage sites if not carried out sensibly.



Changing scenery in Gangtey village, Phobjikha, Wangdue Phodrang

It has become common practice in rural areas, for farmhouses to be rehabilitated to provide home-stay for tourists. This modality demands changes and upgrades to the farmhouses to provide modern facilities. In some cases, the farmhouses are extended to accommodate more tourists. In addition, temporary sheds are also surfacing which serve as souvenir shops and accommodations for workers working at hotels, small

restaurants, etc. If all the farmhouses are altered in scale and architectural facades and appear as new modern structures, the landscape of the settlement would be under threat.



Chimi Lhakhang and settlement, Punakha



New modern structure under construction



Tshento-Shari village, Paro Taktshang Valley, Paro



New hotel constructed in Tshento-Shari village



Temporary buckle houses along the road

At popular heritage sites, huge commercial structures have also started to be built, changing the landscape of the village and the site. This kind of development is very challenging to control as the jurisdiction falls under the Ministry of Work and Human Settlement, and without the proper legislative framework, the department is handicapped. However, for the important heritage sites, the Department will prepare a management plan which will address the immediate surroundings including the settlements and set guidelines to protect the cultural heritage values of the site, settlements and landscape (in view of the cultural landscape).

IV. Regional Workshop

Training Reports





Mahesh Priyankara GURUMETIYA
Archaeology Reprographer
Photography Division, Department of Archaeology

I would like to thank ACCU Nara, Mr Prasanna B. Rathnayake, and the Department of Archaeology in Sri Lanka for giving us this opportunity to participate in this workshop. Also, I would like to thank Mr Ichiro Nakamura, official research photographer, and his team for spending their time for us. Because of the COVID situation, we had to participate in this programme though online.

It was suitable that we participated in the programme in Sri Lanka because there are large number of cultural properties across the country. It is very worth to get the latest knowledge from Japan. In this workshop, we got basic knowledge of lighting, using of correct background, camera settings, how to store digital data, and problems in photographing, which were useful for us to apply for our future activities.

In the future workshop, I would like to learn how to take photographs of painting and large monuments in our country in particular. Also, I wish to learn how to photograph objects with calculate real measurements. It is necessary to conduct a training programme to provide the latest technology and most suitable software which are used in Japan. I think it is very helpful for us to understand better. If ACCU organises a practical training here in Sri Lanka, it will be more helpful for all of us than online sessions.



Sumedha Deepthi KUMARI
Archaeology Reprographer
Photography Division, Department of Archaeology

I would like thank ACCU Nara, Mr. Prasanna B. Rathnayake, Mr. Ichiro Nakamura, an official research photographer and his team for providing me with this opportunity to enhance my knowledge in photography. I enjoyed the training regarding camera settings, lighting, backgrounds, storing etc. I would like to learn more about Japanese methodologies and technologies used in documenting its traditional paintings. Learning the lighting method and the new technology used in Japan such as types of photographs was very useful for me to expand my knowledge and skill.

Photographing mural paintings

In Sri Lanka, there are paintings on undulating surfaces such as the paintings of the Dambulla Cave Temple World Heritage site. What are the techniques used to photograph paintings on uneven surfaces? How should we maintain the equal distance between the focal plane and the paintings when photographing within a small amount of space? Because of these difficulties to reach places, we used a computer to maintain the distance between focal plane and the painting, and it was photographed in section and put together later. I would like

to know if Japan has developed a new technology or equipment which will enable us to photograph this type of painting in small space.

Negative film

I have another question regarding black and white negatives, 120, 2B size and also 135 negatives. How are these negatives stored and preserved in Japan? What is the best way to preserve them in a hot and humid tropical country like Sri Lanka? I would also like to query about the methods that are used to preserve and store these old negatives. We scan the negatives and store copies in external hard drives and the negatives are stored in wooden or metal cupboards in which the temperature is controlled. I would like to learn about the systems to preserve and store old negatives.

Sri Lanka is a tropical country with strong daylight throughout the year and with monsoons in rainy seasons. What are the methods of outdoor photography using natural sunlight and what is the way to maintain the equipment in diverse weather conditions? Also, what are the repercussions of seasonal changes in weather on negatives and equipment, and what should we do to mitigate these problems?

Does ACCU take underwater photographs? Unfortunately, the Department of Archaeology does not have this facility, and international organisation help us take underwater photographs. Therefore, we would like to have an opportunity to be trained in this discipline of photography.

Another drawback we have at the Department of Archaeology is no access and ability to take aerial and satellite photographs due to lack of training. I would like to be trained in different disciplines of heritage photography using latest technology such as software and the latest equipment.

Once again, I would like to thank all of you for giving me the opportunity to participate in this training programme. I would like to request ACCU to organise a practical training programme in Sri Lanka where we can obtain some of the methods of heritage photography so that we can select the appropriate methods for Sri Lanka.

Here is an example for photographing with narrow space



Degaldoruwa painting documentation



Palitha HERATH

Archaeology Reprographer

Photography Division, Department of Archaeology

A workshop on photographing objects related to heritage had been organised by the Asia-pacific Cultural Centre for UNESCO (ACCU Nara); the Department of Archaeology, Sri Lanka; as well as the Department of Museums from 25-27 January 2021. We participated in the programme conducted online at the Kandy Ulpunge premises.

The workshop including lectures from Nakamura Ichiro, who is a Chief Photographer of the national institute in Japan, on how photography techniques for cultural heritages. The lectures were delivered under various topics such as photographing cultural archaeological objects, basic knowledge in connection with photographing cultural objects, camera settings and operations, understanding histograms, photographing three-dimensional objects as well as flat objects. Based on these topics and sub-topics, eight subjects were explained in detail. Also, using the QR system for watching these lectures made this workshop more meaningful.

In the workshop, the explanations about basic knowledge on photographing cultural objects, the principles, and the required equipment were provided very clearly. The basic knowledge was imparted on camera equipment and how to set them up in a relevant way to take a proper photograph. Following this, the types of cameras used for photographing cultural objects, lighting methods according to objects, setup of lighting, background lighting, and how to set shutter speed and aperture were explained very well. Also, focusing, proper exposure, differences pointed out by the number of aperture and shutter speed, and ISO sensitivity were explained in a way that was suitable for amateurs. The most important factor was, emphasizing through this topic, the facts that all the tasks were carried out without the use of computers. Further, the formats for storing digital photographs such as RAW, JPEG and TIFF were also explained thoroughly. In addition, the lecture included an explanation regarding how bright light and dark light bring about a change in the colour spectrum of the artefact. White balance was emphasized upon in the lecture, and how it is set to obtain an accurate photograph was pointed out. Other important factors in the lecture series of this course were use of light, setting up a background, and highlighting characteristics through change of lighting. We were provided with a new experience on how to take a photograph of cultural objects using a white background. I could learn new methods in this workshop in addition to the ones we use at present and believe that the above-mentioned methods will be of use.

The online workshop provided us with a new experience. As significant problems of the online workshop, very short duration, facing various types of technical problems, having no practical opportunities, and the distance between the lecturer and the participants can be pointed out. Rather than using an online method, if these programmes are conducted by lecturers coming to our country as was done previously, the cultural ties

between us will be strengthened, and it will be possible to avoid problematic situations. I thank ACCU and Mr Nakamura Ichiro and his staff as well as everyone who contributed to organizing this programme.



Arjuna SAMARAWEERA
Archaeology Reprographer
Photography Division, Department of Archaeology

I would like to thank ACCU Nara in Japan and Mr. Prasanna B. Rathnayake for giving me this opportunity to participate in the workshop. I believe that all the participants of the workshop were happy to receive this training in photography. As most of the participants are not professional photographers, this training in photography was very important and useful despite being an online training programme.

As a photographer of the Department of Archaeology in Sri Lanka, I would like to discuss the possibility of ACCU organising a training programme with practical sessions in Sri Lanka with more advanced knowledge. I would like to receive a training on new technology and equipment as their capabilities will help immensely in my career. Sri Lanka as a developing nation does not have and cannot afford the latest technology and equipment. However, we try to do our best with the available equipment and minimum resources to document Sri Lankan cultural heritage before it is destroyed by time and lack of resources for safeguarding our heritage.

The training on cultural properties photography will be immensely useful for our future activities. In addition, I would like to learn about the latest equipment, software and other equipment used in photo-documentation which is the field led by Japan. I would also like to learn more about the photography of paintings from

Japan's experiences and the types of affordable equipment and software which will serve in a developing country. I would like ACCU to share the knowledge of latest technologies, software and equipment through the training.

At the Department of Archaeology, we developed a scientific method to take detailed photographs of paintings using available resources for the first time. Thus far, we have photographed the paintings of the Sigiriya World Heritage site, where we were able to obtain accurate measurements of the painted figures for the first time in history. We have also documented the paintings of the Kelaniya Temple near Colombo, Degaldoruwa Temple in Kandy, and Tivanka Image House within the World Heritage Site of Polonnaruwa. During these projects we faced many difficulties and some technical issues such as necessity of taking photographs in very narrow spaces, without the space necessary for minimum focusing distance. Lighting was another problem we faced. We would like to know ideas, better knowledge, and methods to resolve these issues by ourselves. Therefore, I believe that a practical training in Sri Lanka would give us a greater advantage which will help us in photo-documentation of paintings.

Although I have specifically mentioned paintings as they are a priority at the moment, I would also like to be trained in different aspects of archaeological photography.

Here I attached 2 photos which we taken in photo documentation project.



Photograph which is combination of more than thousand separate photographs by using software



Dimensional view of Kelaniya Temple Paintings made using software



Anoma Kumari SOORIYAKUMBURA
Archaeology Research Officer
Central Province Office, Department of Archaeology

What is the meaning of photography?

Photography is a way to record and communicate visually me and others. Also, photographs can be a powerful way to make learning visible.

What are the main factors important in cultural heritage photography?

- High quality camera
- Aperture
- Shutter speed
- ISO
- Suitable lighting system
- White colour background
- Mental concentration

What are the advantages of cultural heritage photography?

- Necessary part of long-term preservation of cultural heritage.
- Archaeological objects will change over time, imagine serve as a way to document and represent heritage

Current status of cultural heritage photography in Sri Lanka

At the Antiquities Exhibition and Photography in Sri Lanka, we use the background coloured in red, marron, black, and blue, and white background is used in very special cases. I think that dark-coloured background is used to highlight the glory of our country through antiquities. Also, in Sri Lanka, there is very little use of advanced technology of photography, especially in field of archaeology. Every time we use only our smart phone technology as we do not have enough physical resources and technology.

What I learned from this workshop

In this workshop I learned that antiquities should be photographed on a white background. Therefore, from now on, white background will be used in the photography of antiquities in Sri Lanka. So, thank you for introducing such an innovation. Although our smart phone is equipped with photography technology, we realized in this workshop that the photos taken by smart phone are not of good quality. In addition, I learned the lighting system that should be used in photography, camera function, and mental concentration required for taking a photograph.

What I felt through the online workshop

I am happy to participate in this online workshop due to the current condition. In this workshop, I learned many things about photography. I hope to attend a practical training in the future.

Many thanks to Mr. Prasanna Rathnayake for organising the workshop on photography using new technology. And special thanks to Mr. Rasika Dissanayake who made a financial contribution, and to Mr. B. Dissanayake who provided the opportunity to hold the workshop. Our special thanks to Mr. Nakamura Ichiro, an official research photographer, and everyone.



Anusha Rathnamali ATHUKORALA
Archaeology Research Officer
Central Province Office, Department of Archaeology

I learnt from basic to the end of the cultural property photography in this workshop. I learnt the camera settings that is especially necessary for cultural property photography, the proper photography techniques that can be applied for the archaeological, and how to preserve the photography.

In the lecture No. 2, Mr Nakamura explained about the purpose and roles of the photography that can be categorized into two parts, utilities and documentation. He also mentioned that sharp colour and other features of the cultural property should be precisely recorded in the photographs.

Normally, white colour is used for the background as adding extra colours gives unnecessary information to the subjects. It is notable that the background colour reflects to the artefacts. Also, reproduction of real colour of the cultural property is very important. He explained the basic structure and mechanism of camera, various types of cameras that have been used in the history and the present, and I learnt that the medium and large size cameras are more suitable for cultural properties photography although it is difficult to use the large cameras.

And, he explained the different types of light sources such as sunlight, room light, and LED. I understood that aperture, shutter speed and sensitivity are main key pillars, which will help us capture a photo of cultural property more accurately.

I would like to thank Mr. Nakamura Ichiro for providing the lectures in the programme, Mr P.B. Rathnayake for co-organising the workshop on photography with Japan. And, special thanks to Mr Rasika Dissanayake who made a financial contribution, and to Mr B.M.B.J.B. Dissanayake who provided the opportunity to hold the workshop.



Malsha Madushani RANASINGHE

Development Officer

Badulla District Office, Department of Archaeology

1. What was learnt at the workshop

I mainly understood through this workshop that photography is important to protect and conserve cultural properties. It is also important to be aware of basic facts in creating through photographs a quantity of detailed information and a data base of reports. The objectives of photograph change as photographs are captured for utilization and documentation.

To take proper photographs of cultural properties requires correct shapes. The camera to be used should vary for each purpose. Therefore, for more high-quality photographs bigger cameras have to be used. Single-lens reflex cameras are suitable while smartphone cameras are unsuitable.

Cultural properties should be photographed as a RAW format. To process for later use, JPEG is not suitable to a certain extent. It is possible to use TIFF in order to save photographic pictures evolved without compression, without loss of information.

It is possible to capture a certain object as is by matching the focus and speed of the shutter. The light which is reflected from the object and enters through the lens is properly displayed on the communicative surface. When proper lighting is set, the object is photographed with the correct exposure.

The smallest aperture with the highest value is more suitable. When the value is less, the sharpness of the photograph becomes less. (Using F 11 the intermediate value is best.) A low shutter speed has to be used. If it is a moving object, by using a lesser shutter speed, the image will become blurred, therefore a higher shutter speed should be used. Photographs should be taken through the minimum sensitivity of ISO100-200.

When photographing cultural objects, lighting is an important factor. The direction of the light, the angle in which the light falls on the object results in quality of photographs. Except special instances, use of indirect light is suitable. It is more suitable to use sub-lighting sources rather than one main source of light. The type of standard light is obtained crossways.

The angle at which the object should be photographed is also important. Whether it should be photographed from top or a frontal angle depends on the concept and requirement. If the focusing distance of the length is short it would be possible to photograph from a broader angle, and if the distance is longer it can rapidly ascend to a limited range. Since many cultural objects are immovable objects, the basic mode of photography should be AV.

If the relevant object is still, the camera should not move. It is suitable to set up the camera on a tripod. It is important to activate the shutter switch without touching the camera, either through a long wire or setting the automatic timer of the camera.

Relevant settings

- Image Quality – RAW
JPEG – Objects with a smooth curve are high in quality and those with curved steps are low in quality.
Use of the largest size (L – with a smooth curve) setting is suitable.
- White Balance – AWB (often the automatic setting is selected).
However, through the manual White Balance setting, under even a tungsten light colour are correctly reconstructed and the colour of tools appears natural.
- Picture Style – Neutral
- Colour Space – Adobe RGB
- The date and time have to be established correctly.
- It is suitable to format the Memory Card within the camera prior to taking photographs.
- Histogram – On a frequency graph with a suitable grading a broad expansion which creates the shape of a high mountain from Bright Light (A) to Dark (B) is depicted.

How to be careful when providing lighting

- ❖ Providing lighting with an incline from the top when photographing a three-dimensional object
- ❖ Setting up beams of light from top and from the side when photographing three-dimensional objects
- ❖ Using a diffuser to enlarge a small ray of light
- ❖ Using a white background for reflecting light

Photographing three-dimensional objects

- ❖ Setting up a platform to photograph the object from the front
- ❖ Setting up a white background on a flat table
- ❖ Using filler light to enhance the quality of the main lighting
- ❖ Deciding the size of the background required for the object and covering the additional background with a black coloured paper

Photographing various objects from the front

- ❖ Placing the camera at a certain height but not parallel to the object in order to capture a large amount of information
- ❖ Focusing attention on facts that should be projected

Quality of lighting and setting up directions

- ❖ Using a white background
- ❖ White coloured objects – setting up light from the top closely, distancing background lighting
- ❖ Dark objects – distancing light from above, bringing background lighting closer
- ❖ Glossy objects – using a large lighting source, control reflective light, using a black coloured covering to change the direction where the top lighting comes in
- ❖ Low-height objects – using a somewhat high angle

- ❖ Large objects – using main light totally, changing the light from top or filler light according to requirements, using several lamps from the same direction
- ❖ Large stone inscriptions – placing the main lighting in relation to the object at a somewhat deep angle

When photographing flat objects

- ❖ Using main lighting
- ❖ Using a white background
- ❖ Lifting up the object when photographed (placing object on a transparent glass surface)
- ❖ Using reflection to spreading out the light equally
- ❖ Setting up a black coloured covering behind the object
- ❖ Raising the height of main lighting

2. How to use the knowledge obtained during the workshop

- Documentation of movable artefacts in a manner that displays correct data
- Preparation for panels for exhibitions etc.
- Future research and research paper

3. Impression of the online workshop

It is important to learn theoretical facts regarding photographing cultural objects presented in the medium of videos together with simple explanations. It is also important that online session provided answers to problems that cropped up regarding information presented through videos.

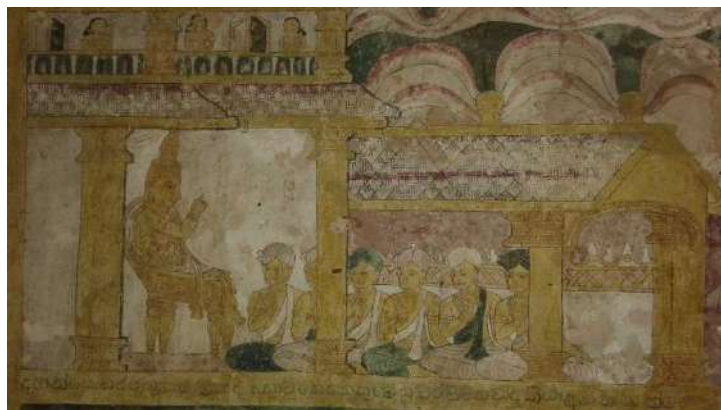
In order to confirm these facts and to obtain proper understanding of practical use, it is important to focus on and conduct a practical training using equipment in the future. This opportunity is of importance in order to generate new knowledge regarding photography and to improve the knowledge we possess.



U. Anura SHANTHA
Archaeology Research Officer
Central Province Office, Department of Archaeology

Photographical workshop report

I worked as an Exploration Officer in the Exploration Division of the Department of Archaeology. I am engaged in a group of duties including legal work, site inspection, damage assessment and special investigations. Photographic documentation plays a key role in all of these archaeological duties. For example, I take photographs of the following cultural objects: micro stone tools, animal and human bones, beads, pearls designs, as well as caves and brick designs.



Archaeological evidence found in the field of Ceylon archaeology can be divided into several eras, namely the Prehistoric era, the Historic era, the Anuradhapura era, the Polonnaruwa era and the Kandy era. The designs of these eras take many forms. The archaeological evidences such as micro stone tools, megalithic design, Megalithic cemetery, beads, cave, inscription, huge clay monuments, and the brick statues are located outdoor , indoors, on the sea bed as well as inland.

Photographic documentation is essentially a fundamental part of the process of locating, storing, reporting and conserving all of the above archaeological evidences. Therefore, any officer of the Department of Archaeology should make this photographic record to the best of his ability. However, the three-day workshop on cultural property photography conducted by ACCU took me a different dimension apart from other officials in the department.

Although the Department of Archaeology does not have the relevant advanced technical tools introduced in the course, but we have filled the requirement as much as possible by using a smartphone.

Also, we used to use the colours like red ,blue and black, for the background especially when photographing movable antiques. However, I understood that white background is ideal for photographing cultural properties, and lighting is important to record the detailed information of the object.



Nilanthi Kumari EDIRISINGHE
Archaeology Research Officer
Central Province Office, Department of Archaeology

Introduction

Cultural Heritage is the identity of the country as well as the value of the country. Sri Lanka is a country of immense cultural heritage value, and preservation of the heritage is the absolute duty and responsibility of citizens and archaeologists. The Department of Archaeology, legally bound by this duty, carries out various archaeological interventions. We conduct archaeological exploration and excavation, managing museum, studying epigraphy and numismatic, conservation, maintenance, and promotion. In all of the activities, we have to be very careful about dealing with cultural properties. In addition to these tasks, we focus on documentation in which photography is an essential factor. Therefore, this workshop was extremely useful for our duties.

Photography is a description, which can be understood more easily than a document. It can play a vital role in documentation of the long history of the country. For example, the photographs that were taken during the archaeological investigations in various parts of Sri Lanka conducted by H.C.P. Bell in the 1890s have greatly contributed to the studies done by contemporary scholars. Some of the archaeological sites are no longer visible and others are distorted, so we can study them only with the photographs at present. In this context, photography plays a big role in archaeology field.

It is very timely that the Department of Archaeology co-organised such a programme with the Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO (ACCU Nara) It was extremely important both officially and personally.

What I learned through the workshop

As an archaeologist I have to get involved in various archaeological interventions. Although I am currently working in the promotion section, I have to do other archaeological work according to requirements in the future. These are the photos used for promotion.



Although we used a smart phone or a camera with less than 20 megapixels, I am able to identify the differences after the workshop.

I learned a lot of things from the workshop as follows:

- Basic knowledge of cultural properties photography
- Camera settings and operations
- Understanding a histogram
- Lighting
- Photographing three-dimensional objects
- Photographing flat objects
- Camera settings for cultural properties photography without using PC

The main task that I have to do in the promotion section where I am currently on duty is to promote the existing knowledge about cultural heritage to the public. We implement lectures with photographs and video clips, seminars, workshops, and exhibitions, and create books, leaflets, research articles, etc. It is essential to apply high-quality photographs for the relevant purposes.

Also, until now we used red colour as the background when photographing of movable antiquities. But from the workshop we learned that white is the best colour for background. By using a white background, the shape, expressions, accuracy, artistry, and other features of the antiquity can be well identified. It is worth pointing out in practice.

Additionally, the instructor explained the necessity to change the size of background depending on the distance between the camera and the object, the unnecessary to use a scale, and the importance of using lighting. These are important points for our work as we used various scales in practice such as scale board, pen, person, etc. It was also important to learn how to take accurate photos without shadows by setting the lighting and background and how DIY tools work effectively. The manner in which a Buddha statue is photographed without compromising its dignity is commendable and great lesson for us.

How I felt about the online workshop

- This is a fresh and unique experience in my life.
- We were able to learn more than just attending a workshop and listening to lectures.
- Feeling of uncertainty at the first day, but pleasant feeling from the second day
- We were able to learn so easily and freely because:
 - all videos can be viewed several times at home as we received the files earlier.
 - it was possible to understand without any problems due to the Sinhala subtitles
- On the second day I thought it would be fruitful to re-watch the videos I had watched the day before.
- The zoom session on the third day provided the solutions and clarifications to our problems.
- It was a great assistance to facilitate the programme smoothly
- Mr Nakamura Ichiro is a great and patient instructor. His way of teaching and explanation are very interesting, so we could listen without being lazy.



Wimal Jayantha BANDARA
Archaeology Research Officer
Central Province Office, Department of Archaeology

Through the workshop, we learned the points that should be noted when photographing cultural properties and the knowledge about equipment that is necessary for taking a high-quality photograph. We understood how to conserve cultural property, even if we lose it, the photographs convey the visual information for future generation. We learnt how to prepare the background for taking a photograph, how to set up lighting, how a camera operates, and how to focus. The instructor also explained how to set up the camera, white balance, how to store photographs, and how to capture photos of three-dimensional objects while controlling lighting. We learnt about the tools that were required to photograph three-dimensional objects and how to set them up to increase the quality of a photo.

Although we did not have the facilities and equipment mentioned above, we can use the knowledge we obtained, use the combined cameras and simple substitute equipment we have, and capture photographs so that maximum information of the cultural heritage is recorded. When photographing an archaeological monument or building outdoors, sunlight can be used as lighting. We can consider the time for taking a photograph, the time that the sunlight will be available like sunrise, mid noon and sunset, and the manner in which the light would fall on the monument. As we learnt in the workshop, this is a substitute strategy for obtaining and controlling light. In the work of maintenance and conservation of cultural heritage, we have to take photographs for documentation and recording before, during, and after the tasks. On these occasions, the theories and rules we learnt at the workshop can be used. Accordingly, for documenting cultural heritage for future, we need ensure if the photographs contain correct and a lot of information. When photographing coins, beads, pieces of pottery, small statues, and small containers of archaeological artefacts, we used a red background. However, we learnt that we have to use a white background for such photos because using a white background can prevent unnecessary external lighting from having an impact on the photograph. When photographing statues, houses with paintings inside buildings, sculptures, and other archaeological objects, we have to make sure that information such as size, height, density, special characteristics and shapes are well documented. I will use the minimal facilities available to the maximum and will make use of the knowledge acquired in the workshop so that we can take high-quality photographs during the documentation work conducted by the Department of Archaeology

Since this was the first online workshop I participated in, I have to say that I had a fresh experience.

It can be identified that this online workshop was very successful. Subsequent to studying with lecture videos, we were able to resolve and understand the problems and unclear points about the lectures with the lecturer through the interactive session. If we had an opportunity to go to the field for a few days and study the above-mentioned facts with equipment practically, it would have been far more successful. However, we have to be thankful to **ACCU Nara** and everyone who worked in this workshop for conducting such an online

workshop and providing knowledge during a pandemic without any hindrances by connecting Japan and Sri Lanka. We appreciate that the online workshop will help the Department of Archaeology as a pilot institution contribute towards finding, conserving, maintaining, and protecting cultural heritage in Sri Lanka.



Shiranthi Anuradha SENEVIRATNE
Archaeology Research Officer
Central Province Office, Department of Archaeology

What I have gained from the workshop

It is very important for any person to study cultural properties in any culture in the world. Properly recorded photographs of the cultural properties can be referred as one major way of studying the economic, religious, political and artistic features of any nation.

This workshop educated us how to record and store descriptive information of the cultural properties following the basic principles of cultural properties photography. It was greatly helpful to enhance my knowledge on this new subject which I never learnt before. Following are the main areas that I would like to mention as highlights of my learnings:

1. Type of cameras that can be used to take photographs for artefacts
2. How to set the camera to take a photograph (e.g., shutter speed, ISO sensitivity, white balance, etc.)
3. How to set the background before taking a photograph - For example, I used the red background to take photographs of artefacts before, but I realized that those background colours critically distort the important information of the artefact. The real colour of the artefact cannot be represented in the photograph as a result, and the observers are given wrong information. In addition, using a white background for photography will show the real and detailed information of the artefacts. Therefore, the colour of a background plays an important role for cultural properties photography.
4. How to set up lighting before taking a photograph – I have not considered the importance of lighting when taking a photograph before, but in the workshop, I learnt the methods to eliminate shadow and to reflect light, which help observers understand the information of the object properly. Figure 3 is a photograph that I took at home using available lighting resources like white A3 paper, tracing paper, and phone flash lights.
5. How to record photographs



Figure 1: Red background



Figure 2: White background



Figure 3: White background

How can I apply learnings to my duty?

1. Normally, we have to prepare project proposals before conservation of monuments or old buildings. What I learnt from this workshop can be used to take proper photographs of those monuments and building which highlights important information and helps the authorities understand properly. As a result, we will be able to take approvals easily and proceed with conservation projects smoothly, which prevents the monuments and buildings from decaying further.
2. When conducting conservations projects, we need to update the progress of the activity in time to time for the relevant divisions. We had to prepare progress reports with long descriptions about the status before. However, I will be able to reduce time for preparing the reports by using proper photographs to explain the information of the project progress. Also, I will utilise the techniques of clear and descriptive photography that I learnt when we create final reports of the conservation project at the end of the project.
3. Publication of the book on historical sites and monuments is one of our main duties to educate people. Therefore, what I learnt about attractive and informative photography will help me explain the facts easily, which will be definitely effective to increase the readers' interests. By distributing those publications in the society, we will be able to increase fans of archaeology.

What I felt on this online workshop

1. Theoretical knowledge that I gained from this online workshop is extremely satisfied. The lectures were good and clear enough to understand. The Sinhala subtitle translations were greatly helpful to understand.
2. However, I believe that understanding practical techniques and knowledge was difficult in this workshop because I think we need to touch and use the required equipment during this course to understand practical issues and solve problems.



I.D.M. WIJEBANDARA

Archaeology Research Officer

Central Province Office, Department of Archaeology

Introduction

Today, archaeology and cultural heritage is an argumentative, controversial, and contemporary topic. Some outstanding or dedicated archaeologist debate and make a point of scientific and psychological promotion to get attention from the multi-cultural societies. Based on remains and material context, they investigate the integration of culture and civilization critically.

It is very helpful to study modern scientific methods, to study archaeological sites, and to identify and analysis the monuments and archaeological findings. ACCU Nara provides the Asia-Pacific countries with the human resource development programmes. The participants, who play an active role in protecting cultural heritage in their own countries, acquire new knowledge and technique in the training course. Thus, this online workshop on photography was very helpful for to learn new methods.

My leaning experiences

In the three-day online workshop, I learnt how I should take photographs of cultural properties. This training mainly provided the knowledgeable of cultural properties photograph for the professionals working for archaeology field, museum, and relevant field in Sri Lanka who are in charge of research and management of movable and immovable cultural heritage.

Following are the contents I learnt:

1. Basic knowledge of cultural properties photographs
2. Camera setting and operations
3. Understanding a histogram
4. Lighting
5. Photographing three-dimensional objects
6. Photographing flat object

On the final day, I could share questions and problems and find solutions for them at the interactive session.

How it is valuable for myself

There is a massive space available for photography in the field of archaeology in our country. Photograph is used to record archaeological site and cultural heritage as well as to describe nature of such heritage prior to initiations of the activities of the excavation and preservation by the Department of Archaeology and relevant institution. For this purpose, this photographic workshop provided the beneficial knowledge to be applied to my responsibilities and duties such as exploration, excavation, studying stratigraphy, research of artefacts, and raising people's awareness. Photography is also a stone medium to conserve our heritage and its value.

Opinions on the online workshop on photography

As I mentioned above, I feel the online workshop on photography was really beneficial for me as it gave better advantages for professionals. The participants gathered at the large classroom due to this purpose, which I think is best way to review the programmes each other.

All the lecture materials (videos and text materials) were supplied by ACCU in this workshop, which helped our self-studying and improved our knowledge. I think it is my duty to pay attention towards photography and apply the newly acquired technique to my work.

Acknowledgements

I would like to send my gratitude to Professor Anura Manatunga, Director General of the Department of Archaeology, Sri Lanka; Archt. Prasanna B. Ratnayake, Director (Architectural Conservation), Department of Archaeology; Rasika Disanayake, Assistant Director (Promotions Section), Department of Archaeology; D.M.P.B. Disanayake, Assistant Director (Central Province), Department of Archaeology and other officers and friends who encouraged me to participate in this workshop. Finally, my respectful thanks are offered to Mr. Nakamura Ichiro and ACCU Nara. I appreciate their contribution to organising the workshop under difficult situation surrounding COVID-19 pandemic.



Charitha KARUNARATNE

Technical Officer

North Western Province Office, Department of Archaeology

The programme on photographing cultural heritages organized by ACCU was very. It was possible to acquire great understanding on how to photograph cultural heritage. Although I had little knowledge on photography before the programme, I was able to improve my knowledge and gain understanding of basic facts of photography through this programme. I felt it somewhat difficult at the beginning of this online learning programme, but I could acquire the knowledge and complete the programme successfully in the end.

Although I am not a professional photographer, the officers of the Department of Archaeology have to participate continuously in photographing cultural heritages. This programme proved to be useful in avoiding a number of difficulties we experienced on those occasions.

The lecture videos on how to set up a background for photography, camera settings, and others were useful for us to improve the quality of photographs in the future. I also acquired good knowledge about storing and saving data. We had some problems. For example, although it was mentioned in the lecture that it is suitable to save and store photographs in RAW format, it is JPEG that is commonly used for photographs in Sri Lanka. This problem which arose from the differences between RAW and JPEG qualities was resolved at the interactive session in which we were able to connect with the lecturer.

I acquired good understandings and new knowledge about how to set up the lenses, aperture and ISO sensitivity, how to set up lighting, types of cameras, how to set up a suitable photography platform as well as histogram. The lectures on lighting resolved many problems that we face in the practical field. We have to take photograph of large buildings, statues, reliefs etc. in the field where it is difficult to obtain light bulbs. We were able to inquire the problems that arise in such a situation and get the answers to resolve them from the instructor. I also acquired a special experience on how to photograph the object with respect such as Buddhist statue. It will be possible to use this technique for the tasks to be carried out in the future very effectively.

It was a problem of this programme that we were unable to use practically the theories we obtained during the workshop. If we were given the opportunity to put these theories into practice, we would have acquired understandings and knowledge regarding practical problems on photography.



Sugath Wanigarathna JAYASEKARA
Photographer
Department of National Museums

The workshop on photographic documentation organised by ACCU is essential for studying cultural properties. Accordingly, the training programme was held for a group of Sri Lankans who are engaged in the relevant field of cultural properties. I would like to express my thanks to the National Museums Department for providing the opportunity to participating in this programme.

The lecture videos explained the basic facts of photography, which were easy to understand how cultural properties should be photographed. In the video B and C, the basic principles of camera and its operation, and how to prepare a camera for capturing photographs were explained in details step by step in a simple manner. I learned about main settings of camera and procedures of setting the proper exposure. Also, the range of focusing, ISO sensitivity which is a main factor of the mechanism of taking photographs, and other significant factors such as the aperture and shutter speed and their connection were explained with images. It was easy to understand how to take photographs correctly even for the amateur officers who are not professional photographers but have to document cultural properties.

The videos D and E explained how to identify a histogram when photographing an object and presented how to set up lighting with demonstrations. Through these presentations, I learnt how to provide proper lighting and how to check the histogram when photographing cultural properties, and accordingly, we are able to set up lighting correctly in order to obtain the histogram accurately. Similarly, the videos explained that the knowledge on histogram is necessary for processing a photograph on a computer. I also acquired the knowledge on how to set up proper exposure when photographing cultural properties and how to process a photograph with a proper software.

Videos F, G, and H demonstrated how to photograph three-dimensional objects and flat objects. They clearly presented how cultural properties should be photographed and how lighting should be adjusted according to the nature of the specific object. The clear explanations in the videos enabled us to acquire the knowledge on how to set lighting according to the physical nature of each object, where the main light should be placed, how to control the intensity of light, how to prepare a background correctly, and how to adjust the angle of camera in order to highlight the details of the object.

On the second day of the workshop, we viewed the lecture videos again one by one and had discussions among the participants. The dialogue enabled us to improve our knowledge acquired from the videos.

I would like to appreciate Mr Nakamura Ichiro for delivering the presentations and replying to questions raised by participants and showing us practical activities in the live Zoom session. We hope that another workshop including practical training will be held in the near future subsequent to this programme that we obtained the knowledge



Vithanage Don Jayan LAKMAL
Assistant Director
Department of National Museums

The workshop on cultural heritage photography organized by ACCU Nara institution and the Department of Archaeology was helpful to acquiring much knowledge. This training workshop was useful in obtaining a basic level of knowledge related to photographing cultural objects, to me who is an amateur in the field of photography. The knowledge on camera settings to be followed in the process of photography, operations and suitable equipment to be used on those occasions were provided by the experts of the Nara National Research Institute for Cultural Properties. I could understand the importance of the professional process of photographing cultural properties which pays attention to even small points we have not considered before. I learnt the procedure of lighting that is used in photographing cultural properties. Also, another significant point of this programme was acquiring theoretical knowledge and understanding the technical methods for photographing three-dimensional objects and flat objects. The ideas and views were expressed by the senior photographer with many years of experience in the field of photography, and the instructor gave us the advice and exchanged ideas at the interactive session. It was important guidance for the participants who are amateurs in the field of photography.

This workshop provided the amateur photographers with the important opportunity to learn the things that they did not know. The instructor who are engaged in photography exchanged knowledge, problems, and associated technical requirements. The knowledge acquired through this workshop is useful in the process of photographing cultural properties and in the successful maintenance of our work in this field. As an officer of the Ethnology Division of the National Museums Department, the knowledge acquired through this

workshop can be used very effectively in various tasks such as documentation of museum objects, conservation, research, and publishing report. There require effective photographs.

I also learnt how to reveal more information and value of a museum object when it is photographed and how to photograph an object with a white or colourless background and realized that we should change some of the traditional procedures that we followed up to now. Instead of taking a photograph simply as we have done, we should follow the theoretical methods depending the object to be photographing. The knowledge provided through the workshop was helpful to update the technical strategies we follow. I learnt how we should plan and improve the processes of photography work according to the international standards and how we can use resources effectively. Through this online workshop, I could gain a huge knowledge and facts provided by the instructor Nakamura Ichiro in a simple and attractive way. During the Zoom session, as he gave a demonstration with explanations, the participants could successfully obtain answers to their problems. If it is possible to conduct a practical training in this programme as well, the programme would be more successful and we could obtain more results.

It will be thankful if experts come to Sri Lanka from Nara after the COVID-19 situation is settled to certain extent and provide us with practical training. Overall, the online workshop organised by ACCU Nara and the Department of Archaeology was very successful.





Nuwan Sampath UYANAGE

Chemical Conservation Craftsman

Chemical Conservation Division, Department of Archaeology

1. Through this workshop, I gained a lot of knowledge such as: equipment used for photographing archaeological artefacts; how to set and handle lighting for photographing archaeological artefacts; RAW files; types of cameras suitable for photographing archaeological artefacts; size of sensors; aperture, shutter speed, and ISO sensitivity required for sharp images; how to use a tripod correctly; types of tripod; how to change the direction of light; how to photograph three-dimensional objects; how to minimize highlights by making the lighting soft; clear exposure and histogram; the importance of white background for photography; how to set white balance properly; how to take high-quality photograph by making use of minimum of resources; and so on.

I could learn the methods to take photographs without harming archaeological artefacts, to photograph valuable archaeological artefacts with proper respect provided, to use correct lenses according to requirements, to control light using diffusers, to minimize reflections in photographing, to set lighting for large-sized archaeological artefacts correctly, to photograph flat objects, to prevent noise, to take photographs with high resolution, and so on. I also understood about RAW, JPEG and TIFF formats, and RGB colour, which are basic principles of photographing cultural heritage. Similarly, I learnt that with either white or grey colour can be used for a background when documenting and photograph.

2. In the Chemical Conservation Division of the Department of Archaeology where I work, photographs of objects have to be taken before and after conservation work. In the future it is possible to use either a white or grey background when photographing cultural objects as the instructor mentioned. Also, RAW format can be used instead of the JPEG format. When photographing cylindrical objects, we have to use an incline and handle lighting so that we can highlight its three-dimensional qualities. The knowledge of photography for archaeological artefacts is important for me. It is also useful to save obtained photographs using several methods, e.g., HDD – DVD, for future protection.

3. As a student and member of The National Association of Photographers – Sri Lanka (NAPSL) recognized by PSA – Photographic Society of America and FIAP, I have to thank ACCU Nara. The online course on photographing archaeological artefacts was concluded successfully and useful for my employment as well as my photographic career and future use of the Department of Archaeology. It was extremely important and valuable. A price cannot be put on this valuable course and my heartfelt thanks go out to the Director of ACCU, Morimoto Susumu who provided this course for us and Nakamura Ichiro who delivered a very valuable lecture as well as all others.



J.A.D.M. Menaka JAYASURIYA
Archaeology Research Officer
Central Province Office, Department of Archaeology

As an Archaeology Research Officer of the Department of Archaeology, I got a great opportunity to participate in the ACCU workshop for Cultural Heritage Protection. I have never studied photography and participated in a workshop like this. So, I learnt a lot of information and theoretical factors of photography for cultural heritage. Through watching the lecture videos, I got the basic knowledge on photography for cultural properties and its utility as well as the importance of documentation. I learnt how to conserve our cultural properties, and furthermore, I could expand my knowledge about cameras and the factors which we must keep an attention when photographing.

This workshop was very important for my profession in many ways. Because under my professional affairs, I have to take charge of creating inspection reports of architectural monuments, conducting conservation and maintenance projects, documentation of movable artefacts, and making final reports. Photographs must be included in the reports to record the present condition of the cultural properties. Actually, I did not pay much attention to lighting before this workshop, but I understood the importance of lighting for photography. Besides, Mr. Nakamura Ichiro pointed out the very simple but very important factors. It was very useful for us to take high-quality photographs and do my duty well. Furthermore, we traditionally use a colourful background when taking photographs, but I understood it is not good in this workshop.

This online workshop was very important to get a lot of information about photography. If we could join practical sessions, we could have understood some theoretical parts easily. However, this program helped us exchange our ideas with the instructor in many ways. So, it can be identified as an important programme to enhance our knowledge and collaboration.

Finally, I would like to give my heartfelt thanks to the team of ACCU Nara and the Department of Archaeology in Sri Lanka for giving us this great opportunity so that we can preserve the cultural heritage for the next generation.



Romesh Tharaka JAYAWEERA

Technical Officer

Polonnaruwa District Office, Department of Archaeology

The programme on photography for cultural heritage organized by ACCU was very successful. It was possible to gain great understanding of photographing cultural heritage. I did not have any knowledge about a histogram previously and I was able to get to know about it through this programme. Also, I was able to gain extensive knowledge about using a white background for photographs and good understandings of the facts that I should consider when taking photographs in manual mode. Although it was somewhat difficult during the initial stages of this remote learning method, later I was able to join the programme successfully and obtain knowledge.

Although I am not a professional photographer, as an officer of the Department of Archaeology I have to participate continuously in photographing cultural heritage. This programme proved to be useful in avoiding a number of difficulties we experienced in those occasions. Through the lecture videos, I could learn how to set up a background for photography and acquire the knowledge regarding a camera, which is useful enough to increase quality of photographs in the future. Also, I acquired good knowledge about storing and saving data. There are the problems we faced.

Although it was mentioned in the lecture that saving and storing photographs in RAW format is suitable, in Sri Lanka it is JPEG that is commonly used for photographs. It was possible to resolve the problem which arose regarding the differences between RAW and JPEG qualities when we participated in the live session with the lecturer.

I acquired a good understanding and new knowledge about how to set the lenses, aperture and sensitivity when photographing cultural properties. It was possible to gain knowledge about the sensitivity of a photograph, setting up lighting as well as types of cameras. Also, I acquired knowledge about setting up a suitable platform when taking photographs as well as about a histogram. In the lecture on lighting, it was possible to resolve many problems which arose in the practical field. In the field, large buildings, statues, reliefs etc., have to be photographed. During those instances it is difficult to obtain light bulbs. We could inquire the problems that arise in such a situation and resolve them.

For photographing an object of respect, such as a Buddhist statue, I acquired a special experience on how to take a photograph with respect. It will be possible to use this technique in the tasks to be carried out in the future very effectively.

A problematic situation faced in this programme was being unable to use practically theories we obtained during the workshop. If we were given the opportunity to put these theories to practice, we would have understood practical problems of photography.



Indrajith PERERA
Archaeology Research Officer
Kegalle District Office, Department of Archaeology

These are the outcomes of the workshop I acquired:

Camera Settings and Operations

Learning how exposure works will help me take control of my camera and take better photos. Shutter speed, aperture and ISO sensitivity are the elements to combine exposure.

Aperture

This is a hole inside the lens through which the light passes.

Shutter Speed

Shutter speed, also known as “exposure time”, stands for the length of time that a camera shutter is open to expose light into the camera sensor. If the shutter speed is fast, it can help freeze action completely. If the shutter speed is slow, it can create an effect called “motion blur”, where moving objects appear blurred along the direction of the motion.

ISO Sensitivity

Once the light has passed through the aperture and been filtered by the shutter speed, it reaches the sensor. This is where we decide how to set the ISO.

Understanding a Histogram

The histogram shows a mathematical review of exposure after the photo has been taken. It tells you how evenly exposed a photo is. I found it useful to understand.

Use Storage

- I. Memory Cards (SD, CF & USB)
- II. Hard Disk Drive (HDD)
- III. Optical Disk (CD-R, DVD-R & BD-R)

Understanding Colour Scheme

1. RGB (use this scheme for best results)
2. CMYK

White balance

White balance changes the colour cast of the entire photo and is responsible for the overall warmth. It can determine whether my photo appears blue or orange: from cold to warm.

As the name suggests, 'white balance' balances the colour temperature in the image. It adds the opposite colour to the image in an attempt to bring the colour temperature back to neutral. Without appearing red or yellow, white appears correctly in the image after proper set of white balance.

Data Handling

1. Data for archives
2. Data for printed publications
3. Data for internet
4. Data for large scale prints

Recommendation to Use a Tripod

1. Ability to photograph in low light
2. Ability to photograph long exposure
3. Better stability
4. Get sharper images
5. More time to create shots
6. Ability to frame and adjust photographing easily

Shooting Mode

Modern DSLR cameras typically have several shooting modes:

1. Program mode (P) - Camera intelligently chooses shutter speed and aperture to achieve correct exposure
2. Shutter priority (S) - User sets shutter speed, camera chooses appropriate aperture
3. Aperture priority (A) - User sets aperture, camera chooses appropriate shutter speed
4. Manual mode (M) - User sets both aperture and shutter speed

Utility for My Job Opportunities

1. Take high-quality photographs for project report
2. How to highlight detailed information of artefacts and monuments
3. Use simple lighting techniques for cultural properties

Online workshop

1. It is very useful academic session as a distance education method
2. Share with theory and practical techniques for photography



Dammi BANDARA
Archaeology Research Officer
Epigraphy Division, Department of Archaeology

The ACCU workshop for cultural heritage protection was organized to create awareness on the techniques to be followed in taking photographs of cultural properties. It was held for three days from 25th to 27th January 2021. Twenty participants of the Department of Archaeology and the National Museum participated in this event. This workshop was conducted in three phases. The resource person was Mr Nakamura Ichiro, official research photographer of the Photography Section, Department of Planning and Coordination, Nara National Research Institute for Cultural Properties, Japan. This workshop was conducted online and all the videos related to the session were uploaded to their website on 25th January, and all the participant required to study these videos at home. On the second day (26th January), the participants gathered at the Ulpange Conference Hall in Kandy, Sri Lanka to discuss the content of the relevant videos and the problems encountered from the self-study. Only a few of the participants were in the field of photography and they also provided their immense support to others for understanding the content of the videos especially the technical aspects of the photography. On the third day, various issues related to photography were discussed and resolved through the online session using Zoom with Mr Nakamura.

The workshop was organized mainly in six topics i.e., Basic knowledge of Cultural Properties, Camera Settings and Operation, Understanding a Histogram, Lighting, Photographing 3D Objects, and Photographing Flat Objects. These topics were aligned with the objective of understanding of the protection and conservation of cultural heritage, and the main purpose is to document cultural heritage.

This workshop was very much informative for myself and I can summarize the knowledge I gathered as follows:

It was important to pay attention to the types of cameras and lighting conditions to be used when taking a photo. There is a clear difference between photography with cultural values and ordinary photography. We have to focus on a few points to be followed in taking photographs with cultural values. The background colour used for photography is one of them. When a colourful background is used for photography, the colours are reflected and there are obstacles to accurately reproducing those of cultural properties. Therefore, it is clear that this problem could be avoided by photographing using a white background. It was also explained that the colour range of cultural property can be kept accurate even if the background is changed after taking photos with a white background. This is one of the techniques that I had never experienced before.

When photographing different shaped cultural properties, the knowledge of angle and the advised on controlling light according to the direction in which the light should be applied can be used. It was also described how to take a white object on a white background and how to photograph shiny objects. I also gained clear understandings of aperture, shutter speed, and ISO sensitivity that change when taking photos.

In addition, it was stated that the memory card should be formatted in the camera itself and it was not advisable to delete the non-standard photos taken by the camera.

My field of study is ancient inscriptions and coins. So far, the coins were photographed on a red background. In future research, the use of a white background will help take photographs that preserve the natural colour of coins. I also had a clear understanding of the directions of light for taking photographs of the form of inscriptions or symbols.

I would like to express my appreciation to ACCU Nara, the Department Archaeology and the Department of National Museum for organizing such an informative workshop. Also, if we can have the hands-on training session related to this workshop, it would be a great experience for all of us. Technology the countries like Japan have are well ahead of us. So, if we can get a training in Japan, it will definitely be an advantage for the protection and conservation of cultural heritage in Sri Lanka.