



ICOMOS

ICAHM

**International Committee
on Archaeological
Heritage Management**

ICAHM'S 2014 ANNUAL CONFERENCE

2014 ICAHM 年会

Universal Standards for Archaeological Heritage Management

世界考古遗产管理标准

Jishou, China | 20 – 23 October 2014

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CONFERENCE REPORT

Contents

Introduction.....	4
Opening Session	5
Willem J.H. WILLEMS.....	5
Douglas C. COMER.....	6
TONG Mingkang	8
The Management of Linear, Transnational and Serial Sites such as the Silk Route, the Roman Limes or the Great Wall	17
Universal Standards for Archaeological Heritage Management - Part I	24
Universal Standards for Archaeological Heritage Management - Part II	29
Workshop on Development, Compliance and Archaeological Heritage: working with international finance and business	33
The application of aerial and satellite remote sensing to archaeological research and heritage management.	37
Incorporating intangible culture into management and research programs	41
Representing and preserving minority cultures and dealing with Stakeholders	45



In memory of Willem J. H. Willems

1950 - 2014

Co-President ICAHM



Introduction

ICAHM, the ICOMOS International Committee for Archaeological Heritage Management, is very pleased to have been able to organize this Annual Conference on Standards for Archaeological Heritage Management in the PR China. We have found that contacts between archaeological heritage managers from western countries and from China are still quite limited while at the same time an exchange of expertise is highly valued. Where best practices in archaeology are concerned, both sides have much to offer. Of course there are challenges such as the language barrier, but this can increasingly be overcome as was shown by the meeting in Jishou from 20-23 October 2014.

When ICAHM received an invitation from Jishou University, we were therefore very happy to accept it. The fact that the meeting could actually take place is also due to the invaluable assistance from ICOMOS-China, who provided crucial help in co-organizing this meeting with us. We could never have done this without their assistance before and also during the meeting. In addition, we are grateful to our colleagues from Chengdu and Xi'an for their highly appreciated involvement in organizing interesting excursions and to ArchaeoConcept from Switzerland in assisting with the factual preparations and on site.

Although the venue was not easy to reach and travel expenses prevented a number of ICAHM members from attending, we ended up with well over 100 participants from East and West that engaged in lively discussions with the help of a group of dedicated Jishou students acting as interpreters. We hope that the meeting will prove to be a starting point for fruitful discussions about principles and best practices that will continue in the future, but also of friendships that last. After all, new initiatives and directions are not only borne out of joint efforts that are interdisciplinary and intercultural, but out of the personal relations that went before that.

This publication contains the abstracts of all papers with a short introduction by the session moderators, as well as the full texts from the opening session. We are grateful to Mrs. Annemarie Willems, MA, from ArchaeoConcept, Switzerland, for editing this volume, to Jun Zheng from ICOMOS-China for his help in collecting all texts and to the P.J.R. Modderman Stichting, Leiden, for financial support.

Prof. dr Willem J.H. Willems, Leiden University, The Netherlands
Dr Douglas C. Comer, Cultural Site Research and Management, USA
Co-presidents of ICAHM



Opening Session

Willem J.H. WILLEMS

Co-president ICAHM

It is with great pleasure that I welcome you all here this morning for the opening of the Annual Conference of the International Committee on Archaeological Heritage Management, ICAHM. ICAHM, as you all know, is an intentional committee of ICOMOS, the international organization that is concerned with monuments and sites. The central mission of ICOMOS is the development and implementation of international standards and guidance for the preservation, conservation, restoration and even the reconstruction of monuments and sites. We also advise UNESCO, but primarily we try to develop norms on what is good practice and what is not and we identify what should be best practice: the goal to strive for.

The ICAHM Committee does those things for one specific field of cultural heritage, namely the archaeological heritage, the remains from the past that mostly lie invisibly beneath our feet, where ruins and mounds and other surface features give only an idea of what lies underneath or that are even completely invisible. My co-president Douglas Comer will speak further on these issues later on.

For now, I would like to emphasize that such a task can only be accomplished in an international setting, where there is an exchange of information and knowledge across borders, where we all can profit by learning from each other about best practices, where we can exchange technical information and most important: where we can discuss what the international standards should be.

The meeting here in Jishou was designed to do just that. When last year we were invited by Jishou University, through the good services of Prof. TANG Zijun, the ICAHM executive decided to accept that invitation. As you are all aware, Jishou is not the easiest place to reach, but we thought that a place of learning where minorities have special status would fit very well with the ideas of modern heritage management. It has not been easy, and we are less numerous than at our last meeting in Cuzco, Peru, but I am sure it will be worth it.

We could not have organized this meeting without the support of our Chinese colleagues from ICOMOS China. Without their experience and full support as co-organizers we would not have been here today, and I would like to thank ICOMOS-China in the person of its President Mr. TONG Mingkang. We are honored that you are with us here today sir, and that you have agreed to deliver the keynote opening address.

I would like to thank also our colleagues from Chengdu and from Xi'an for their help in organizing the excursions. And last but certainly not least, the generous support of Jishou University has been extremely important to the realization of our meeting here today, and it will continue over the next days. I am very glad indeed our hosts have found a solution for the translation problem with the help of Chinese students that will interpret for us.

So for now, I would like to conclude by thanking Jishou University for all their help and I would like to ask its General Secretary Mr. BAI to preside over this opening session. We are honored, sir, that you have accepted to fulfil this role.

Douglas C. COMER

Co-president ICAHM

I would like to thank Jishou University and ICOMOS China for their invaluable contributions to this conference. Without them, it would not have been possible.

The theme of our conference is Universal Standards for Archaeological Heritage Management. As we begin, I would like to take a very few moments to think about why such standards are needed, and the strategic value that they might serve.

As archaeologists, we should know that history has not proceeded at a constant rate. Change occurs in fits and starts, but beyond a doubt the pace of change has accelerated as human have become more and more adept at exploiting the environment. This has produced such enormous environmental alterations that today there are serious questions about sustainability. Have we altered and degraded the environment so much that ultimately it will no longer be suitable for human life, except, perhaps, a life in which we must tolerate very unpleasant conditions? This much we can intuit from the archaeological record. If carefully and systematically, studied, however, the archaeological record can tell us much more. There are lessons about limits of acceptable change, the reasons for the many episodes of environmental and cultural collapse that have occurred all over the world, and the circumstances and times at which this occurred. Through archaeological research, we can hope to identify those points beyond which we should not venture, and do so in time to change course before we reach those points.

Ironically, though, the material record that might provide the data we need for this analysis is also rapidly disappearing, along with other resources, such as forests and stocks of fish in the sea. What makes this an especially great loss is that unlike forests and stock of fish, the material evidence of the past is non-renewable.

Therefore, in setting standards for archaeological heritage management, we are acting in the service of the World Heritage Convention. The Convention was intended to put programs and institutions necessary to the conservation of natural resources and the preservation of cultural resources in place in countries around the world.

One institution that was established by the World Heritage Convention, however, threatens to eclipse the most important objectives of the Convention itself. This is the World Heritage List. The List is an excellent thing, in and of itself. It promotes the international understanding that is necessary to what is perhaps the most essential of all global public goods: peace. As the Constitution of the United Nations Educational, Scientific and Cultural Organization, Adopted in London, 16 November 1945, famously puts it, "...since wars begin in the minds of men, it is in the minds of men that the defenses of peace must be constructed."

Nonetheless, The World Heritage List and the economic benefit of establishing "branded" tourism destinations threaten to eclipse these more important objectives. In the rush to enjoy the economic benefits that sometimes accompany inscription, sites are being inscribed on the World Heritage List before adequate management is in place. How do we contend with this?

To begin with, by developing standards for archaeological heritage management. We intend to proceed with this as follows:

- Contacting key stakeholders
- Outlining the essential issues to be addressed
- Producing draft documents for review by stakeholders
- Publication of standards in the ICAHM-Springer series

We are developing a prospectus for the series, and identifying contributors. We hope standards in print by the end of 2015.

Then, we must make use of these standards as follows:

- ICAHM and others who evaluate nomination dossiers will refer to the best practices
- States Parties can refer to the best practices document while developing nomination dossiers
- If management capacity does not conform to best practices, the States Party can request assistance in developing capacity from any number of organizations (US/AID, JICA, etc.)

ICOMOS refers to this as working “upstream” in the nomination process. Fully developed management capacity should serve as a model for other heritage sites.

We will be successful when we can see that the benefits that accrue from inscription of a site on the World Heritage List are both local and global. Local benefits are those that provide economic and social development to communities in a country that has successfully inscribed a site. Yet for these to be sustainable, they must also be global. Benefits enjoyed in an equitable manner promote a domestic tranquility that serves the interest of all countries of the world, simply because people who are engaged and content with their own lives are much less likely to look elsewhere in disruptive ways for what they require. This is an aspect of heritage management that we ignore at great risk. More generally, effective management ensures that a site will not be destroyed in the long run in pursuit of short term goals. A well-managed site serves the goal of international understanding by presenting the history and culture of the country in which it is located effectively and in a way that visitors can enjoy.

Over the next few days, we will be discussing the many facets of archaeological heritage management. Among the most practical and important these are ways that we might use to inventory, evaluate, mitigate, and monitor sites and landscapes, and to zone within sites, landscapes, and regions. Yet we must also address issues about which most archaeologists have not received formal training. We, as heritage managers, must learn about them to carry out our responsibilities effectively by developing the skills to operate in what is now a worldwide marketplace, in ways that benefit both local economies and global public goods.

ICAHM looks forward to our discussions, and to working with you over the coming month and years to develop and implement standards for archaeological heritage management.



TONG Mingkang

Deputy Director of the State Administration of Cultural Heritage / President of ICOMOS China

Archaeological Heritage and Its Management in China - archaeology, conservation and management

On behalf of the State Administration of Cultural Heritage of China and ICOMOS China, I would like to express warm congratulations on the successful convening of the conference and extend warm welcome to participating experts and scholars in archaeology coming from afar!

Archaeological heritage represent an extremely important category of cultural heritage of mankind, provide substantial physical evidence for the people today to learn about their past as human beings, and play a significant role in continuing cultural traditions and advancing social development in the contemporary context. With the ever-enhanced awareness of outstanding universal value of archaeological heritage, more and more archaeological monuments and sites have been inscribed on the World Heritage List by the UNESCO World Heritage Committee. Over the years, ICAHM has been committed to the development of theories and practices regarding archaeological heritage management. As the only scientific committee specialized in archaeological heritage under ICOMOS, ICAHM has played an active and crucial role in improving protection and management of archaeological heritage and facilitating nomination of archaeological properties for World Heritage status.

China is an ancient civilization that boasts a great variety of archaeological heritage in large numbers and with significant value. Governments and cultural heritage authorities at various levels in China attach vital importance to the protection and management of archaeological heritage, which has already been incorporated into the national plan for cultural heritage conservation. The system for the protection and management of archaeological heritage is well in place in China, covering all ancient sites and tombs and giving priority to what we call "Large-scale Archaeological Sites". Thanks to enormous input of human, material and financial resources, archaeological heritage in China has been put under effective protection and continued efforts have been made to improve protection, presentation and utilization over them, so that archaeological monuments and sites distributed across the vast land of China have come back to life. Professional institutions in China, including China Archaeology Society, based on their exceptional expertise, have made active endeavors to provide strong technical support for the protection and management of archaeological heritage.

This annual conference provides not only a platform of discussion on theories and practices of archaeological heritage management but also a rare opportunity for Chinese professionals to conduct dialogue and exchange with their international colleagues. Chinese participants can draw upon from advanced experiences and methods of other countries, while the international community has a chance to hear from their Chinese counterparts. I hope that beginning from this session, Chinese institutions would increase communication and exchange with ICAHM and broaden and deepen cooperation with ICAHM.

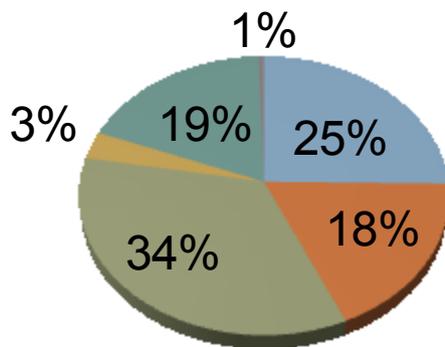
Archaeological Heritage in China

General information

Archaeological heritage represents an important category of cultural heritage resources in China, an ancient civilization with time-honored history. Statistics of the third nationwide survey of cultural heritage indicate that there are over 330,000 ancient sites and tombs across China, accounting for 43% of the country's total monuments and sites which register 760,000.

Number of Immovable cultural relic

- Ancient Sites
- Ancient Tombs
- Ancient Architecture
- Cave Temples & Stone Sculptures
- Modern times
- Others



Archaeological Heritage in China mainly falls into two categories: ancient ruins and ancient tombs.

Among the 47 World Cultural Heritage sites in China, five are archaeological heritage sites, including the Peking Man Site at Zhoukoudian, Yin Xu, the Mausoleum of the First Qin Emperor, Capital Cities and Tombs of the Ancient Koguryo Kingdom and the Site of Xanadu. In addition, archaeological sites and monuments constitute an important part of several other World Heritage sites in China, like the Great Wall, the Silk Roads and the Grand Canal.

Major characteristics

Briefly speaking, archaeological heritage in China bears recognizable features as follows:

First, long time span: From paleoanthropological sites dating back to up to one million years to Qing Dynasty building sites of three hundred years old, archaeological heritage in China represent diverse cultures of various periods and various areas in ancient China.

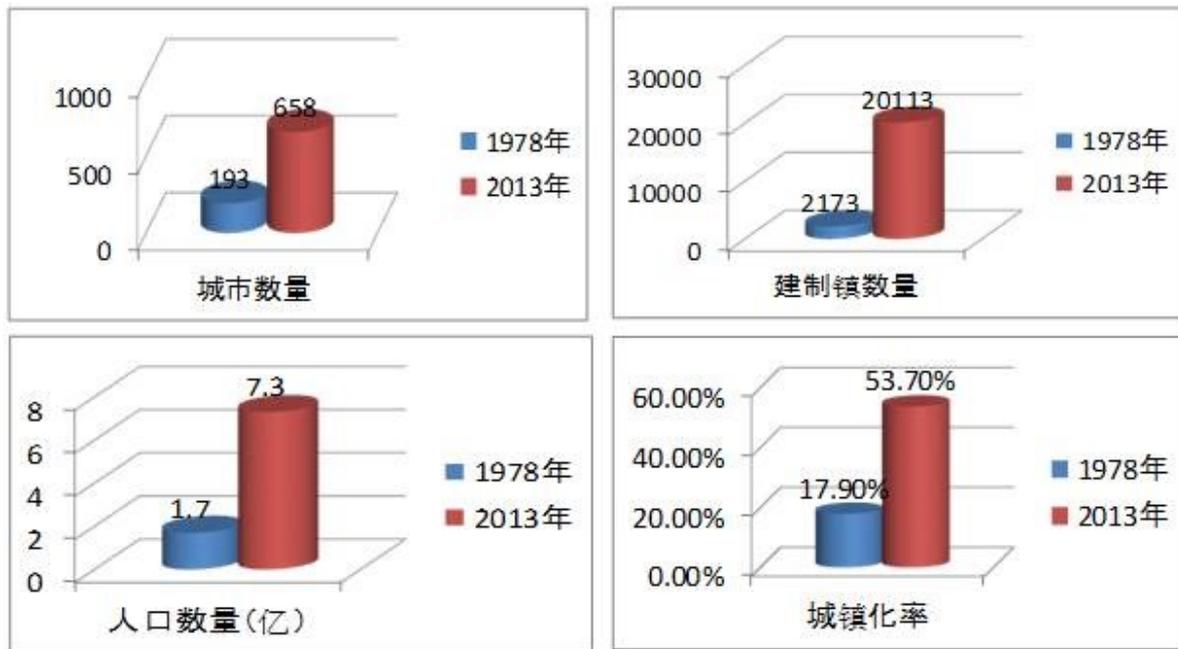
Second, large scale: There are quite a number of huge archeological sites in China, which are commonly dubbed as “large-scale archaeological sites”. These ancient sites, featuring large size, great value and significant impact, include remains of huge communities, towns, palaces, mausoleums and tombs and bear rich historical and cultural information of various periods of ancient China in politics, religion, the military, and science and technology. The site of Chang’an city of the Han Dynasty covers an area of 65 kilometers, bearing testimony to the highly-developed culture and prosperous society of ancient China.

Third, mostly made from earth and thus difficult to preserve: Most historic buildings in China are earth-wood structures. It is generally the case that only earthen materials have been preserved after hundreds of years. Earthen sites, in the face of natural and human activities, are vulnerable to damage and destruction, whose preservation and protection remain a worldwide challenge. The rammed earth site of the foundation of Hanyuan Hall, Daming Place of the Tang Dynasty

Fourth, highly overlapping with modern settlements: The Chinese civilization has been uninterrupted for several thousand years. The habitats that our ancestors chose to dwell, based on their extraordinary wisdom and knowledge, turn out to be places to live by modern Chinese as well in most cases. For example, the site of Luoyang City of the Sui-Tang period highly overlaps with the urban space of present-day Luoyang.

Current situation and challenges

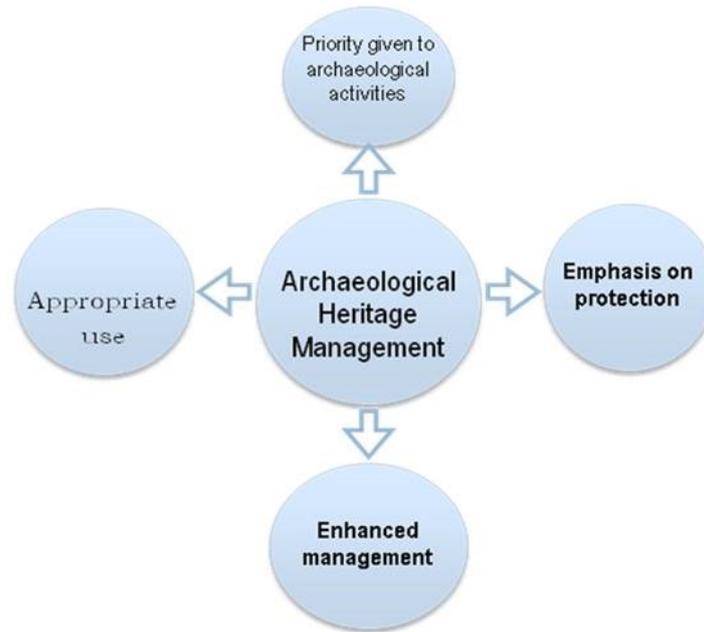
Efforts to protect archaeological heritage in China are faced with unprecedented opportunities and challenges today. Like what happened in many developed countries, China has been going through a period of fast economic growth and drastic social changes since the policy of reform and opening up was launched. According to statistics, permanent urban residents in China grew from 170 million to 730 million between 1978 and 2013, registering an increase of urbanization ratio from 17.9% to 53.7%, with an annual growth rate of 1.02%. The number of cities soared from 193 to 658, and that of designated towns, from 2,173 to 20,113.



Fast economic growth and accelerated urbanization process mean not only serious challenges but also great opportunities for the protection of archaeological sites.

Challenges: land use for urbanization and massive infrastructure construction continue to squeeze out space of existence for large-scale archaeological sites.

Opportunities: national strategies for the new urbanization drive require the protection and exploration of urban cultural resources, emphasis on cultural continuation and innovation, and urban development aimed at building cities into cultural spaces with both historical richness and distinctive modern characteristics.



Management of Archaeological Heritage in China

In response to inherent characteristics of China’s archaeological heritage and challenges they are faced with, we have adopted a management approach by focusing on the following aspects:

1. Priority given to archaeological surveys and excavation
2. Emphasis on protection
3. Enhanced management
4. Appropriate use

Priority given to archaeological surveys & excavations

Archaeological activities are considered to be basic means to reveal value and implication of archaeological heritage, the first step to obtain accurate knowledge of them, and cornerstone of protection efforts that follow, and thus play an extremely important and fundamental role. Without archaeological surveys, excavations and research activities, the protection, presentation and utilization of archaeological heritage would find no basis to rely on, just like trees without roots or water without sources.

Generally speaking, archaeological surveys and excavations in China can be summarized with following several characteristics:

- a. Emphasis on overall control. China exercises a strict review and approval system over archaeological surveys and excavations. All archaeological excavations carried out in China shall obtain approval of the State Administration of Cultural Heritage (SACH). The principle that archaeological excavations are conducted in connection with capital construction projects has been adopted and observed since the 1960s and will continue to serve as a guideline in years to come. SACH sets strict control over the number of archaeological excavation for the purpose of academic research. It allows small-scale excavation of ancient sites and small and medium-sized tombs, but prohibits excavation of imperial tombs.

b. Emphasis on academic purpose. Surveying, mapping, prospecting plus small-scale excavation for the purpose of academic research is recommended in order to obtain accurate knowledge and information about following aspects of archaeological heritage:

- Scope and layout of distribution of the site;
- Relationship between the site and its setting;
- Nature and core value system of the site;
- All types of information pertaining to the site protection, such as building techniques and material properties.

c. Emphasis on planning. With regards to grand sites or other important archaeological sites, a work plan for 3 to 5 years is required to be completed in advance, aimed at academic issues or protection needs to be addressed, in which work objectives for different phases and annual work schedules are included.

The work plan, based on conventional methodologies of archaeology, is to carry out comprehensive research in targeted sites by using modern technology such as three-dimension digital scanning, aerial remote sensing and others.

Archaeologists are also heritage conservators and should participate in efforts to protect, present, utilize, and formulate protection plans for archaeological sites following their excavation, and provide important protection and management advice and proposals for decision makers.

Taking the Maoling Mausoleum as an example, archaeological activities in Maoling Mausoleum adopt the approach of “overall investigation, large-scale general survey, detailed survey in key spots, trial excavation in key positions, high-precision mapping, and information digitalization”. After more than one year of field surveys, archaeologists have, for the first time in history, identified the layout of the tomb of Emperor Wudi of the Han Dynasty. The mausoleum faces east, with the emperor’s tomb as the center and encompassed by inner walls and outer walls. Several hundred outer burial pits are distributed around the mausoleum and over 50 accompanying tombs line up along the Sima Passage. The mausoleum town is located to the northeast of the mausoleum.

Liangzhu Site was first discovered in 1936. Archaeological activities in following decades have gradually unveiled the scenarios of the site. In 1986, Fanshan Remains in Liangzhu Site were found, with 11 large tombs excavated. As of 2007, a total of 135 sites had been discovered within this huge site complex. In 2007, Liangzhu Ancient Town was discovered, recognized as the largest town site of the period ever found in China.

The Old Tusi (chieftain) Town Site is located in Yongshun county, Jishou city, Hunan province, where our meeting takes place. After systematic archaeological activities, this ancient chieftain town site has been unveiled. Site remains are distributed in an area of 534 hectares. The town center is located in a gentle slope at the east bank of Lingxi River, covering an area of 19 hectare. Other remains are distributed along both banks of Lingxi River.

Emphasis on protection

As a type of non-renewable, non-replicable cultural resources of public nature, archaeological heritage survived over thousands of years until today, but they are fragile and sensitive. Protecting them well is our top priority. Authenticity and integrity remain essential to protection efforts. All protection efforts should be carried out based on authenticity and integrity.

Protection of archaeological heritage includes following aspects:

- a. Protection of the heritage itself. All possible tools should be adopted to reduce negative impact on the heritage itself caused by changes of natural environment, so as to delay the process of damage and prolong its existence. The principle of minimal intervention should be observed and recognizable protection measures should be adopted.
- b. Protection of the overall layout. For archaeological heritage, especially large ancient town sites, their layouts, enclosure walls, road systems also constitute an important part of heritage value. Therefore, protecting them in an integrated manner is necessary for preserving the authenticity and integrity of archaeological heritage.
- c. Protection of the environment. Landscape settings that constitute an important part of archaeological heritage should be given necessary space control. The integrity of archaeological heritage can be preserved through adjusting land use, optimizing functions and restricting building height.

The unique Southwest China agricultural landscape developed around the Sanxingdui Site reflects harmonious co-existence between the site and local residents.

Enhanced management

Daily management is a key to archaeological heritage management. Good daily management is an effective tool to keep archaeological heritage safe and sound. Monitoring and pre-evaluating of threats facing archaeological heritage will be conducive to overall improvement of protection efforts.

China exercises a system of cultural heritage protection by classifying historic monuments and sites into state-level, provincial-level or city/county-level protection.

Basic work for the management of monuments and sites under various levels of protection are legally required as the “four haves:

- Signs and specifications in place
- Records and archives in place
- Protected scope and construction control zone in place
- Special protection institutions and personnel in place

The Old Tusi Town Site is a good example. Based on distribution of historic remains and their interdependence with surrounding mountains and rivers, and taking protection needs into full account, necessary protection scopes and restricted construction zones have been set up and detailed management rules worked out for the protection.

A special administration unit for the protection of the ancient Tusi town site was set up in 2002. This protection unit was upgraded as a division-level government body in 2012, responsible for the site’s protection, management, archaeological activities, publicity, and safety control and monitoring.

Meanwhile, capacity building of management bodies also provide important guarantee for improved management. Talent training is essential to capacity building of management bodies, which should

primarily focus on training in expertise and knowledge and on increasing the number of professional personnel.

With regards to the Tusi site's information management, 412 sets of archives have been put in file, including maps, archaeology reports, protection project plans and laws and regulations, in addition to 183 copies of historical literature and research books and over 5,000 photographs. An E-archive management system has been set up, with special rooms for the storage and use of archives. As a result, these archives are managed in a systematic and digital manner.

Developing conservation plans is a basic tool to exercise management over archaeological heritage. Conservation plans are based on the integrated protection of archaeological heritage itself and its settings. With systematic information processing regarding preservation status, local communities, and local urban and rural development, the protection plan should accurately evaluate major threats and destructive factors facing the archaeological heritage, effectively demarcate protected zones and work out management rules, work out protection measures and tools, and offer a solution to coordinate and harmonize archaeological heritage protection and regional social and economic development.

Regular patrol and continuous monitoring is an important tool of routine management.

Routine management should adopt the approach combining prevention by man with prevention by technology. On one hand, management personnel should be highly responsible; on the other hand, hi-tech instruments and approaches should be used in a reasonable manner to improve routine management.

Appropriate use

Archaeological heritage were historic remains that are preserved today. As Italian philosopher Benedetto Croce said, "All real history is contemporary history". Appropriate use of archaeological heritage inevitably bears the footprint of the times. Cultural needs of contemporary people should be met, and interest needs of stakeholders, including government, original residents, professional institutions and even construction project managers, should be coordinated and balanced. Utilization practices that meet needs of all parties can be deemed as appropriate.

Building national archaeological parks is a major initiative that China has taken to reasonably utilize archaeological heritage. This initiative reflects a result of all-win by various stakeholders in the context of fast urbanization drive in China today, and represents effective efforts to realize the sustainable conservation of archaeological heritage and safeguard cultural diversity.

A national archaeological park is defined as a particular public space consisting important archaeological sites and their settings, featuring research, educational and recreational functions, and bearing nationwide exemplar significance in protecting and interpreting archaeological sites.

SACH has so far proclaimed 24 national archaeological parks and ratified 44 candidate projects. Statistics indicate that the total area of national archaeological parks in China reaches up to 900 square kilometers, making up nearly 0.01% of China's total territory.

The unique value of national archaeological parks is as follows:

- a. Taking the site as content and the park as form, stressing the public nature and calling for sharing of protection achievements by all.

Taking Daming Place Site as an example; the Daming Palace of the Tang Dynasty was the most spectacular and magnificent building complex among the three imperial palaces in Chang'an, capital city of the Tang Dynasty (the other two are the Taiji Palace and the Xingqing Palace). Dubbed as an outstanding example of gardening and architectural art of the East, the Daming Place is a trapezoid structure covering an area of 3.5 square kilometers. Featuring the layout of "court in the front and bedroom in the back", the Daming Palace is a symmetric construction built along the axis line, starting from the Danfeng Gate in the south and ending at the Taiye Lake in the north.

Daming Palace National Archaeological Park was established based on archaeological excavations and research results, with the purpose of protecting the site's authenticity and integrity. Great efforts have been made to present the site authentically and interpret the site's values accurately. Various ways of presentation and utilization have been adopted by Daming Palace National Archaeological Park, based on characteristics of its archaeological remains. For example, in response to visitors' needs and based on results of history and archaeological research, active efforts have been made to explore appropriate approaches to the interpretation and presentation of the site of the Daming Palace, which primarily include the following:

While marking the remains of the Yanying Hall with rammed earth, partial imaginative reconstruction as a way of interpretation; abandoned buildings used to establish an archaeological exploration center, film and TV productions and display boards used to interpret the site's cultural and historical values, interactive performances staged to interpret the cultural traditions in a lively way. All these approaches have been well received by visitors, leading to good publicity, educational and social effects.

- b. Measures and efforts taken to protect archaeological heritage have also significantly promoted local tourism and benefit local people, driven transition of regional industries, and propelled the development of local economy.

Taking Old Tusi Town as an example; in protecting and utilizing the Old Tusi Town Site, original residents' historical connection with the site is fully respected. While the safety of the site is guaranteed, normal production and life of original residents are kept so as to achieve harmonized co-existence with the site.

Water, electricity, road and telecommunication facilities within the site have been improved, pipelines re-installed underground, and 100 houses newly built to relocate original residents so that they can enjoy modern lifestyle.

Funds have been mobilized to organize expertise and skill training in eco-friendly beekeeping, routine maintenance and intangible cultural heritage performances so that original residents can gain substantial benefits and improve their life standards.

These utilization practices should be carried out on the precondition that archaeological heritage is under proper protection and abide by the basic protection principles and concepts in order not to "drain the pond to get all the fish", so that archaeological heritage can not only be enjoyed by contemporary people but also be continued for the benefit of generations to come.

Conclusion

The four aspects of archaeological heritage management are an integral whole and none of them is dispensable. Archaeological work plays a fundamental role, while protection efforts constitute a major part, utilization plays an indispensable role, and routine management should be conducted

constantly. Only by properly handling the relationship among archaeological work, protection efforts, utilization practices and routine management, can archaeological heritage management be geared to a pattern of positive and sustainable process.

The above are my brief presentation of experiences and practices of archaeological heritage management in China. I hope to hear valuable comments and suggestions from you, my dear international colleagues. I believe that with our concerted efforts, more archaeological heritages will come back to life and make their irreplaceable contribution to spreading human civilizations, continuing cultural traditions, and educating the people.

I would also like to take this opportunity to express my heartfelt thanks to the conference organizer Jishou University and co-organizers IICC-Xi'an and Chengdu Academy of Archaeology and Cultural Heritage for their hard work they have done.

The Management of Linear, Transnational and Serial Sites such as the Silk Route, the Roman Limes or the Great Wall

Moderator: Peter STONE



This session comprised six papers that looked at different aspects of the history and management of three World Heritage sites: The trans-national Frontiers of the Roman Empire; The Silk Roads: the Routes Network of Chang'an-Tianshan Corridor (China, Kazakhstan, and Kyrgyzstan); and The Great Wall (China).

The session opened with a review by Peter Stone of the different management regimes that have been in place over the last twenty or so years for Hadrian's Wall, now part of the Frontiers of the Roman Empire. The paper questioned why, and for whom, we manage World (or any) Heritage sites and focused attention on the financial cost of high quality management. Chen Tongbin then outlined ideas behind conservation planning for the most important and largest archaeological sites in China and, to illustrate her paper, compared the management systems of the Frontiers of the Roman Empire and Great Wall of China. She concluded by reviewing the proposed management arrangements for the Silk Roads a topic discussed at more length by Feng Jian. Zsolt Visy then compared the history of the Roman Frontier and the Great Wall of China and drew out management issues relating to the accretion of evidence of later settlement and industry on top of the remains of, in particular, parts of the Roman Frontier. He also raised the problems faced by managers of the Frontiers given the different national legislation in place.

The next two papers then discussed how research continues to expand our understanding of these sites and therefore our ability to manage them most effectively. Tian Yaqi and Sun Zhouyong discussed the route and some major monuments of the Silk Roads. Here the emphasis was on how landscape and site survey coupled with documentary research were continuing to enhance our understanding of a complex and massive site. Yu Chunlei provided a similar insight into the Great Wall in the south Ningxia Plain.

Discussion following these papers questioned while co-operation between countries over the management of trans-national sites was (obviously) essential, whether any trans-national site could ever have a unified, comprehensive management regime given such differences in national legislation. Discussion also touched on how different political systems and legislation influenced the approach and rationale behind management regimes.

Name: Peter STONE
Affiliation: Newcastle University, UK

Abstract title: Managing Hadrian's Wall: from archaeological monument to regional asset

Hadrian's Wall is one of the most complicated heritage sites in the UK stretching from coast to coast and with some 700 owners. It passes through numerous local authorities, two National Parks and every national cultural and natural conservation agency has some role in its management.

In 1996 the Wall became the first of the UK's World Heritage sites to have a Management Plan. Since then two further iterations of the Management Plan have been produced (2002-07 & 2008-14). A fourth Plan is currently being drafted. Each Plan has reflected the management theory of its time and each has been implemented, or not, by different management regimes.

This paper addresses the differing approaches to heritage management and ends by reflecting on why heritage sites are managed at all.

Name: CHEN Tongbin
Affiliation: ICOMOS China / Institute of Architecture History, China Architecture Design & Research Group

Abstract title: A brief introduction to the Conservation Plan of the most important and largest archaeological sites in China.

This paper compares two large World Heritage sites: Hadrian's Wall of the Roman Empire and the Great Wall of the China. It compares the management plans, in terms of heritage type, overall values, time and spatial frame, component parts, environmental features and challenges that the conservation and management face. The paper then examines the proposed management plan for and coordination of the colossal cultural route, "Silk Roads: Chang'an – Tianshan Corridor", and hopes to propose a framework based on the management plan for the Great Wall of China and to establish a coordination and management system that was based on overall values for colossal cultural heritage sites.

Name: Zsolt VISY
Affiliation: University of Pécs, Hungary

Abstract title: Comparative analysis of the Roman Limes and the Great Wall

Two thousand years ago two big empires existed at the eastern and western ends of Eurasia, the Chinese and the Roman Empire. There are more parallel features between them which are of interest, but their most significant structures, the Great Wall and the Roman Limes deserve the highest scholarly interest. They are the longest built constructions of the world.

Analyzing their structure the most striking characteristic is their continuous line through thousands of miles. It follows from their function: to prevent any uncontrolled entry in the territory of the empires, to defend their territory from any invasion. The origin of the Great Wall goes back to earlier wall structures that were connected and united in 220 B.C. and thereafter by Qin Shi Huang and the emperors of the Han dynasty. There are many indications to suppose that the origin of the Roman Limes under Domitian in the eighties of the 1st century A.D. partly goes back to the Chinese experience.

The Great Wall was used through more than 1500 years; its latest phase is dated to the Ming dynasty in the 14th -17th centuries. The Roman Limes was not in use so long, only until the 5th century A.D. in the Western Roman Empire and until the 7th in the Eastern one. The total length of the Great Wall in antiquity measures about 6000 km, while that of the Roman Frontiers about 6500 km. However, there is a significant difference in their building method and material. The army was stationed in both cases in forts along the frontiers, and a great number of watch towers were built to ensure the control. The forts were built on strategically important places from material available on the site, and with measurements corresponding to the size of the troops.

The Silk Road is the longest trade route in the world. As far as possible, the Silk Road followed the Great Wall, but it ceased to go further to the West in the Tarim Basin. In the region of Dunhuang it forked, and took more lines. The Limes Road of the Roman frontiers did not have such an important role, but first of all in Europe, following the rivers Rhine and Danube, it has a rather great significance in the trade.

A further connection between the two defense systems is that the Great Wall and the Hadrian's Wall were inscribed in the World Heritage list in 1987, and 10 years ago the unified World Heritage site of the Frontiers of the Roman Empire was created. It follows that this WH site is a serial nominated site, while the Great Wall is an independent cultural site. A significant difference is that the Great Wall takes place fully in the territory of China, but the Roman Limes on three continents and in the territory of many countries.

The covering of the sites by later settlements is quite different. In the desert or in mountainous areas it is not too strong, but in other regions, first of all along the rivers very hard. It is the case in the benches of the Rhine and the Danube. The exact mapping is of great importance.

Since 2005 the German and Raetian Limes and the Antonine Wall have been inscribed, soon followed by the preparations for the nomination of the Hungarian and Slovakian sectors. The Hungarian nomination dossier is ready. It will be soon sent to the World Heritage Centre, and the Hungarian Limes Association has prepared a development conception for the enhancing of the tourism along the Hungarian sector of the Limes.

Both structures played a decisive role in the life of the peoples living in- or outside of them, and both influence our life. An important point is that the Roman frontiers run in Europe through densely populated areas, most Roman settlements in this area are covered by medieval and modern towns, settlements. A threatening effect is the strong industrialization of the line of the limes, so the newly initiated multinational project of the Roman limes as a World Heritage site in the form of serial nomination cannot be prepared easily.

Name: Willem J.H. WILLEMS
Affiliation: ICAHM / Leiden University

Abstract title: Comparative analysis of the Roman Limes and the Great Wall.

In addition to the general points raised by prof. Visy, this lecture will look in more detail at some of the issues that are relevant in the Dutch and German part of the Roman frontier. It has particular characteristics that make it different from other parts, which is useful to underline its own particular Outstanding Universal Value. Also, the paper will look at the way in which cooperation is structured and how the administrative and governmental levels cooperate.

Name: FENG Jian

Affiliation: ICOMOS INTERNATIONAL CONSERVATION CENTER-Xi'an(IICC-X)

Abstract title: The Silk Route

The Silk Roads are well-known as routes of integration, exchange and dialogue between East and West, and have contributed greatly to the economic, politic and cultural exchanges of human civilizations for more than two millennia. It is a phenomenon that is both great in its meaning and influences. Internationally, the study, conservation and presentation of the Silk Roads are a complex and concerned question.

Under the support of UNESCO and World Heritage Centre, the three state parties: China, Kazakhstan and Kyrgyzstan have achieved the inscription on World Heritage list of the “Silk Roads: the Routes Network of Chang'an-Tianshan Corridor” in 2014, which marked the first step of its conservation.

ICOMOS International Conservation Center-Xi'an (IICC-X) is the secretariat of the Coordination Committee on Serial Transnational Nomination for World Heritage of the Silk Roads; meanwhile, IICC-X witnessed the difficult and complex process of world heritage nomination for China, Kazakhstan and Kyrgyzstan as the secretariat of their working group.

In this report, I would like give a brief presentation from IICC-X's view, and focus on transnational heritage management and coordinating mechanism. It includes the formation of a comprehensive concept; drafting joint action plan; combination of practical coordinated management mechanism; and a platform to keep further research, exchange and cooperation.

关键词：系列遗产、保护和管理、协调机制

丝绸之路是一条横贯亚洲、连接欧亚大陆的著名古代陆上商业贸易通道，是东方与西方进行经济、政治、文化交流的主要交通动脉。其文化内涵丰富，影响巨大。如何在全世界范围内理解、保护和展示丝绸之路是一个复杂而又备受关注的问题。

近年来在联合国教科文组织，世界遗产中心的帮助下，中哈吉三国历经八年努力，完成了丝路遗产的申报工作，完成了保护的第一步。

国际古迹遗址理事会西安国际保护中心作为丝绸之路跨国系列申遗协调委员会秘书处，同时也是中、哈、吉三国的协调委员会秘书处，全程见证了这一艰辛而又复杂的过程。

本次报告中，将从 IICC 的视野中为大会做一简要的展示。着重叙述对跨国遗产的管理，协商机制。包括形成可被理解的概念，制定共同的行动计划，充分结合各方现实的协调管理机制，不断深入的研究、交流和合作的平台。

冯健 国际古迹遗址理事会西安国际保护中心常务副主任

Name: TIAN Yaqi and SUN Zhouyong
Affiliation: Shaanxi Provincial Institute of Archaeology

Abstract title: The Archaeological Investigation of Silk Road within Shaanxi Province, China / 陕西境内丝绸之路南线走向的考察研究 田亚岐 孙周勇

Chang'an, located in Shaanxi province, is the starting point of the Silk Road. Zhang Qian was dispatched to visit the West twice by the Western Han Dynasty. On his way, he opened the trade route, which is called "guodao" (road of countries), between China, the Middle East, and Europe. The routes heading to the north, the northwest, and the west from Chang'an are the arterial roads, which are also referred as the northern, middle, and southern line of Shaanxi's Silk Road. Among the three, the southern line is also called the "shuoyanwei ancient road" (the old road linking the Weihe and Qianhe River).

For a long time, the academia had very few disagreements over the general direction of the south line of the Suhe River and the Weihe River. However, there are disputes over the direction, use, historical transformation, and changes of the main route from the Suhe River and the Weihe River to the YueLong Mountain. Authors put forward the following views by analyzing clues in historical geography and survey on roads, combined with archaeological materials.

The source of Weihe River is Chang'an City and the water flows towards the west till the intersection of Qianhe River and Weihe River located in present Baoji city. In other words, from that intersection, Weihe River stops running towards west. This is because the Weihe River is situated on the narrow rock channels, where water runs fast and is difficult for boats. It is also extremely hard to travel on the ancient road path alongside. In comparison, Qianhe River offers a better water passage with a wider river way and abundant water. What makes it even better is the convenient traffic conditions of Longshan mountain routes. Therefore, there is no doubt that Qianhe River is the main river way in this region.

2. People normally follow their ancestors' routes. In Han Dynasty, Qianhe River and Weihe River were used by historical predecessors. From prehistoric times, the cultures of eastern and western sides of the Longshan Mountain are quite similar and have great interactions. Especially since the Qin Dynasty when the capital city was changed eight times with an inclination for the capital city to move towards the east, which consequently resulted in the development of Guanzhong. After the first emperor of Qin united the six countries, he built a network of roads from Xianyang to Longxi (which is today's southern Lintao city in Gansu Province) via the Yongcheng city. The Weihe River that flows away from Chang'an to Longshan has become a very important part of the national roads network. These are the basic conditions for the Western Han dynasty to continue to adopt this road.

3. On the Silk Road of Chang'an, there are a river path from the Weihe River to the Longshan River and a land path which are called Qianhe Weihe River Way and Chang'an-Yongcheng-Longzhou land road respectively. The river and land way compensate and supplement each other in times of need such as the changes of water lines and weathers.

4. Warehouse docks and imperial palaces are important points of stay along the paths, based on the habits of travelling in the daytime and resting at night. According to the ranked political importance of roads, the Silk Road is a national route, where the emperor tours. If walking 40-50 Whaley, there must have been imperial palaces for short stays. That is why we have recently excavated so many imperial palaces alongside the river, such as Liangshan Palace in Qian county, Out Alluxe Palace in Fengxiang Palace, Qinian Palace, Shangjialing Palace in Qianyang, Long County Moer Building Relics and Fengxiang Qianhe River warehouse relics at the Western Han Dynasty etc. These are evidence of authorities for the direction and times of Qian and Wei main routes.

5. The author proposes particular judgment on the vital gate, Da Zhenguan, of the road of that time. It was documented that in the Western Han Dynasty Yuanding Five Year, Han Emperor Wudi, Liu Che, had climbed here where he encountered bursts of thunders. On that account, it was called Da Zhenguan (the big thunder gate). According to the record that Da Zhenguan lies in the east side of Longshan and our surveys on the geographical conditions of the gate, the writer regarded that Da Zhenguan is seated near Sanqiao Village of Guguan Town of Long County.

As the Silk Road has applied for inscription in the World Heritage list, we want to take it as an opportunity to explore, the historical culture and context of the Silk Road play in the exchange and development of human civilization as well as the promotion of the interaction among regions. At the same time, full application of new concepts, ideas and methods and further studies on the Silk Road are of importance.

陕西长安是丝绸之路的起点，西汉张骞两次出使西域，开通了中国与亚欧大陆间的贸易通道，并使之成为当时东西联通的“国道”。从长安方向出使分别向北、西北和西的三个方向的道路为主干道，即陕西境内丝绸之路的北、中、南线，其中南线也被称为溯汧渭古道。

长期以来，对于南线溯渭河的大致方向没有疑义，但在诸多问题上仍存争议，如溯汧河并越陇山段的主干道作用和走向、历史传承与沿革等。笔者通过历史地理、道路调查的线索，并结合考古发掘材料，提出了如下几方面的考察观点。

1. 从长安起点溯渭河方向西行至今宝鸡市以东的汧、渭两河交汇处，即不再沿渭河方向西行，因为渭河处在狭窄的山石通道之中，河水湍急，不利于行船，也不利于古道陆路行走。而汧河河道宽阔，河水充盈，通行条件优于渭河中上游，加上陇山山脉的川道通行便捷条件，所以自然成为这一区间的主干通道。
2. 后人走前人的路，即汉代溯汧渭通道有前代开辟的背景条件。自史前时期开始，陇山东西两侧文化面貌相近，交流互动频繁；尤其秦“九都八迁”的东进，打开了通往关中的发展之路；秦始皇统一六国后，修筑了从咸阳经雍城到陇西（今甘肃省临洮南）的驰道，长安溯渭水至陇山段的道路成为全国驰道网上一个重要组成部分。这些都成为西汉沿用此路的基础条件。
3. 丝绸之路长安溯渭水至陇山段水陆并行的两条通道，即汧渭河水上游通道，以及长安—雍城—陇州间的陆上通道。水上和陆上通道互为利用，相辅相成，即根据气候等因素变化，某个时节或某个区段使用水陆或陆路，并随时根据条件变化而改换陆路或水陆。
4. 根据当时白天行走晚间路途歇息的原则，确定水陆主干道走向的重要标志分别是仓储码头或离宫别馆。按照陆路等制，丝绸之路为当时国家大道，而当时皇帝出巡也是国家大道，如果日行40—50华里，那么此区间必有离宫别馆设置，而正是近年来发现的乾县梁山宫、扶风美阳宫、凤翔瓦里宫、凤翔蕲年宫、千阳尚家岭宫和陇县摩尔原建筑遗址，以及凤翔汧河码头西汉时期仓储建筑遗址等，为溯汧渭交通主干道的走向和时代提供了权威性的依据。
5. 本文作者对当时该道路上的重要关卡——大震关的位置地望提出了具体判断。据文献记载，汉元鼎五年，汉武帝刘彻登山至此遇雷震，并因此而得名。根据文献中“大震关在陇山东坡”之记载，以及对关隘的地理环境考察，笔者认为地处陇县固关镇三桥村附近即为大震关的关址所在。

今年随着丝绸之路跨国申遗的成功，以此为契机，丝绸之路的历史文化文

在人类文明交流互鉴和发展进步中具有不可替代的重要作用，将推动大区域间的联动发展。于此同时，充分利用新的理念、思路和方法，进一步探索丝绸之路研究则至关重要。

Name: YU Chunlei

Affiliation: Shaanxi Provincial Institute of Archaeology

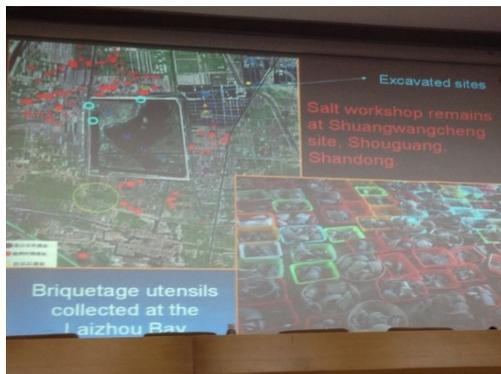
Abstract title: China's Northwest frontier viewed from the place choice of the Qin's Great Wall during the Warring State / 从战国秦长城选址 看当时西北边疆的形势与知识

Mencius said that geographic condition is more important than fate. People in the time of the Warring State had already realized the importance of geographic locations. As an important military construction, the Great Wall utilized geographic conditions to enhance the protection of the state and save material resources and human power. However, through actual investigation, we have found that the utilization of geographic conditions of the Warring States' Great Wall is not optimized enough as we predicted. We propose that this resulted from the Warring States' political situations, technology, and availability of natural resources. Compared to the Sui and Ming Dynasties, the Qin Great Wall ignored the abundant region of the Hua'xia plain, which reflects Qin's ignorance of this area

孟子曰，天时不如地利。战国时代对于有效利用地势地形的重要性已有深刻的认识，长城作为一种带有强烈军事性质的建筑，必然会尽可能地利用所在的地利，利用地形地势的目的不外乎加强防御和节省人力物力。但在实地调查中发现，战国时代长城对于地利的利用也并不和我们现在所具有的认知完全相符，这就导致在长城研究的过程中产生了一系列的争论与误判。产生这种现象的原因在于战国时代政治形势、生产技术以及对于自然资源的依赖。相对于隋代与明代长城，整个战国秦昭王长城的选址分布将肥沃的宁夏平原置于域外，体现了战国时代，秦人对于宁夏平原的无知，才有了始皇统一后的新秦中。

Universal Standards for Archaeological Heritage Management - Part I

Moderator: AN Jiayao



The theme for the 2014 Annual Meeting is *Universal Standards for Archaeological Heritage Management*. We hope to both showcase exemplary case studies of heritage management and develop a comprehensive set of standards for building these practices into future nomination dossiers and management plans.

Name: Friedrich LÜTH
Affiliation: Deutsches Archäologisches Institut

Abstract title: Large scale magnetometer survey – tools for inventory and in the environmental impact assessment of major infrastructure projects.

Since heritage management is generally knowledge-based, well accumulated and developed inventories on archaeological sites and monuments are the backbone of any successful heritage management. For Europe the European Convention on the Protection of the Archaeological Heritage (La Valetta 1992) stresses the factor in article 7 and the 42 member states that are party to the convention have agreed to bring up to date surveys, inventories and maps of archaeological sites. Large scale infrastructure projects carried throughout Europe over the past 25 years have yielded information that the factor of known to unknown sites is between 1:8 and 1:25. This stunning but also frightening factor calls for innovative approaches to intensify survey methods. This presentation aims to show how the use of large scale magnetometry surveys used as a day-to-day technology can contribute to improve the discovery of unknown archaeological sites and monuments during Environmental impact assessment. Examples from motorway-, pipeline- and other infrastructure projects as well as landscape oriented surveys of well-known archaeological landscapes within world heritage sites such as Avebury and Stonehenge in the UK or Vix in France open the scope for non-intrusive, large scale surveys that lead to more completed inventories.

Name: LUO Kanglong
Affiliation: Jishou University

Abstract title: Archeological Data Acquisition Methods without Breaking Ground: A Case Study of Changes of the Dong People Settlement and Farmland in Huanggang.

Traditional archaeological stratigraphic analysis uses enucleation analysis as the means, and is extremely useful for the study with long time span as well as cultural layer analysis with strong homogeneity. However, as village settlement changes have a time span of just 100 years, the two traditional methods are difficult to obtain ideal research results. Surface inheriting site system classification

analysis without breaking ground can hit the nail on the head, producing reliable research conclusions. Not only archaeologists, but also anthropologists and historians attempt to use this archaeological method, which ought to be an up-and-coming new attempt of data acquisition.

Name: LONG Xianqiong
Affiliation: Jishou University

Abstract title: Historical Anthropological Research of a Great Tujia Ruin Site: a Case Study of Laosi City, Yongshun, Hunan.

No abstract received

Name: Necmi KARUL
Affiliation: Istanbul University

Abstract title: Presenting the lost cultural heritage in submerged sites under dam reservoirs along the Euphrates and Tigris- Trajectories

Throughout the history Anatolia has been the home of numerous civilizations being occupied almost continuously. Accordingly it is one of the rare geographies where the entire sequence of cultural development can be traced. The archaeological record of Anatolia, moreover, bears the remains of most significant achievements of human cultural history. Despite all this significance, there occurs a dilemma between the preservation of archaeological heritage and investment projects that are implemented in increased pace. Ever since the 1950s, industrial investments - notably large dams and other destructive means such as highways, mechanical agriculture and irrigation channels and fast growing towns have been among the main destructive agencies of the archaeological heritage of Turkey. Even though these still continue to pose threat on heritage, with the means to carry rescue operations, it has been possible to put a number of extensive archaeological rescue projects into practice; thus, while major investment projects are having a devastating effect on heritage, at the same time they have provided the means to procure data on ancient cultures.

Archaeological sites that have been submerged under the dam reservoirs are to be considered as invisible cultural heritage now and can only be perceived through documents and by various means of displaying this knowledge.

The paper will present some of the most significant architectural remains that have been already inundated or about to be lost in the Euphrates and Tigris basins, ranging from the earliest Neolithic settlements to the glorious medieval towns such as Hasankeyf. Also a statistical assessment of the lost heritage will be considered.

Name: Renato KIPNIS
Affiliation: Scientia Consultoria Científica

Abstract title: Case Study: Santo Antônio, Belo Monte Hydroelectric Power Plants and Porto Velho – Araraquara Power Lines, Brazil

The driving force behind the recent boom of Brazilian archaeology is the strong Brazilian economic growth, which is anchored by a steadily improvement in its macroeconomic stability, and fueled by the government's boost to economic growth through a strategic investment program known as Growth Acceleration Program (PAC). PAC combines management initiatives and public works, and focuses on investments in infrastructure for social-economic development, in areas of logistics,

energy, transportation, housing, sanitation, and social development. Private and public investment in a myriad of projects, big and small, is creating a huge demand of specialized work on environmental and cultural resource management. The potential impact, negative and positive, on natural and cultural resources, is enormous; especially in Brazil where for vast areas our knowledge about those resources is scanty.

But all the thriving archaeological activity in Brazil would not happen if were not for two pieces of federal legislation: The federal law that is the cornerstone for the conservation of the Brazilian archaeological patrimony (Lei Federal n° 3.924 – 26/07/1961) and the administrative rule that regulates archaeological projects in the context of Cultural Heritage Compliance (Portaria n° 230, 17/12/2002). Despite a coherent heritage compliance process, which has ensured an exponential increase of archaeological projects within environmental licensing process, Brazil doesn't have a strong institutional cultural heritage framework, strong cultural heritage compliance frameworks or clear compliance procedures that can work as standards for good practices within cultural heritage management. As a consequence, while the increase is very good news, it must be tempered with the knowledge that the scope and quality of the work being carried throughout Brazil is highly variable.

We present here three case studies of major archaeological heritage management project being carried out in southwest and southeast Amazonia, in the state of Rondônia and Pará, Brazil, where two very large hydroelectric power plants (UHE Santo Antônio and UHE Belo Monte), and a 2,500 km power line running north to south in western Brazil are being built. Very effective projects put together in order to deal with challenges with archaeology survey of vast areas, and rescue of hundreds of archaeological sites are under way. We hope with this presentation to contribute for the development of comprehensive set of standards for building good practices within archaeological heritage management.

Name: Eylem ÖZDOĞAN
Affiliation: Istanbul University, Prehistory Department

Abstract title: Problems in Preserving and Presenting Multi-layered Prehistoric Sites with Masonry Structures in Turkey.

Regarding the preservation and exhibition of the prehistoric sites in its place, the first applications started to be seen from the second half of the twentieth century in Turkey. Although it may seem late when compared to examples around the world, there have been some unique applications and projects in distinct multi-layered settlements, which have been made possible due to Anatolian geography with all its ecological and cultural niches. Among these are Hittite capital Hattusa-Boğazköy and Neolithic Çayönü, which come forward not only with their historical background but also solutions brought on the preservation and exhibition of the multi layered stone based structures therein. Another place similar to these two settlements is Kanlıgeçit located in Eastern Thrace.

Boğazköy is a rare example where monumental structures from one single period was preserved, consolidate and exhibited in a wider area. In Çayönü, the settlement was formed as a place where four layers were exhibited by showing the mound formation and architectural development on the settlement. In Kanlıgeçit, the area was designed after the Early Bronze Age citadel was thoroughly been preserved and protected, different structural phases can be observed in the citadel.

As a current application, Kanlıgeçit is a part of an integrated heritage management project together with the prehistoric mound in Aşağı Pınar and tumulus's in Kırklareli located in a 1-km-distanced area. Designing as an open-air museum, these three archaeological units represent distinct periods and give visitors the opportunity to make a spatial evaluation of time.

Name: LI Shuicheng
Affiliation: School of Archaeology and Museology, Beijing University

Abstract title: Salt Industry Archaeology and Conservation of Salt Industry Heritage

As a valuable resource, salt has played a special role in the evolution of human history. In China, salt has long been deemed as a “Great Treasure of the Nation”, as represented by its shape of Chinese character.

China enjoys rich salt reserve and a long history of salt production. However, archaeology in salt industry has long remained an unexplored sector in China. Since the end of the 20th century, international collaborations between Chinese and foreign archaeologists have given rise to China’s progress in the salt industry archaeology and helped narrowing the gap with the West. These collaborative research projects have drawn great attention of the international community of archaeology.

Traditional salt-making sites using various techniques are still preserved in remote areas of China, such as the Salt Well Village in Mangkang of Tibet Autonomous Region and Yangpu Salt Field in Danzhou of Hainan Province. These important salt-related heritage sites are outstanding examples of lifestyles of traditional settlements and utilization of land and other resources, witnessing the continuous evolution of salt production over thousands of years and bearing enormous creativity and vitality of mankind. It is therefore an arduous task for archaeologists and heritage conservators to preserve these valuable heritages and safeguard cultural diversity.

Name: Marc KOCKEN
Affiliation: M A R C Heritage Consultants

Abstract title: The “Arty” Way – Dutch Approach to the Presentation of Archaeological Heritage

Aim of this paper is to present a new approach in the Netherlands and discuss its pros and cons with the international community in order to contribute to the ICOMOS Debate on Permissibility and Standards for Reconstructions of Monuments and Sites.

Early 2013 an online survey was presented by the ICOMOS ISC ICIP to gather information within the ICOMOS community to start a debate on permissibility and standards for reconstructions of monuments and sites. This debate was called upon during the 17th ICOMOS General Assembly in Paris noting the increasing disregard of existing theoretical principles for the justification of reconstruction, and a new tendency towards significant commercialization of reconstruction activities. To contribute to the debate, I will present the Dutch approach on the subject of reconstruction with a specific focus on the archaeological heritage.

In contrast to most European countries, there is in the Netherlands no tradition in physically reconstructing archeological sites due to the lack of usable visible substance.

In 1999 a National policy document examining the relationship between cultural history and spatial planning, was presented. Under the influence of this policy, progress was made to present the archeological heritage to the public. Due to the lack of visible substance a more artistic approach developed - with (landscape) architects, designers and planners in the lead - that can be described as the “arty” way of reconstructing/ presenting the archaeological heritage on site. In the context of this paper I will elaborate some examples of third dimensional outdoor presentations in combination

with in situ conservation of archaeological remains. These examples show an inspired design that makes the archaeological heritage both physically and mentally livable and adds to the identity, social significance and contemporary use of the place.

Two important lessons learned for success:

1. There has to be a multi-disciplinary and participatory approach during the whole process in which heritage experts play a significant role, and
2. Dilemmas - such as what past to present? Where you put the emphasis, in the preservation of archaeological values or in the development of a place? Whose interest is being done right and to what extent? How much authenticity may be lost? - have to be discussed at the beginning of a project.

Universal Standards for Archaeological Heritage Management - Part II

Moderator: LU Qiong



Name: ZHANG Jianlin
Affiliation: Shanxi Provincial Institute of Archaeology

Abstract title: Excavation and protection of Earthen Sites: Examples of Xi'an and Central Asia.

Most ancient sites in Asia are constructions made from rammed earth, adobe or clay bricks. Appropriate solutions to their protection and presentation following archaeological excavation have yet to be found. Since the 1950s, many archaeological surveys and excavations have been carried out in the sites of Chang'an city of the Sui and Tang dynasties and imperial mausoleums of the Tang Dynasty. Most of these excavated sites are backfilled with earth, while only a small number of them are protected by backfilling underground parts and restoring on-ground parts and a few less are covered with protective shelters as a way of presentation in original locations. Debates have never stopped over the strength and weakness of these different protection approaches.

Archaeological excavations of grand sites in Central Asia began in the first half of the 20th century. Up to 100 towns, community and temple sites have been excavated. But most of them are not backfilled with earth; only some are simply sealed with clay layers, and even a few less are covered with protective tents. These sites are generally in poor condition of protection.

Over the past decade, archaeological activities have been gradually conducted in grand sites in Xi'an. Based on these practices, protection plans have been drawn up, geographical information systems established to facilitate dynamic monitoring, and on-ground signs and restoration facilities put in place to present excavated sites.

Name: D.P. TEWARI
Affiliation: Department of Ancient Indian History and Archaeology, University of Lucknow

Abstract title: Biodeterioration Of Wall Paintings of Archaeological Monuments of India

Wall Paintings form an important parts of nation's cultural heritage. It is well known that the paintings because of their complex structure are easily affected by biological agencies like micro-organisms, bats and birds etc. The microbes growing on wall paintings include actinomycetes, algae, bacteria and fungi. Fungi are exceptionally abundant on the earth and have variety of fermentative

abilities and high ecological adaptabilities which give them a highest place among other bio deteriorating agencies.

Bats and birds due to excreta damages paintings by encouraging the fungal activity and also cause bad smell, which in turn affects the number of visitors to that particular site. Fungal activity causes damage through discoloration of paint, flaking of paint and by imparting different types of colored spots which diminishes the aesthetic beauty of the paintings. The present paper deals with the fungi present on some wall Paintings as well as their control measures.

Name: Erika M. ROBRAHN-GONZÁLEZ

Affiliation: DOCUMENTO Corporate Group / NEPAM/LAP/UNICAMP (University of Campinas)

Abstract title: International Archaeology Standards: Strategic Aspects for the Brazilian Case

The reality of archaeological practice, in the specific case of Brazil, is known to be considerably diverse. Given its multicultural aspect, this country has a varied prehistory of human occupation, resulting in the existence of a great diversity of archaeological sites that, in many cases, are still related to actual indigenous societies. On the other hand, there are many historical structures and material culture related to the colonial and historical Brazilian history. Finally, the country is going through a political and social process resulting, among others, in a struggle for the recognition and preservation of local cultural heritage, including the archaeological remains.

The main objective of this study is, taking the aspects mentioned above into account, to analyze the main aspects present in the Brazilian reality concerning its specific archaeological heritage management and local community's realities. The study is expected to point out: which of the international standards are suitable for the Brazilian realities, which are being currently considered, and which would have to be adapted to local reality. The final goal for the study is to create a positive contribution considering the archeological experience in Brazil to the consolidation of International Archaeology Standards.

Name: Helen ARTHURSON and Iain DAVIDSON

Affiliation: IDHA Partners and UNE, Armidale, Australia

Abstract title: Defining standards through benchmarking tools--a case study from Australia and the United States

During 2011, working under a contract from Woodside Energy, IDHA Partners sought to evaluate the cultural heritage management of the petroglyphs of the Burrup Peninsula under the threat of industrial development against the management of a similar extreme range of petroglyphs in Nine Mile Canyon, Utah, USA. Industry operates within the different frameworks established by relevant legislation and cultural expectations. We identified some principles of good practice for cultural heritage management. This presentation will discuss the context of the two cultural heritage sites, the legislation as it then was, and the lessons that can be generalized to other situations.

Name: CHUN Wu and NING Ruiqi

Affiliation: Xi 'an Hanheng Information Technology Co., LTD

Abstract title: Discussion on Wisdom Tourism Based on Archaeological Heritage Protection

Tourism activity is not only the way to translate archaeological heritage value; it can also improve the public's awareness of the protection of cultural relics, which will be benefit of the protection and

management of archaeological heritage. However, among the earthen archaeological heritage sites in China, there exist low passenger flow volume, low degree of satisfaction and insufficient knowledge of heritage. In the paper, different ways of wisdom tourism, such as tour information service, tourist management coupled with display and exhibition technique, are investigated. It concludes that wisdom tourism is the perfect answer to the conflict between heritage protection and tourism activity, which leads to advanced translation of heritage value and better value experiencing, not only that, it also plays an important role for the delicacy management and preventive protection.

Name: JIAN Liu

Affiliation: Institute of Architecture History, China Architecture Design & Research Group

Abstract title: Analysis of function, landscape and risk prevention in delimitating the Buffer Zone -- Taking the Site of Hailongtun Tusi Fortress in Guizhou as a case study.

This paper, in accordance with World Heritage conservation and management requirements for the Buffer Zone, analyses the area surrounding the site of Hailongtun Tusi Fortress in terms of function, landscape and risk prevention, and elaborates the delimitation reasons of the Buffer Zone for the Hailongtun Site, which are: to fully take into account the surrounding mountain and water systems that are importantly related to the Hailongtun Site from aspects of military defense, transportation, mountain landscape, environmental perception, etc.; to also give consideration to local social development and put the areas that may potentially affect the property, such as areas concentrated with tourism development and village construction activities into control. By employing the Geographic Information Systems (GIS) in the terrain model and visual field analysis, the delimitation accuracy of the Buffer Zone is enhanced. Moreover, classified management strategy is set up in line with different conservation and management requirements within the Buffer Zone, to give a solid added layer of protection to the property.

Name: AN Jiayao

Affiliation: The Institute of Archaeology, Chinese Academy of Social Sciences

Abstract title: The Archaeology and Management of the Site of Daming Palace.

Built in 663 AD and destroyed at the end of the 9th century, Daming Palace was the main royal residence where Tang emperors lived and dealt with state affairs. The site of Daming Palace is located in Xi'an. Since the late 1950s, the Institute of Archaeology, Chinese Academy of Social Sciences has carried out a full scale survey to Daming Palace Site, some of the important sites were excavated. During this process, archeologists found out the boundary of Daming Palace and understood the basic layout; their hard work has provided detailed information for conservation and interpretation of Hanyuan Hall, Linde Hall and Danfeng Gate, also set up basis for studies of Tang Dynasty royal family and Daming Palace conservation. The total area of the site is 3.2 square kilometers, and it is 4.5 times of the Forbidden City in Beijing. It is a big challenge to preserve and manage the site for the government and the people. Now the National Park of Daming Palace Site was set up. The discovery and protection of the Daming Palace site has become a fine example demonstrating how archaeology can change the lives of the people living on and around sites.

Name: FU Jing and XU Xinyun

Affiliation: Institute of Architecture History, China Architecture Design & Research Group

Abstract title: Study on the valued attributes of the archaeological site of Laosicheng Tusi Domain and its management strategies from the perspective of serial property.

Having adopted the World Heritage's approach to the 'serial property' in identifying its component parts and overall value as a whole, this paper examines and illustrates how Tusi Sites, as a representative outcome of Tusi System that implemented in multi-ethnic regions of Southwest China from 13th to early 20th centuries, testifies the interchange of human values on ethnic culture inheritance and national identity between the central government and local minorities in Southwest China. Taking the Site of Laosicheng Tusi Domain as an example, analyze how its settlement pattern and various types of key remains attest to the representativeness of valued attributes of the serial property. Meanwhile, in responds to the requirements for conservation management at the Laosicheng Site, discuss what management strategies may be employed for dealing with site conservation, cultural inheritance of Tujia People, coordination between stakeholders, tourism management, etc., under an overall coordinated management framework of the serial property.

Workshop on Development, Compliance and Archaeological Heritage: working with international finance and business

Moderator: Willem J.H.WILLEMS



The session was a workshop, with in depth discussion of recent trends and developments in international regulation as well as voluntary compliance and initiatives by major international mining companies and other groups. An important starting point was the analysis of A. Mason on how to improve current World Bank policies. This was followed by a report from SAA President Dr. J. Altschul on the consultation process that his association has started with the development banks and the ups and downs and pitfalls in that process. In the discussion, also the recent GAPP-initiative in the US was mentioned; the Gas and Preservation Partnership (see <http://gasandpreservation.org/>). This is a not-for-profit organization that works with the energy industry as well as the heritage industry to identify and properly manage cultural resources while encouraging efficient exploration and development of energy reserves.

The session was continued with two papers on the Romanian Gold Mining Project at Roşia Montana, a highly contentious issue in Europe - as again at the session. Discussion nevertheless made clear that things are not always what they seem, and that actually the mining project and its revenues may be the salvation of the most important part of the (Roman and later) heritage instead of its ruin. For a fascinating article on this issue, see R. Hodges, Roman Gold Mines in Transylvania, *Current World Archaeology* 68 (or <http://www.world-archaeology.com/travel/richard-hodges-travels-to-transylvania.htm>).

In his consideration of some of the issues, discussant prof. Zijun TANG, an economist from Jishou University, went into some of the differences between Chinese and Western approaches. The discussion also showed wide appreciation for guidance such as that produced by the mining consortium of Rio Tinto in many different languages (E. Bradshaw a.o. (eds) 2011 *Why Cultural Heritage Matters. A Resource Guide for Integrating Cultural Heritage Management into Communities Work at Rio Tinto*, Melbourne 2011).

Name: Andrew MASON
Affiliation: Golder Associates

Abstract title: The World Bank Group and Cultural Heritage Protection: A Due Diligence Methodology for Evaluating Bankable Studies / 世界银行集团和文化遗产保护：评估融资可行性研究的尽职调查方法

Development proponents are required to undertake cultural heritage assessments for their projects in many, if not all jurisdictions. These studies are completed for a variety of reasons – compliance

with host country laws, the requirements of lenders or in some cases as voluntary corporate policy. This paper examines cultural heritage assessments undertaken for financial institutions, namely the World Bank and the International Financial Corporation (IFC). These two organizations have their own policies for cultural heritage assessments as a safeguard to ensure high quality assessments are undertaken for projects they finance, no matter what jurisdiction. Studies meeting the requirements of such safeguard policies are colloquially known as “bankable”. IFC requirements for cultural heritage assessments have become the de facto commercial standard for cultural heritage assessments in the developing world.

While the intent behind the World Bank and IFC standards is laudable, there are shortcomings. Many so called “bankable” studies are neither high quality nor do they demonstrate that they meet all (or most) of the requirements set out by the World Bank or IFC. This raises a number of important questions. Who reviews these studies and determines they are adequate? IFC Performance Standard 8 (Cultural Heritage) indicates work must be completed by “competent professionals”. Who decides? Based on what criteria? Similarly, the same performance standard requires work to employ “internationally recognized practices for the protection, field-based study and documentation of cultural heritage”. Again – who decides? What are internationally-recognized practices? This paper proposes the adoption of explicit criteria against which to evaluate the quality and comprehensiveness of cultural heritage studies completed for financial institutions.

多数国家和地区要求开发商就其开发项目进行文化遗产评估。这其中的主要原因包括，项目所在国的法律要求，项目贷款人的要求，或开发商自身的政策要求。本文主要讨论为金融机构——世界银行和国际金融公司（IFC）——所进行的文化遗产评估。作为一种保护措施，这两个金融组织有其自身的文化遗产评估政策。这些政策保证其融资项目拥有要质量的文化遗产评估。若该文化遗产评估研究符合其政策规定，则通常称为“融资可行”。事实上，IFC的文化遗产评估要求已成为许多发展中国家文化遗产评估的商业标准。

世界银行和IFC的标准背后的意图是值得称赞的。但其有不足之处。许多被称为“融资可行”的研究既不是高质量的，也未完全（或未大部分）满足世界银行和IFC所规定的要求。这样就引发了一系列的重大问题。谁来复审和决定这些研究是令人满意的？IFC“履行标准8”（文化遗产）指出评估工作必须由“专业过硬的人员（机构）”来完成。谁来决定？根据何种标准？另外，“履行标准8”还要求采用“国际认可的惯例来进行文化遗产的保护，田野调查及记录”。那么又由谁来决定？什么是国际认可的惯例？本文旨在提出一套明确的标准，用以评价提交给金融机构的文化遗产评估的质量及其完整性。

Name: Jeffrey H. ALTSCHUL

Affiliation: Society for American Archaeology, Washington DC

Abstract title: Improving Standards and Practices in Cultural Heritage Compliance in Latin America

In August 2014, the Society for American Archaeology (SAA) convened a one-day meeting to discuss the cultural heritage management (CHM) policies and practices of development banks in Latin America. The meeting grew out of discussions held over two years between the SAA and the development banks in which both parties recognized the need to improve and strengthen CHM compliance with bank policies. The parties also recognized the need to hear directly from Latin American archaeologists and government regulators and to craft interventions that could be effective and sustainable in countries, many of which have weak CHM institutions and enforcement mechanisms. The meeting brought together representatives of the World Bank, the International

Finance Corporation, and the Inter-American Development Bank, CHM regulatory ministries and agencies from various countries in Latin America, and Latin American archaeologists active in CHM to evaluate the status of current practice and to offer recommendations to improve that practice. This paper will present the results of the meeting and its preliminary recommendations.

Name: Adrian GLIGOR

Affiliation: Vice President Patrimony & Sustainable Development, RMGC

Abstract title: Rosia Montana Mining Project and Cultural Heritage Strategy

Rosia Montana Gold Corporation (RMGC) proposed, even since year 2000, the continuation of mining in Rosia Montana by developing a modern mining project within a site where traditional mining was carried out in few historical phases: Roman times (2nd-3rd century A.D.), late medieval phase (16th-19th century) and contemporary/communism times until present (1948-2006). Rosia Montana used to have a mining operation coordinated by the Romanian State, including two open cut pits; this was operational until year 2006 when Romania joined the European Union. Therefore, Rosia Montana site has a rich mining cultural heritage, feature known and recognized by RMGC.

Starting with year 2000 and in compliance with the national and European legal provisions, there was archaeological potential assessment research organized in Rosia Montana and, starting with year 2001, through Order of the Culture Ministry no. 2504/March 2001, there was preventive archaeological research program conducted by institutions of the Culture Ministry, Romania Academy, Education and Research Ministry, CNRS France, Technical University of Munich, etc. According with the public documents issued by the Culture Ministry, this cultural heritage research and rescue program has no equivalent in Romania; it involved the participation of more than 300 specialists from Romania and Europe (archaeologists, mining archaeologists, architects, conservators, historians and ethnography specialists, urban planners, etc.). RMGC provided the required financial fund and logistics, according to the legal provisions.

In this way, 13 sites of archaeological (underground and above/ground), architectural and landscape cultural value were identified. These sites were thoroughly researched in the past 10 years, and some sites are still undergoing research. Through this research, several areas of significant cultural value were identified; these areas were established by representatives of Culture Ministry as protected areas and they are undergoing in situ restoration and conservation. In all these cases, RMGC modified the mining project by decreasing the initially proposed pits, changing the roads routing or the location of certain mining objectives such as the waste dumps.

The sites consisting of common cultural values were researched, published, displayed in a museum-like exhibition; in other words – they were rescued-by-record. Related to these sites, the Culture Ministry decided the issuance of archaeological discharge certificates, which means that these sites will be given back for current human use.

The efforts of the specialists made it possible to have published, so far, 6 scientific volumes about the history, archaeology, ethnography and geology of the locality; another 14 volumes are undergoing preparation. Also, a Mining Museum was organized and implemented; its first exhibition was already open. This was done in parallel with the access and visiting arrangement works conducted within an underground mining sector of Catalina Monulesti mine. The artefacts found were also stored and archived in a professional manner.

At present, Rosia Montana Mining Project is undergoing the assessment of the Environment Impact Report (EIA); RMGC is publicly committed to arrange Rosia Montana historical site in a museum-tourism manner within the context of Mining Project Development, by financing certain projects and

programs estimated to more than USD 100 million; its purpose is the conservation of the site's cultural heritage and sustainable development of the local community.

Name: David JENNINGS

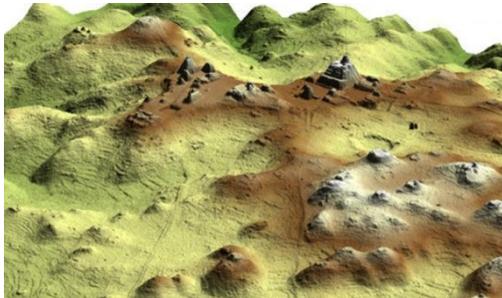
Affiliation: York Archaeological Trust

Abstract title: Rosia Montana Cultural Heritage Strategy compliance with European best practice and legal framework.

As part of the Rosia Montana project I was asked to undertake an independent review of its cultural heritage strategy and assess its compliance with European best practice. This paper presents briefly the results of this audit focusing on conformance to the requirements of the Valletta Convention. It also discusses some of the wider debate that the project has provoked at an international level. Finally, it outlines a number of common themes that internationally financed/nationally significant projects tend to raise that require consideration in the management of the cultural heritage.

The application of aerial and satellite remote sensing to archaeological research and heritage management.

Moderator: Douglas C. Comer



With the publication of "Mapping Archaeological Landscapes from Space: In Observance of the 40th Anniversary of the World Heritage Convention", ICAHM highlighted novel applications of aerial and satellite remote sensing to research and management programs. To build on this success we welcome papers that demonstrate best practices with emerging technologies, new approaches to remote sensing for research, and case studies for heritage management applications.

Name: Douglas C. COMER

Affiliation: ICAHM / Cultural Site Research and Management (CSRМ)

Abstract title: An Overview of the Most Promising Aerial and Satellite Remote Sensing Technologies for Archaeological Research and Heritage Management.

Aerial and satellite remote sensing and rapid advances in computing technology provide archaeologists with powerful tools for research and the management of archaeological heritage. Sensors carried by aerial and satellite platforms provide both access to both sophisticated technologies and an archive of environmental change over the past half century. In this presentation, the technologies and applications of them that have proven most productive to archaeologists over the past several years are described, and examples of how they have been applied are presented. These run the gamut from innovative applications of archived imagery that reveals the former locations and settings of archaeological sites that have been destroyed or compromised by development in recent decades to recent applications of Lidar technology that have been used to discover archaeological sites under dense vegetative canopies or "hidden in plain site." Also included in this discussion is the use of synthetic aperture radar (SAR), multispectral, and hyperspectral imagery. Finally, the use of supercomputing facilities to analyze "big data" is described.

Name: CHEN Tongbin

Affiliation: ICOMOS China / Institute of Architecture History, China Architecture Design & Research Group

Abstract title: The Application of GIS Technology in the Delineation of Boundaries for Archaeological Sites Protection in China.

The Turpan Region, an important place along the Silk Roads, had significant contribution to the long-distance trade over the Eurasian Continent and cultural dialogue between the east and the west from 2nd century BC to 14th century AD. This paper, from the prospective of conservation master plan, explains how modern satellite image technology serves the conservation and use of regional cultural

heritage. In the case of Conservation and Tourism Development Master Plan for Cultural Heritage Sites in Turpan Region, this technology analyzed the seventy-million-hectare setting of cultural heritage sites in Turpan Region – particularly, it analyzed the ecological environment and water management system in arid areas and demarcated relatively independent geological units. Then, based on the comparison of conservation conditions and factors affecting the conservation of 208 heritage sites, the different measures in Conservation Master Plan were drawn up. The technology provided effective technical support to the conservation and management of regional cultural heritage sites that are in large areas and in various types.

Name: Gustav ROBRAHN-GONZÁLEZ EIGENHERR
Affiliation: DOCUMENTO Corporate Group / ESPM University, São Paulo, Brazil

Abstract title: New approach of technologies for archaeological structures mapping and heritage protection: an instance of the Port of Rio de Janeiro, Brazil.

Archaeological research developed in the last years along the port region of Rio de Janeiro has revealed complex structures from origins of different historical contexts. Dated back to the eighteenth century the structures found were of high historical relevance. The findings consisted of structures that were complex due to their juxtaposition. The work to be presented intends to show how the use of technology made the archaeological prospects more precise and scientifically efficient. Through the use of laser scan and other technologies it was possible to be aware of the full scale of the findings and facilitate the procedures to be made on the site, and also contributing by creating miniatures models that mimic the structures underground. It is important to acknowledge the great quantity of constructions happening in the modernization of the Rio de Janeiro Port, giving the archaeological research a great responsibility since the soil is suffering profound changes. Archaeology is required to modernize itself, being able to perform with unquestionable quality and keep up with the pace of modernization the country is going through.

Name: LIU Jianguo
Affiliation: Institute of Archaeology, Chinese Academy of Social Sciences

Abstract title: Low Altitude Photography and 3D Model Reconstruction for Archaeological Sites. / 考古遗址的低空拍摄与三维建模

Low altitude photography has received increasing attention from archaeologists. This technology is low-cost, easily operative and capable of generating large amounts of data. The high spatial resolution allowed by low altitude photography meets the requirements of archaeological research and cultural heritage protection. Using multi-view 3D reconstruction software, the data provide surface point cloud and real 3D models of the site, providing a means to reconstruct the excavation process. Furthermore, analysis results such as digital orthophoto maps, elevation models, contour lines, charts, etc. could be efficiently generated.

考古遗址的低空航拍技术因其成本低廉、操作简单以及获取的数字影像信息丰富等特点，越来越受到考古学研究和文化遗产保护领域人士的普遍关注。

低空拍摄的数字影像具有很高的空间分辨率，能够满足考古学研究和文化遗产保护的多种需求。在计算机中通过多视角三维重建技术处理之后，可以生成考古遗址的表面三维点云，加载影像信息可得到真实的三维模型。通过三维数字模型不仅能够重现考古发掘的每一个重要阶段，而且能够从中快速获取高精度的正射影像图、立面影像图、剖面影像图、数字高程模型等影像，由此绘制各种线划图、生成等值线图等图件。

Name: CHEN Gangquan
Affiliation: Conservation Institute of Dunhuang Academy

Abstract title: Preliminary application of monitoring and forecast technology in the conservation and management of the Mogao grottoes.

The Mogao Grottoes are the famous cultural religious heritage site in the world. After a thousand years, it was deteriorated by natural factors gradually. But the damage would be severe when suffering natural calamities. Recent years, the number of tourists increased rapidly, it is a potential threat for the safety of the site. To build the system of monitoring and forecast of Mogao grottoes, the changing of all kinds of environmental factors which affect Mogao grottoes could be learned earlier, to monitor the cave environment and the number of tourists in real time, the evidence could be provided for making the decision of management and taking the measure of treatment. The technology has been carried out at Mogao grottoes and the result is promising.

Name: LIU Chuansheng and WANG Xinyuan
Affiliation: Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences

Abstract title: A Preliminary Study of Multi-scale Analysis on the Great Wall Landscape by Using the Geospatial Information Technology.

The Great Wall was selected in this study for the demonstration area by using spatial information technologies to provide research basis for its management, monitoring, etc. Based on the analysis of remote sensing image data with different spatial and temporal resolution, dynamic spatial information technology was employed to analyze its environmental changes of the Great Wall. After exploring the association between heritage corridor and landscape ecological pattern, the Great Wall and its surrounding environment can be effectively protected. The ecological environmental changes on the Great Wall and its surrounding areas may affect its outstanding universal value (Authenticity and Integrity).

The study on the Great Wall gives full play to the unique role of spatial information technology in world cultural heritage research, conservation and management, highlights the spatial cognition of world cultural heritage, and promotes coordinated and sustainable development of the relationship between the heritage sites and the environment. By integrating remote sensing monitoring and research results of the Great Wall with archaeological and philological research achievements, it is possible to construct a framework for applying spatial information technology to monitoring and protecting the Great Wall so as to provide spatial technical support for the management, monitoring and display of the Great Wall.

Name: YANG Tianmin and ZHAO Qiang
Affiliation: Shaanxi Provincial Institute of Cultural Relics Protection

Abstract title: Application of magnetic survey technique to verify the archaeological survey anomaly by hyperspectral remote sensing found in the southern region of Weihe river.

It is the first time in china, using hyperspectral remote sensing technology, to do archaeological investigation in a large area. The survey has a total area of about 1000 square kilometers, mainly concentrated in the south of Weihe River in Xi'an, including the Changan City relic of Han Dynasty, FengHao site of West Zhou Dynasty and Du Mausoleum ruins area of Han Dynasty. The Aerial survey

using hyperspectral measurements and aerial photography in two ways, and has made the very precious, rich in high resolution imaging spectrometer data and earth surface feature spectrum data. It has laid the foundation for the future in this area to continue to search for outliers and carry out archaeological research work. The Aerial survey have been made in the survey region identified 70 multiple anomaly points. Using application magnetic survey technique to verify the archaeological survey anomaly by hyperspectral remote sensing found in the southern region of weihe river, to prove these survey anomaly do exist.

Name: WU Yu-hua, XU Li-lin and Hu Duo-Duo
Affiliation: Chinese Academy of Cultural Heritage; National Geomatics Center of China; Geo-Compass Information Technology CO.,LTD

Abstract title: The Research of the Key Technologies on the Monitoring & Management to the Large-scale Archaeological Sites Utilizing Remote Sensing Technology / 大遗址遥感动态监测管理之关键技术探讨

According to the requirements analysis of conservation on the large-scale archaeological sites, the remote sensing technology has been used to the applied research on the monitoring. The key technique can be summarized as follows, the design of system for monitoring index, dynamic monitoring technology based on multi-type and multi-temporal data, the data processing of multi-type remote sensing images and the construction of the information management system. It shows that, remote sensing technology can monitor the changes of large-scale archaeological sites dynamically with advantages of high precision, wide coverage, less investment. It may improve the level of conservation and management to the large-scale archaeological sites.

摘要：结合大遗址保护相关需求，利用高分辨率遥感技术进行动态监测与保护管理应用研究，就监测指标体系设计、多类型多时序数据动态监测、多样性遗址遥感影像综合处理及信息管理系统建设等关键技术进行了探讨。应用表明，遥感技术可动态监测大遗址的地表变化情况，具有监测精度高、覆盖范围广、投入人力少等优势，可为大遗址保护管理水平的提升提供重要支持。

关键词：大遗址；遥感；监测管理；监测指标

Incorporating intangible culture into management and research programs

Moderator: Iain DAVIDSON



Intangible heritage is the most difficult aspect of archaeological heritage. We all know oral traditions, unexpressed cultural practices and other intangible behaviour are and were an integral part of those things archaeologists deal with, but intangible heritage, by its very nature, lacks the material basis that is the essence of archaeology. The session on this topic had five diverse presentations from: Mario Rivera from the Universidad de Magallanes, Punta Arenas, Chile; Zeynep Eres from Istanbul University, Turkey; Roxana-Gabriela Curcă and Marius-Tiberiu Alexiana from the University of Iași, Romania; Brian Egloff from the University of Canberra, Australia and Thongsa Sayavongkhmedy of the Department of Heritage, Lao People's Democratic Republic; and Yang Tingshuo from Jishou University, China. The diversity of the countries which contributed papers is an indication of the universality of the concerns.

Rivera presented four case studies of the threats to cultural heritage: the destruction of archaeological sites by the "Dakar" Rally; the illicit trade in antiquities; the damage caused directly by mining and its associated works; and the absence of appropriate policy about the lands of Indigenous people. These threats reflect issues arising from old models of research, the preponderance of funding for archaeological research in the context environmental studies associated with development, and lack of appropriate government policy. One of the key protections for sites will come from raising awareness of the importance of sites and landscapes through education, including relevant interpretive signage at those sites that have been preserved. Such interpretation must highlight the importance beyond what is visible on the surface.

Eres, too, addressed the question of how to present archaeological sites to the public with a detailed examination of reconstructions of sites. In her case studies, she was concerned with archaeological remains that have little visual impact. The response in various parts of Turkey, and elsewhere, has been to build replicas of the excavated buildings and other parts of prehistoric villages in order to show those missing parts, and to allow the presentation and revitalisation of intangible aspects of the heritage.

Curcă presented one of two papers at the conference about the salt industry, in this case in Romania, the other being in China (by Li Shuicheng). In both cases it was possible to show that the industry was widespread, ancient and important. Although there is substantial evidence of the infrastructure, and an ongoing ethnography of how the industry operated, the prehistoric industry can only be understood by modelling the wider context in which salt was produced. The juxtaposition with the

Chinese paper at this conference suggests there is more to be gained by a truly international comparison of salt production.

In a poignant study of the impact of illicit trade in artefacts in (and perhaps beyond) Lao, Egloff described how, within a period of twenty years all the large, artistically interesting statues of Buddha were removed from the Tam Ting Caves and replaced with much less impressive offerings. Egloff's question was whether this destroys the soul. Curiously, there is a case that both the removals and the replacements were made by members of the community, albeit different ones. This highlights the complexities of heritage preservation, where, first, the intangible value that is assigned by the heritage industry is valued differently by different members of the community most closely associated with the heritage site, and, second, within the community there are also differences about values.

Finally, Yang presented a detailed argument about the conditions for first rice farming, emphasizing that this could not be determined solely by the availability of suitable plants and their environments. Rather, whether or not rice was cultivated depended on intangible choices of behaviour by the people who achieved the earliest cultivation.

These very different studies emphasize that intangible heritage pervades all that we do in archaeology and in cultural heritage management, and that the best protection for cultural heritage comes from a proper evaluation of the intangible associations of materials.

Name: Mario A. RIVERA

Affiliation: Universidad de Magallanes, Punta Arenas, Chile

Abstract title: Heritage Protection and Archaeological Sites. The Role of the Civil Society in Northern Chile Archaeology.

Chilean economy rapid development coupled with governmental social policies into scientific and cultural research projects do not reflect the integration of the civil society due to: 1) persistence on old models of research, 2) financial support, both public short term funding, and private subsidy usually as compensation for environmental permits, and 3) lack of government policies regarding heritage and management. This paper argues that these factors do not allow a modern vision where the state should be responsible for the preservation and correct management of archaeological heritage. Key study cases such as the devastation of archaeological sites that worldwide known Dakar Rally is producing, the intense illicit traffic of archaeological collections in the international corner of Chile, Peru and Bolivia, very similar to those drug corridors; the laissez faire with damage mining enterprises are generating, and the absence of a clear policy regarding ancient territories of indigenous groups are indicative of this situation. Finally, we propose several steps that could mitigate the problems outlined in this paper.

Name: Zeynep ERES

Affiliation: Istanbul University

Abstract title: Modelled village museums as a means for presenting prehistoric sites to public.

The Council of Europe Framework Convention on the Value of Cultural Heritage for Society (2005) and as well The ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage (2008) specifies the interface between the general public and cultural heritage. Both of these decrees, among other issues specify archaeological sites as a public asset and foresee their protection and as well their understandability, thus having considerable implications on managing of archaeological

heritage, inevitably necessitating a collaborative endeavor of archaeologists and conservator architects for “preservation” and “presentation” of such heritage sites.

During the last decade or so, several prehistoric excavations have taken the initiative to develop projects not only to preserve and to display the remains exposed through archaeological excavations, but also to share the knowledge thus procured with the general public. However, the poor state of preservation of the exposed architectural remains, occasionally being hardly traceable have been the main concern in devising rational solutions for management projects. So as to overcome this problem, a number of prehistoric excavation sites have designed their presentation strategy on modelled three-dimensional revitalization of prehistoric life at open air village museums.

The paper, after briefly presenting prehistoric village museums that have been implemented during the last decade in Turkey, Bulgaria, Cyprus and Azerbaijan, will open a dialog to discuss open-air prehistoric village museums as an instrument of heritage management, also considering them within theoretical framework of site management.

Name: Roxana-Gabriela CURCĂ and Marius-Tiberiu ALEXIANU
Affiliation: University of Iași, Romania

Abstract title: Romanian intangible heritage of salt; Implications for archaeological research.

In numerous mountainous and piedmont areas of Romania, where traces of salt exploitation going back to 8000 years ago have been found, persists, at a surprising level of intensity for an EU country, resilient phenomena of exploitation and supplying of salt obtained from salt springs and salt deposits. The more than 300 ethnographic investigations conducted since 2007 as part of two ethnoarchaeological projects (see <http://ethnosal.uaic.ro/> and <http://ethnosalro.uaic.ro/>) involving Romanian and French specialists (O. Weller, R. Brigand) have revealed the richness and complexity of the universe generated by salt in the countryside. Particularly individuals aged over 70 are the preservers of highly-valuable knowledge, not recorded anywhere else in Europe, on the genuine forms of exploitation of salt water or rock salt from the first half of the 20th century. The study of the oldest level of this intangible heritage provided unexpected means for understanding prehistoric phenomena, intrinsically limited by purely archaeological approaches. Among the most important research directions generated by the modellisation of the intangible heritage parameters are: spatial analysis, diachronic concentration and the functional definition of the archaeological settlements found near areas of salt supplying, chronotopic strategies for recrystallizing salt from salt-spring brine, forms of primitive mining, the economic dimension of salt-spring brine/rock salt exploitation and supplying, halo therapy. But the most important immediate effect is the current integration of the complex problematics of salt supplying into archaeological research projects, on a national and wider scale.

Name: Brian EGLOFF and Thongsa SAYAVONGKHAMEDY
Affiliation: University of Canberra; Department of Heritage, Ministry of Information, Culture, and Tourism, Lao People’s Democratic Republic

Abstract title: Destroying the Soul: the illicit trade in artefacts in the Lao PDR and its impact on heritage values.

After decades of effort to control the illicit traffic in cultural property there have been notable successes, but the overwhelming picture is one of frustration and failure. National cultural property offences in Lao PDR and anecdotal reports from neighboring states, confirm that looting is widespread, shifting in its geographical focus, supported by substantial profits and thrives on a lack

of enforcement capabilities in supply countries. Reports indicate that theft of archaeological and religious objects involving the looting of ancient sites and the breaking and entry into storerooms and religious buildings is rampant throughout much of South East Asia. Seldom do researchers publish articles that describe in detail contemporary violations, present investigative reports, illustrate in detail violations of laws other than those referring directly to cultural property – theft, intimidation, assault and conspiracy’ or review successful prosecutions achieved through national cultural property legislation. This paper is a review of the situation over a span of 20 years of one kind of cultural property in a single jurisdiction, that being figures of Lord Buddha in the Lao PDR. The perspective is from the vantage point of the Tam Ting caves where colleagues and students from the University of Canberra and the Lao government carried out conservation work between 1992 and 1997. The chilling picture of the place in 2011 where some 666 statues of Buddha, some life-sized, supports the proposition that although there have been a few victories, they are small and that on the whole the defeats are massive and destructive beyond comprehension or description. This is particularly the case as one’s view is expanded to a national and then a regional perspective.

Note

An early version of this paper was presented at the Institute of Advanced Studies workshop on the ‘Illicit traffic of cultural objects: Law, Ethics and the Realities’, The University of Western Australia, 4-5 August 2011. The paper has been updated and the Tam Ting caves are the subject of a book in preparation titled Sacred Caves of Tam Ting (Pak Ou), Luang Prabang, Laos: Mystery, Splendor and Desecration by Brian Egloff and Kristin Kelly.

Name: YANG Tingshuo
Affiliation: Jishou University

Abstract title: Archeological Evidence of the Origin of Rice Farming Culture.

The origin of the rice farming culture is a very controversial topic. Solving this problem plays a key role in contemporary ecological construction and social harmony. However, the hypothesis of the origin of rice farming from ethnology, history, agriculture, and biology has not been proved. Therefore, it is necessary to integrate the hypothesis of origin from diverse disciplines, providing innovative references to archaeological excavating ways. The controversy of the origin of rice farming culture can finally reach common view, achieving direct evidence to archaeological data.

Representing and preserving minority cultures and dealing with Stakeholders

Moderator: TANG Zijun



The People's Republic of China officially recognizes 55 ethnic minorities in addition to the Han majority (over 90% of the population), and the population of Hunan prefecture consists of 41 groups. Both within China and abroad, the ethical and pragmatic challenges of preserving, communicating, and supporting minority cultures remain one of the greatest obstacles to effective heritage management. These papers will illustrate global best practices through case studies and new theoretical approaches.

Name: XIANG Jinfei and JIA Bin
Affiliation: Cultural Heritage Conservation Center of Beijing Tsinghua Tongheng Planning and Design Research Institute Co. Ltd; Cultural Heritage Conservation Center of Beijing Guowenyan Co. Ltd.

Abstract title: An inquiry into the relationship between communities and conservation of large-scale heritage sites within minority areas, China – Case studies on archaeological park planning of Taihecheng Ruins, Yunnan and Lajia Ruins, Qinghai.

少数民族地区大遗址保护利用与社区的关系
—以云南太和城遗址和青海喇家考古遗址公园规划为例

Recently, a vast number of significant archaeological sites have been discovered within China's regions of ethnic minorities. These sites are closely related to the local minority communities' cultural and historical heritage. The conservation, utilization and management of these large-scale heritage sites will directly impact the local minority groups' social lives and future development. Therefore, preserving and continuing the local culture, maintaining and developing local cultural diversities, and promoting national unity and harmonious development are the three vital issues for our excavation project.

The Taihecheng ruins were the capital of the Nanzhao Period of Yunnan. It is an important evidence of ethnic interactions and cultural exchanges between the central region and the southwest areas during the Tang Dynasty. The citizens of Nanzhao were ancestors of the Bai nationality, who are nowadays the ethnic minorities living on the heritage site. Hence, the conservation management plan and planning of the archaeological park of Taihecheng Ruins both focus on the relationship between the value of cultural heritage and the showcase of local Bai's cultures. Of equal importance

is the relationship between land utilization of the archaeological park and the local community's traditional modes of production and lifestyle. Meanwhile, the project also discussed how the display and utilization of the ruin sites could bring social and economic interests to the local minority community.

The Lajia Ruins, which are catastrophe ruins of Qijia period, are located at Qinghai province. They not only witnessed the severe earthquakes and mountain torrents that occurred around 4000 years ago, but reflect features of early agriculture civilizations within the Yellow River basin. The Lajia cun heritage sites, is a traditional hamlet of the Tu nationality. The village landscape and villagers' agricultural life both maintain the characteristics of agricultural traditions which have last several thousand years. Therefore, sustainable conservation and utilization of the archeological sites is the enormous challenge of Lajia archeological park planning.

摘要：在中国的少数民族地区，目前已发现为数可观、价值突出的重要考古遗址，其文化内涵与当地的民族历史与文化有着十分密切的联系。这些大遗址的保护、利用与管理，会对原住民的社会生活和未来发展产生直接的影响。因此，保护与延续遗产地的文化传统、维护与推进文消遗产多元化的发展、促进民族团结与和谐发展，是这些大遗址保护利用和管理所面临的重要课题。

太和城遗址是云南南诏时期的都城遗址，也是唐朝中原地区与西南地区的民族联系与文化交流的重要见证。南诏的民族主体正是太和城遗址所在地区原住民白族的先民，太和城遗址的保护规划和考古遗址公园规划均强调遗产价值阐释与当地白族文化历史展示的联系，强调遗址公园的土地利用与当地社区传统生产生活的协调关系，探讨遗址保护展示如何为当地少数民族社区带来社会和经济效益。

喇家遗址是位于青海省齐家文化时期的灾难遗址，不仅见证了发生在 4000 年前黄河流域巨大的地震和山洪灾害，也反映了黄河流域早期农耕文化的聚落特征。喇家遗址所在的喇家村是土族文化传统村落，村落形态与村民的农耕生活依然保持黄河河岸延续了几千年的农耕聚落文化特征。因此，考古遗址的可持续保护与利用是喇家遗址公园建设的重要挑战。

Name: WANG Zhe
Affiliation: Chinese Academy of Cultural Heritage

Abstract title: The new development of conservation of Chinese World Cultural Heritage: research and conservation of minority cultural heritage.

中国世界文化遗产保护的新发展——少数民族文化遗产的研究与保护

Until August 2014, 47 sites have been inscribed on the World Heritage List, including 33 sites of cultural heritage. Among these cultural heritage sites, the following sites represent the minority cultures in China: Historic Ensemble of the Potala Palace, Lhasa (1994, 2000, 2001), Old Town of Lijiang (1997), Capital Cities and Tombs of the Ancient Koguryo Kingdom (2004), Fujian Tulou (2008), Site of Xanadu (2012), Cultural Landscape of Honghe Hani Rice Terraces (2013). Besides, 'Tusi sites' and 'Cultural Landscape of Zuojiang Huashan Rock Art', which are going to be submitted to the World Heritage Committee in 2015 and 2016, have their Outstanding University Values representing the minority cultures.

In the recent few years, more than half of the sites in China, which either have been inscribed or nominated in the World Heritage List, represent minority cultures. With the development of conservation of Chinese World Cultural Heritage, more emphasis is put on the conservation of minority cultural heritage, which lead the new direction of conservation of cultural heritage in China.

Taking Cultural Landscape of Honghe Hani Rice Terraces as an example, the article aims to analyze the conservation, management, presentation and research of the minority cultural heritage sites in process of nomination. Taking the characteristics of the minority cultural heritage as criterion, the article evaluates the new methods of conservation in the recent development of conservation, and criticizes the new mode of conservation of the minority cultural heritage sites.

截止至 2014 年 8 月，中国共有 47 处遗产地被列入《世界遗产名录》，其中包括 33 处文化遗产。在这些文化遗产地中，代表了中国少数民族文化的有以下几处：拉萨布达拉宫历史建筑群（1994，2000，2001）、丽江古城（1997）、高句丽王城、王陵及贵族墓葬（2004）、福建土楼（2008）、元上都遗址（2012）、红河哈尼梯田（2013）。此外，计划在 2015 年和 2016 年提交世界遗产委员会审议的“中国土司遗址”和“左江花山岩画文化景观”的突出普遍价值也是以少数民族文化为核心内容的。

在近几年内，中国列入和计划申报的世界文化遗产中，约有半数以上的遗产地代表和呈现了少数民族的文化。可见，随着中国世界遗产保护工作的逐渐发展，中国的少数民族文化越来越受到广泛的重视和高度的保护。少数民族文化已经成为中国文化遗产保护的关键主题之一，是中国文化遗产保护发展的最新方向。

本文通过以红河哈尼梯田等少数民族文化遗产地为案例，对他们的保护、管理、利用、研究、申报世界遗产等工作进行分析，以少数民族文化特有的文化要素与遗产特征为标尺，探讨他们在逐渐受到全国和全世界重视的过程中，得到的多种新的保护与管理方式的优劣，对在此过程中新发展的保护管理模式进行评估。

Name: Brian BILLMAN, Alicia BOSWELL, Jesus BRICEÑO Rosario, Belsy GUITEREZ JAVE, Kevin KOHLER and Julio RUCABADO YENG

Affiliation: Department of Anthropology, University of North Carolina-Chapel Hill and MOCHE, Inc.

Abstract title: Toward Best Practices in Community Heritage Consultation: Tales from 28 years in the Moche Valley, Peru.

An essential element for the development of heritage management plans and UNESCO nominations is consultation with local communities. Major archaeological sites, museums, and ecological parks often lie adjacent to impoverished communities. Whether they are descendant communities or recent immigrants, these communities should be recognized as stakeholders in local development and preservation initiatives. A primary goal of preservation programs should be the improvement of the standard of living of families in stakeholder communities. Often the success of preservation programs depends on the active, positive participation of community members. Those who move forward with without consulting stakeholder communities do so at their own peril, and the peril of the communities. Often the consequences of ignoring community consultation have proved disastrous. We present six best practices for community heritage consultations. We provide our views on how to implement these practices in the consultation process. Our views are based on 28 years of experience working with rural communities to preserve prehistoric archaeological sites in the Moche Valley on the north coast of Peru. Ours years in the valley have encompassed setbacks, out-right failures, and some successes.

Name: Alicia CASTILLO MENA.
Affiliation: Universidad Complutense de Madrid

Abstract title: Mapping stakeholders in archaeological heritage management: An experimental session to learn and discuss together how to better use this important tool

These days no one doubts the importance of stakeholders in cultural heritage management. New management plans for World Heritage Sites or for other kinds of archaeological sites have to introduce at least the first organizations which are involved in the management of the site, however the reality is that this tool is usually made “in the office” and only considers those with bureaucratic with responsibility and the people with direct business at the archaeological site. This is not enough for best practice in archaeological heritage management. There are indirect or potential stakeholders who are ignored and they also must be considered, they’re sometimes even more important.

As a participative, pro-active and dynamic presentation, through short explanation and a recent documentary about archaeology and World Heritage in Spain (see the trailer and blog: <http://www.youtube.com/watch?v=AVcUbw1ocH8>/<http://documentalunpasadoconfuturo.blogspot.com>) I will introduce and show some stakeholders in these Spanish cases. This can be useful to understand the necessity to improve our current way of mapping stakeholders. Finally, with the participants of this special session, it is my aim to try and rethink about this topic and to make some scenario’s concerning it.