

Monitoring Mission Report for the Imperial Palace of the Ming and Qing Dynasties, the Temple of Heaven and the Summer Palace

Kazuyuki Yano
Japan ICOMOS, Secretary General
Chief Executive Officer
Planning Institute of Cultural Properties

INTRODUCTION

A joint reactive monitoring mission was called in response to the decision made in the 29th session of World Heritage Committee, held in Durban, July 2005, to assess the actual impact of the restoration and conservation works on the Outstanding Universal Value of the World Heritage properties in Beijing, i.e., the Imperial Palaces of the Ming and Qing Dynasties, the Temple of Heaven and the Summer Palace. The mission's objective is to make accurately monitor the ongoing restoration works to prepare appropriate recommendations and suggestions, if necessary, by the World Heritage Committee at its 30th session (Vilnius, 2006).

Concerns are expressed from various sides of professionals and the general public, both nationally and internationally, over the state of restoration works, restoration policy, the contents of restoration works and work schedule presently executed in the Imperial Palace the Temple of Heaven and the Summer Palace. These have been drawing growing attentions from different media sources as well.

From the World Heritage Center, Mr. Feng Jing and from ICOMOS myself, Kazuyuki Yano, were dispatched to make above-mentioned assessment in addition to providing suggestions and recommendations for cultural heritages in the future. Following is the report of the mission prepared by K. Yano concerning mainly the contents of restoration works, its schedule, and organization of the restoration team and technical aspects of the works as undertaken presently. The report prepared by Mr. Jing discusses mainly the buffer zone of related cultural heritage properties.

Duration of the mission

26 – 28 October, 2005

Itinerary

26 October Leaving Narita, Tokyo to Beijing China

27 October Visit the **Temple of Heaven (Tiantan)** and

the **Summer Palace (Yi Heyuan)** in the morning,
Visit the Palace Museum in the afternoon for the meeting.
28 October Visit the **Palace Museum** in the morning.
Leaving Beijing in the afternoon to Narita, Tokyo

Participants of the mission

ICOMOS

Kazuyuki Yano (Secretary-General, ICOMOS Japan National Committee)

World Heritage Center

Feng Jing (Programme Specialist, Asia and Pacific Unit, World Heritage Centre)

UNESCO Beijing Office

Du Xiaofan (National Programme Officer, Cultural Heritage Conservation)

1. The Current Situation

1.1 Imperial Palace

The Imperial Palace (formerly known as the Forbidden City) of the Ming and Qing Dynasties in Beijing was first built in 1420 (in the reign of Ming Emperor Yong Le) and continued being expanded and renovated until the reign of Emperor Qianlong (1735-1796) during the Qing Dynasty. The Imperial Palace is the only intact example of ancient Chinese Imperial Palaces. Its integrity is valued highly throughout the world. Although the upkeeps of the palace buildings were well maintained as part of national projects during the Imperial eras, due to the changes in social and economical situation in China that occurred since the end of the 19th century, sufficient maintenance was not provided over 100 years. A section of the palace has been open to the public as the Palace Museum since 1948. Due to serious decay and degradation partial restoration works took place in the 1970s. The restoration works executed at that time, however, were inappropriate or not up to the standard in terms of respecting the authenticity of a historic cultural heritage that has a universal value. 55% of the property, for example, was repainted in 1924: the work conducted at that time presented problems in terms of design, material and application techniques of polychromy.

Various large scale buildings were built during the 1970s within an enclosure of the Imperial Palace, which interfere with the integrity of the Imperial Palace.

In addition to the general deterioration of each building, weathering and disintegration of the marble staircases and railings in some part are evident. This problem requires urgent action.

With time passing without much positive intervention, decay and degradation continued to advance until a comprehensive conservation and restoration plan for the entire Imperial Palace was made in 2002. The plan has been put into execution since 2003, the first phase of which is planning to

be completed in 2008.

1.1.1 Contents and scheduling of the restoration plan

According to the outline of the comprehensive plan for the conservation of the Imperial Palace, the first phase will take place in 2003-2005. A total of 21 buildings were included as the object of conservation/restoration during the first phase. The second phase is scheduled from 2006 to 2008. Seven, relatively dominant buildings such as the Taihe Men (the Gate of Supreme Harmony), the Taihe Dian (the Hall of Supreme Harmony), are included for conservation in the second phase. The third phase is scheduled for the period from 2009 to 2020. During this phase the plan states to complete the conservation of the buildings on the central axis and then to the Six Palaces in the East and Six Palaces in the West as the last move.

The polychromy, the restoration of roofing, the repair of foundations and the partial restoration of wooden elements are included in the contents of restoration works during the above phases.

1.2 Summer Palace

The Summer Palace was founded in the 15th year of Qing Dynasty (1750) as the major imperial garden. It is situated 15 km northwest of the Imperial Palace.

1.2.1 Contents and scheduling of restoration plan

In 2001, a ground refitting project for the square outside the Dong Gong Men Shou Dian (the Hall of Benevolence and Longevity), the Don Di (the East Bank), and the southern part of the Chan Lang (the Long Gallery) were completed. In 2002, environmental renovation project in the northwestern part of the garden began. Removal of unfit buildings, landscape paving, replanting of trees were included in the scope of this project. Execution began in April 2003 and restoration was completed in July 2005. In 2005, the restoration of Cloud Dispelling Hall-Pagoda of Buddha Fragrance, located in the center of the Mount of Longevity was started; it is planned to be concluded in October 2006.

Contents of restoration works include ground refitting, repair of paintings that was previously not completed in an authentic manner. A full-scale restoration in the historic buildings in the Long Gallery, the Pagoda of Buddha Fragrance and the Sea of Wisdom are presently taking place. Scaffoldings will be erected for the Pagoda of Buddha Fragrance in the spring of 2006.

1.3 Temple of Heaven

The Temple of Heaven had been the place where the emperors of the Ming and Qing Dynasties prayed for good harvest and offer sacrifices to heaven.

Presently the Temple of Heaven is under management of the Municipal Bureau of Parks and Administration of Beijing. Restoration principles state that traditional skills with traditional materials abiding by national and international laws for protection of cultural properties must be used. In principle, the aim is to recover the original state of the time of Emperor Guangxu of the Qing Dynasty. An expert meeting was called in order to draft a restoration plan. Large scale restoration works took place in the 1970s although they were of insufficient quality. The newly drawn plan is based on reliable historic documents and photographs taken in 1935 as well as interview results gathered from restoration workers that were actually engaged in the previous restoration works.

The present scope of restoration plan includes the following works: reinstating inappropriate restoration carried out previously; redrawing and reapplying polychromy of historically incongruous decorative motifs; replacing inappropriate chemical restoration materials used in previous restoration. The foundation platform was partially reconstructed with concrete during the previous restoration period. This part is reinstated using Chinese traditional black fired bricks as the original condition called for. It is understandable that restoration works are required today due to the poor quality of the last restoration works. During this mission, I could not verify that the procedure of taking precise documentation that is recommended to reproduce accurate historic polychromy was actually carried out. I could not see either how the study on design motifs and the research about the reapplication of polychromy were being done.

1.3.1 Contents and scheduling of the restoration plan

- Polychromy restoration

- Restoration of roofing

- Reinstating the foundation platform with traditional material

- Partial restoration of wooden elements

2 Issues

The actual restoration works I observed during the mission in the Imperial Palace, the Summer Palace and the Temple of Heaven included the restoration of roofing, retouching of polychromy, paint restoration, and partial restoration of wooden elements. Although works conducted were not associated with major restoration works requiring dismantlement of structural members, restoration of roofing and exterior painting are very conspicuous and both affect the appearance and impression greatly. It is very important to maintain the desired quality of work so as to retain the universal value of the world heritage properties.

Judging from the degradation state of the historical buildings, it is appropriate to undertake restoration works of this scale now.

Some obtrusive buildings built during the 1970s that are not fit to the Imperial Palace will be

removed from the premises. This was an admirable decision to make and is welcomed. In principle no new buildings shall be planned within the compounds (the Imperial Palace, the Summer Palace and the Temple of Heaven), and if a new building needs to be built, work must be conducted very carefully so that any archaeological evidences that may be buried underneath are not destroyed. The Imperial Palace site in particular requires very special attention because rich city ruins from the Yuan Dynasty are buried underneath it. Consideration to the overall landscape in terms of scale as well as individual design must also be taken into account.

2.1 Restoration of wooden elements

No drastic restoration works requiring dismantlement were associated with any of the works presently undertaken in Imperial Palace, and as observed during the mission in the three sites. However, small-scale replacements of seriously decayed timber were included in the scope of this phase of restoration plan. As characteristics of Chinese architecture, timbers used in architecture are covered with thick paint layers, which sometimes result in delaying the early detection of pathological states until the restoration works actually begin. Restoration of damaged parts seemed to be done with less thoroughness in craftsmanship, probably because they remain hidden under paint layers: this is a problem which I believe needs to be improved.

2.2 Polychromy restoration

In the restoration of polychromy, works can be classified into the following three approaches: A) Conservation for maintaining the present condition; B) Partial reapplication of external polychromy; C) Complete reapplication of polychromy. The issue discussed here is the case of complete reapplication. The basic principle of conservation of historic properties states that complete reapplication should be the last resort. A conservator should seek every possible conservation measure for maintaining the existing condition, or to manage the scope of works within the level of “partial reapplication”. It is necessary to set a clear standards clarifying when and in what conditions a “complete reapplication level” of restoration works can be applied.

In the case of complete reapplication, differentiating authentic works from those that are not becomes hardly possible just from appearances. It is thus necessary to prove clearly how the authenticity in design, material, or traditional technique is maintained. To do so, publishing research findings, precise documentation including video recordings of each step of the restoration procedure must be done together with the complete reapplication works. From what I saw and heard during this mission, I understood how the recording and documentation of restoration works are being carried out and getting more attention; however, further improvements are needed.

2.3 Restoration of roofing

The restoration method employed in the Imperial Palace is called “roof tile replacement or roofing replacement”. The first step of roofing replacement work is to dismantle roof tiles, distinguishing these one by one that can be salvaged for reuse those that can no longer be used. Missing pieces are supplemented with newly fired tiles following the traditional recipe and method. In principle, tiles with special features or ornamentation will stay in use. This roof replacement method is fairly common in restoration practice of Japanese traditional architecture as well.

The roof tiles used in the Imperial Palace are glazed tiles. Glazing represents the nobleness and decorative beauty while practically providing durable and protective coating from weathering. Once the glazing wears off, however, penetration of water soon occurs and accelerates the state of degradation rapidly. Since winter in Beijing is very severe and daily differences in temperature are so great as to bring about freeze-thaw degradation, protection with glazing is practical and quite effective. The splendor of yellow roof tiles is not only the trade-mark of palace architecture, it also symbolizes Chinese culture.

In terms of authenticity, reusing old roof tiles from Ming and Qing Dynasties is a necessary treatment for historic property. But deteriorated tiles are no-longer functional and cannot be used since they become the source of further problem of leaking, bringing more serious damages to buildings. The standard for judging the deteriorated condition is established mainly by careful eye examination of chips, cracks, and fissures, in addition to a sound examination by knocking. This method is also used in Japan and proven to be effective. It is recommended to add scientific material tests such as water absorption test and non-destructive hardness test on randomly selected tiles.

Under close observation, some tiles show damaged glaze while the tiles themselves are still in sound condition. For those tiles, providing protective coating with synthetic resin to add durability may seem to be an option. But the durability of synthetic resin over time under UV rays is unreliable. To avoid problems from happening yet salvaging the original material, the restoration team came up with a method of scraping off the old glaze, and re-glaze and re-fire the tiles. By doing so, the team could increase the percentage of reuse of original materials (tiles) while expectancy of usage will become longer than if synthetic resin coating were used. The method thus presents a positive aspect, but requires direct intervention on to the original materials. This protective method as an authentic method should be discussed not only within China, but also on the international level. The periodic report from the state party that will be submitted later should include the results of such discussions. As an overall appearance, they all look alike; it is very hard to distinguish new tiles from original tiles. Judging only from the appearance, this restoration method may be misunderstood as one that they are simply replaces all tiles into the new ones. In terms of tile laying techniques, restoration works follow a traditional method that presents no problems.

2.4 Conservation of stone

Weathering and disintegration of the marble staircases and railings in some part are evident partially due to the acid rain problems. This problem requires urgent action in order to take scientific records of the existing condition and monitor how the state changes over time. The problem should also be brought to the attention of international experts to conduct researches and investigations to come up with the necessary countermeasures.

2.5 Work plans and expected duration for the restoration procedure

Desirable restoration should proceed in the following steps: (1) study and investigation; (2) planning and design; (3) execution of works; and (4) publication of thorough documentations made over the course of restoration. In the case of historic cultural architecture, allocating plenty of time for preliminary investigation and planning is very important. The contents of investigation should include historical research, investigation on condition of degradation, research on traditional construction techniques, and an investigation of material specifications. Considering that all the above mentioned has to be conducted, the current plan appears to be slightly too short.

Execution procedure and duration of work plans differ greatly depending on the contents and the degree of restoration. However, work plans for executing traditional work require a longer and more relaxed schedule. It seems that the current restoration schedule has been revised to slow down according to the document sent on a CDR in December 2005. It is recommended that the state party clarifies changes in the schedule and submit to the World Heritage Center in case substantial changes are made to the original plan.

2.6 Organization of the restoration

In execution of restoration project for cultural heritage, it is important that individuals who engage in the project prepare for the following questions:

“Who orders, who manages, who coordinates and who supervises? Are the job descriptions, responsibilities and reporting line of these parties involved at each level clear?” “Is there an adequate qualification system established to appoint appropriate supervisors or supervising systems? Are there enough of such qualified personnel to execute sufficient work?” “Are there enough qualified and experienced craftsmen, carpenters, plasterers, or traditional skilled workers for polychromy?”

After visiting restoration work sites in the Imperial Palace, the Summer Palace and the Temple of Heaven, I observed differences in the quality of restoration management systems, and design supervision of skilled workers. Corporations engaged in works are all certified companies, but the qualification level would need to be further equalized. I saw craftsmen with distinguished talents and experience, but it was still questionable if they were enough in numbers.

Experienced design supervisors, conservators, or craftsmen of “maestro” level cannot be

trained instantly. Actual experience in particular must accompany talents and knowledge. Restoration projects of this scale and length in schedule should be fully utilized for the training of new and young professionals.

2.7 Documentation and publication

Preservation projects of cultural heritage must retain the authenticity of the original historic heritage and every single finding and intervention must be documented fully. This includes preliminary survey (research on history, techniques, material specifications and deterioration conditions), records of previous restoration/intervention, causes of deterioration, restoration plans and contents, details of restoration works and work plan and management, findings during the restoration works and the research studies. Photographic records must be taken before and after the intervention are kept together with written material. Such a documentation system was established in Japan and has about 100 years of history. It is also recommended to make an obligatory system to publish documentation for all restoration projects in China.

3. Suggestions

3.1 Integrity of Chinese Palace architecture such as the Forbidden City

The recent restoration using newly glazed yellow tiles and overall recovery of polychromy are an issue whether such methods of restoration infringe on acceptable treatments for retaining the authenticity of world heritage. However this, I believe, this is not just an issue of retaining authenticity, but also an issue of maintaining the integrity of the cultural and historical property. In other words, the integrity of palace architecture as Chinese people conceive it may mean exactly having the bright colors by noble yellow tiles, the vermilion pillars, and the vermilion, green and blue polychromy. The discussion topic raised here is a very delicate issue. While respecting the diversity of individual regions, nations or peoples, there may be discrepancy in between the understanding of authenticity and integrity. It is time to reorganize our thoughts on both authenticity and integrity, even though the idea of authenticity was thoroughly argued in the Nara Document. We now need to extend our discussion further so that what constitutes the integrity of heritage will not affect the authenticity of the same heritage.

3.2 Study on the restoration of polychromy and its authenticity

Historic polychromy techniques applied on architecture are found in China as well as in other East Asian countries such as Korea, Vietnam and Japan. At a glance the techniques found in these countries resemble one another, but under close observation they all are different in application techniques, materials used or process of application. Even so, the restoration to study for polychromy in Asia is a field still in need of further studies and discussions to learn about both the common aspects

and the differences. Experts on polychromy in Asia are recommended to form a consortium for information exchange and building joint research possibilities. I believe Shoukang Palace in the Imperial Palace could become a model example for research, as suggested by the Imperial Palace management office during this mission, as restoration of polychromy is planned for this palace. I would like to recommend Dr. Shigeru Kubodera from Nara Institute for Cultural Properties as one of the leading experts of polychromy restoration from Japan.

In general terms, restoration of polychromy can be approached in three ways: maintaining the present condition, retouching partially, or making a total reapplication. Creating a standard for decision-making is necessary.

For example, in Japan, there used to be a standard widely used from the end of the 19th century to the early 20th century which stated that “A) Supplementary polychromy will not be applied but protection coating can be applied when colors are relatively well retained; B) Polychromy will be reapplied when superficial natural lacquer coating needs to be redone; C) When detailed studies can provide information about the original conditions and the original patterns of polychromy, partial reapplication is permitted; D) For documentation purposes, wall paintings and decorative patterns are carefully replicated.” Later, although these principles are observed, restoration by reapplication has become more common. At present, maintaining the existing condition, partial reapplication, or total reapplication are individually examined and determined according to the existing condition, the degree of discoloration, the types of materials, and other factors. The method of determination is the same as that used in China, however, building a standard policy is also necessary to guarantee the continuation of traditional techniques, while maintaining authenticity. In addition to the manual and traditional replication methods, a documentation using digital capturing techniques and advanced video technology are areas worth being explored. Analyses and regular monitoring must be included into such programs.

Nevertheless, the most pressing issue is to discuss what the authenticity of polychromy restoration is, and to establish an acceptable common understanding in this field.

3.3 Scientific analyses

Scientific analyses of original materials with polychromy and paintings, such as X-ray diffraction analysis, analysis under electro-microscope, and infra-red analysis are required. I did not have a chance to see the report of the current restoration yet, but further advancement in this area of study is expected.

3.4 Comprehensive restoration plan for management and revitalization

Although the presently submitted conservation and restoration master plan for the Imperial Palace covering 2003-2020 is extensively descriptive in terms of restoration, questions such as maintenance

and management as well as development and revitalization of the restored site still need to be discussed in the comprehensive plan.

- Overview of the historic property

- History

- Architectural heritage buildings and their distribution

- Natural and man-made damages to the property

- Records of previous restoration

- Conservation and restoration plan

- Foundation and foundation platform

- Wood

- Polychromy

- Roofing

- Stone

- Risk preparedness plan

- Fire hazard prevention

- Crime prevention

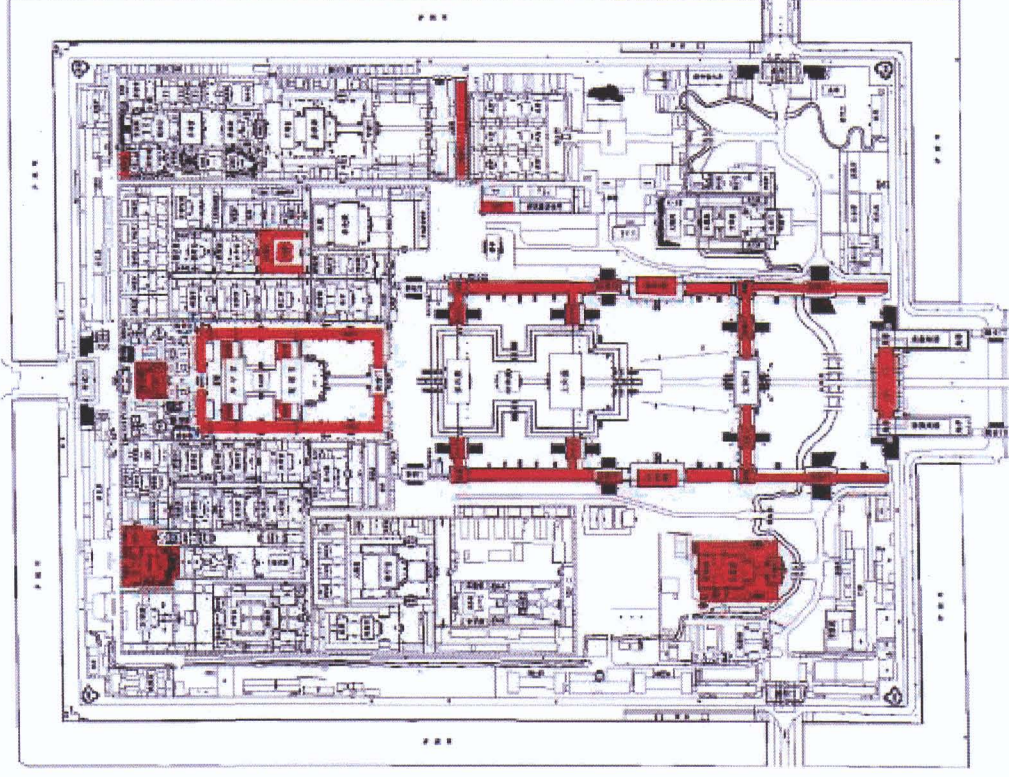
- Plans for opening the site: explanations and facilitation for visitors

- Plans for tourism

- Plans for maintenance and management

Current Situation of the Forbidden City's Renovation Project and the Palace Museum's Practice

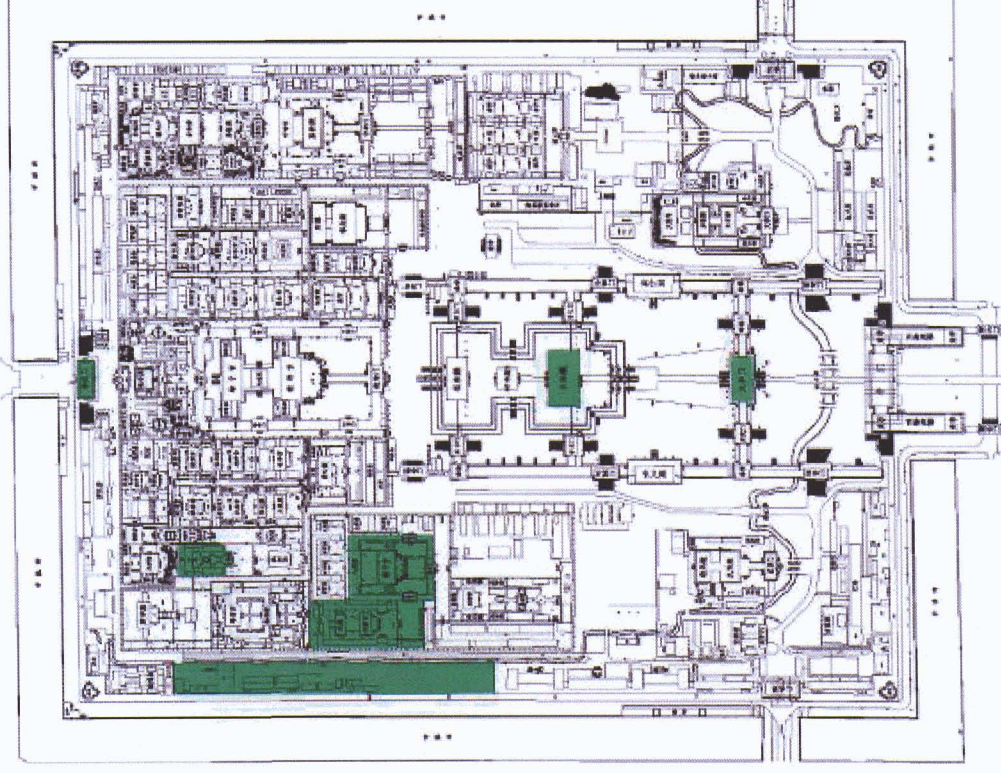
2005 年之前完成的工程项目



Renovation project completed between 2002 and 2005

Current Situation of the Forbidden City's Renovation Project and the Palace Museum's Practice

2006-2007 年计划完成的工程项目



Renovation project 2006-2008