Keynote Address Urban Research Plaza's 10th Forum⁺⁺

Principles of Preservation and Crisis Management

of World Heritage and Archaeological Sites in Ayutthaya

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Thailand is a rich country in the evidence of its past prosperity. Ancient monuments, archaeological sites and ancient art objects have been found in every provinces of the country. These evidences indicate the long history of Thailand since the prehistoric period as well as the wealth of cultural heritages in this country. The surrounding environment of these cultural heritages which is sometimes called its cultural landscape, also needs to be conserved sustainably. There are various perspectives on how to conserve the authenticity and integrity of the culture heritages and their surrounding environment.

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⁺⁺ The 10th Annual Urban Research Plaza's Forum (URP) is hosted annually by the Faculty of Fine and Applied Arts, Chulalongkorn University, Thailand & the Urban Research Plaza, Osaka City University, Japan. website: www. urp.faa.chula.ac.th/urp/Welcome.html.

The cultural heritage in Thailand is recently under threat from population growth, the development of infrastructure, the expansion of its agricultural areas, the new construction of residential and industrial buildings as well as the illicit excavation of its archaeological sites. These are major man-made problems which the Fine Arts Department is facing.

The natural disasters such as earthquake, tsunami, landslide, riverbank erosion and flood are also the natural factors which have an enormous impact on the stability of ancient monuments and their surrounding environment. The 2011 severe flood in Thailand has been regarded as a major catastrophic damage to Thai people's lives, their properties and their products. The flood also affected the archaeological sites in several provinces, especially, Sukhothai Historical Park, Si Satchanalai Historical Park and Ayutthaya Historical Park which have been listed as World Heritage sites.

As an ancient capital city situated on the central lowland plain or flood plain of Thailand with 4 major rivers flowing through this province, Ayutthaya has been flooded every year. During the 2011 flood crisis, Ayutthaya was attacked by a large amount of water with high velocity and high pressure. The city and its ancient monuments were completely submerged at least 2 meters underwater.



Figure 1. Flood waters at Mahadhatu Temple, Ayutthaya.

Compared to the other World Heritage Sites in Thailand, Ayutthaya Historical Park was the most affected by the flood. Hundreds of ancient monuments have been flooded for more than 2 months. The damage of these monuments was caused by the erosion, the flood and the immersion of the trapped underground water.

The ancient monuments located inside and outside the historical park have been damaged. The flood not only affected the stability of ancient monument, but also the local and national economy. The tourist income on visiting Ayutthaya Historical Park also decreased dramatically. The flood created the mental impact on the

people who were concerned about archaeological sites and their sacred religious places which were submerged under polluted water for a long time. The Fine Arts Department is a government agency. Our task focuses on national heritage of arts and culture. We are responsible for the prevention of cultural heritage affected by the severely huge flood. The department prepared the management framework to solve the impact of the flood and to prevent the same problem from arising again in the future. The framework can be briefly speaking as follows:

Firstly, it is the cleaning process to revive the historical park back to normal. The sites and their surrounding areas especially the important sites such as Wat Phra Sisanpet (วัดพระศรีสรรเพชญ์), Wat Mahathat (วัดมหาธาตุ), Wat Phra Ram (วัดพระราม) and Phra Mongkolborphit Shrine (วิหารพระมงคลบพิตร) will be cleaned. The other public and private sectors can participate in this procedure.

Secondly, it is the restoration process including the survey of the damages of ancient monuments. This has to be done in order to plan for the consolidation and restoration of the monuments.

Thirdly, it is beneficial to have a long term plan to protect the ancient monuments from future floods. The preparation for the next flood needs the precise prediction of the calamity. Fine Art Department needs to be prepared for the potential disaster, set up the guidelines for the disaster or risk management system by integrating with the local agencies and the voluntary alliances to be prepared for longterm prevention in the future.

During the crisis, building up the defensive lines including dykes, earth walls iron sheets were effective. This process is to enhance the defensive lines that also include raising the water pump station, establishing the drainage system, and consolidating the ancient monuments. While U-Thong Road will be the defensive line of the inner city, Wat Chai Wattanaram (วัดไซยวัฒนาราม), Wat Thammaram (วัดธร รมาราม), The Portuguese Village (หมู่บ้านโปรตุเกส) will be the defensive line of outer city. There will be the survey of ancient temple walls which will be used for the prevention of flooding after their consolidation.

The dredging on ancient canals, such as Klong Chakrai Yai (คลองฉะไกรใหญ่), Klong Chakrai Noi (คลองฉะไกรน้อย), Klong Makham Reang (คลองมะขามเรียง), Klong Mahachai (คลองมหาขัย) etc., ancient reservoirs such as Bueng Phra Ram, and ancient moats will be re-excavated in order to drain water in the flooding season, and to reserve water in the drought season. The survey of ancient water system will be done and planned for dredging and draining to the Chao Phraya River by the Department of Public Works and Town and Country Planning, Ministry of Interior.

The restoration of ancient monument in Ayutthaya province receive some partial support from several public and private sectors in Thailand such as The Engineering Institute of Thailand, the Department of Public works and Town and Country Planning, Asian Institute of Technology etc., as well as the oversea supports from Japan, Italy, the Netherlands, Germany, the United States of America and UNESCO for which the Fine Arts Department appreciates their assistance.

With the crisis management and the assistance mentioned earlier, I hope the ancient monuments and their surrounding environment in Ayutthaya and all over Thailand will be sustainably conserved. We welcome donation, support, and participation from everyone. The most important thing in managing the plan for preventing and resolving the disaster is the participation and awareness of Thai people especially Ayutthaya people who are actually the owners of this cultural heritage.



Figure 2. Flooded temple grounds in Ayutthaya.