# FINAL REPORT

Cultural Asset Preservation and Restoration Technology Course: Buried Cultural Assets (Archaeology)

February 11, 2002 - June 23, 2002

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#### INTRODUCTION

This final report is a brief narrative account of my four and half months of training from February 11, 2002 to June 23, 2002 in Japan. This specially offered training course on "Cultural Asset Preservation and Restoration Technology: Buried Cultural Assets (Archaeology)" was held at the Japan International Cooperation Agency (JICA) Osaka International Centre in Ibaraki-city, Osaka, Japan.

This final report covers five main aspects of the training course: (1) study visits, (2) field surveys and computer practice, (3) conservation science, (4) most impressive knowledge or technique learned, and (5) application of knowledge in my country.

#### STUDY VISITS

The study visits provided much idea and knowledge on many aspects of Japanese museums, conservation institutions, temples, shrines, castles, and archaeological sites. The study visits also provided good opportunities to meet archaeologists, conservators, architects, and researchers in the field of conservation of cultural properties in Japan.

Our visits to the numerous museums and conservation institutions were very interesting, in particular visits to the Museum of Kyoto, Osaka Museum of History, Kyoto National Museum, Fukuoka City Museum, Lake Biwa Museum, Tokyo National Museum, the University Museum Tokyo, and the Nara National Research Institute for Cultural Properties. Some of these museums and institutes housed some of the best national treasures and collections of cultural properties in Japan. They also provided informative and latest knowledge on museum set-up, organizations as well as the different ways and technology used in museums' exhibitions or displays to the public in Japan.

Our numerous visits to temples, shrines, and castles in Japan were great exposures to view ancient Japanese architectural styles and restoration works, particularly at Kiyomizu Dera, Yakushiji temple, Todaji temple, Nikko Tosyogo Shrines, Itsukishima Shrine, Syurijo Castle Park, Osaka Castle, and Himeji Castle.

Visits to archaeological sites were very interesting as it provided first-hand exposures on Japanese archaeological sites and excavations techniques. Of particular interest were the the on-going excavations sites such as the one at Asuka Capital. However, I must say that the training programme included too many visits to temples, shrines, castles, museums or Kofun sites. It would strongly suggest that the number of visits to these places be reduced to include only those most relevant to the training such as temple/shrines under restoration or those that were restored with special methods for future training course. Many of the temples, shrines or Kofun we visited were rather similar and more often than not, we were there to observe the already restored structures. In any case, world heritage sites would be important places to visit as they are often preserved and restored by some of the best experts in Japan.

### FIELD SURVEYS AND COMPUTER PRACTICE

Field surveys in particular practices on the use of digital photogrammetry, GPS, total station as well as ground probing radar and resistivity mapping were all very useful for my work as we will be able to apply these techniques during archaeological surveys and excavations in Malaysia. The computer practices on softwares such as GIS Archview, 3D modeler, and AutoCAD will be of use in some of my work as well.

#### **CONSERVATION SCIENCE**

Conservation science practices were very important for me, in particular those involving practical skills at the conservation laboratory of the Azuchi Castle Archaeological Museum. The different methods of treatment of wooden and metal objects were useful as we have some of these artifacts in our country. More importantly, we learned practical skills on the removal of soil layers, which is very useful for the preservation of archaeological site's soil layers and also for displays of the soil layers during museum exhibitions. However, I really wished that we had more time for these sort of practical skills training in conservation not only in Azuchi Castle Archaeological Museum's laboratory but also at other institutions like the Nara National Research Institute For Cultural Properties to include conservation or analytical practical skills training of other materials such as bones or stones. The conservation science practices as well as the replication technique were both very useful because it provided practical knowledge and skills as well as ideas on new and suitable conservation materials that were used for conservation and replication works in Japan that may also be used in Malaysia

# MOST IMPRESSIVE KNOWLEDGE OR TECHNIQUE LEARNED

The most impressive knowledge or technique, which I learned during the training course include conservation science practical skills in the treatment of wooden and bronze objects and soil layers removal as well as digital surveys and mapping of landforms, digital photogrammetry, and computer software programs such as GIS Archview.

## APPLICATION OF KNOWLEDGE IN MY COUNTRY

All these knowledge will be applied in my daily work at my university to conserve our collections at the university as well as artifacts during archaeological excavations. Some of these new knowledge and skills will be shared with students at the university and conservators in Malaysia. Such new ideas or knowledge are very useful for me because it will surely help me improve the methods of archaeological conservation and surveys for Malaysia.

#### CONCLUSIONS

The four and half months of training on the "Cultural Asset Preservation and Restoration Technology: Buried Cultural Assets (Archaeology)" provided me with very useful ideas and knowledge in the field of conservation. I have learnt some new and useful techniques of conservation and surveys during the course of the training, particularly useful practical skills and hands-on experiences on the identification of conservation problems and the conservation treatment of wooden and metal objects and the use of certain computer software programs for surveys and conservation. All these knowledge and skills will definitely be very useful as they can be applied in conservation works in tropical countries like Malaysia that have similar conservation problems such as the hot and humid climate during the summer months in Japan.

The study visits to numerous museums, conservation institutions, archaeological sites, castles, temples and shrines in Japan were generally useful exposures for gaining knowledge on their functioning, set-up, storage, and conservation works. These visits also provided first-hand knowledge and exposure on the problems of conservation and the solution to these problems at the site and in the museums or institutions. The knowledge gained will definitely be useful in my future work in Malaysia and also in the setting up of our new conservation laboratory in Malaysia. During the course of the training, I was fortunate to be able to meet many highly experienced participants, conservators, and scientists from Japan and abroad. We learnt and shared knowledge on conservation. The establishment of these networks will surely go a long way to help conserve culture heritage and build bridges of cultural cooperation and knowledge sharing amongst scholars and institutions in the field of conservation.

# **ACKNOWLEDGEMENTS**

I would like to thank the Japan Government and the Japan International Cooperation Agency for giving me the great opportunity and the financial support to participate in this training course in Japan. I am very grateful to all the staff of JICA, in particular Ms Nai san, and JICE, especially Ms Nakamura san and Shibata san, and all our sensei, particularly Professor Hamazaki, Mr. Miyahara, and Mr. Nakagawa as well as all the other trainees of this course for their kind help and friendship that had made my travel and short stay in Japan a very pleasant and memorable one. I owe special gratitude to the Government of Malaysia as well as Dato' Professor DZulkilfi Abdul Razak, the Vice Chancellor of the University of Science Malaysia and my director Dato' Professor Zuraina Majid of the Center For Archaeological Research Malaysia, for granting me leave of absence from work to do my training in Japan. I am confident that all the knowledge, exposures and practical skills gained during the course of my four and half months of training in the field of archaeological conservation in Japan will have a significant and a long-lasting impact on my professional career as well as our efforts to conserve and to save cultural heritage in Malaysia and the other developing countries in the world. Ganbatte kudasai!