## JAPAN – CHINA JOINT PROJECT ON CONSERVATION OF THE ENVIRONMENT AND HISTORICAL LANDSCAPE OF WEST LAKE, HANGZHOU, CHINA

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## Circumstances of the joint project on West Lake

A scientific study on West Lake has been carried out mainly by researchers from Hangzhou University, and the Water Management Office, Hangzhou City, have regularly observed the water quality of West Lake. A sewerage system for the treatment of domestic water was completed at the end of 1970. Furthermore, a great project for water supply (300,000 tons/day) from Qiantang River started in 1986 in order to shorten the turnover time for lake water, and a dredging project for eliminating the bottom mud of lake have been put into practice for purification of the lake water. As result, the water quality of West Lake has improved somewhat. However, the expected effect has not occurred, and the dense bloom of blue-green algae continues to appear. At present, they are studying countermeasures and have asked us for new idea.

The committee of the Natural Science Fund of China and the local government of Hangzhou has recognized that greater support of fundamental sciences is necessary for the purification of West Lake. Accordingly, the Natural Foundation of China and the Science Fundation of Japan have discussed a definite project over the past four years, and reached an agreement as follows.

Professor emeritus Yatsuka Saijo, together with a Japanese Foundation Group, visited China in October, 1992, and observed the state of eutrophication of West Lake, Hangzhou. In September 1993, the Japanese members of the project (project leader: Y. Saijo, project members: T. Okino, N. Ogura, T. Iwakuma and Y. Yamaoka) were sent to Hangzhou by the Center of Research Foundation (Fund of the Toyota Foundation). In Hangzhou, the Japanese members inspected the state of West Lake and the watershed area, and discussed the remediation project for West Lake together with their Chinese counterparts for two days. After that, an agreement was reached on the operation of the project.

For these joint studies between Japan and China, the financing for the Chinese researchers was supported by the Committee of Natural Science Foundation of China and the local government in Zhejiang, China. The Japanese researchers were supported by private foundations in Japan (Toyota Foundation, Naoji Iwaya Foundation, the Science Foundation of Kajima and Sumitomo Foundation).

## Development of the project

The joint project started with the research agreement of June 1994. The project has developed as follows:

<1994>

M. Chu, H. Pei, M. Lee and G. Lin visited Japan in June, 1994 (supported by Naoji Iwaya Foundation), observed the state of research on lakes in Japan and discussed the remediation of lake

environments with Japanese researchers. In October 1994, T. Okino, T. Iwakuma, M. Hosomi, R. Nakazato and H. Arakawa visited West Lake (supported by the Science Fundation of Kajima), and surveyed the zooplankton and the zoobenthos together with Chinese researchers.

K. Shu, L. Wang and K. Ha stayed in Japan for two months, and during which they carried out the studies for received training on limnological techniques of Lake Suwa (supported by the Toyota Foundation and Sumitomo Foundation). In the same year the materials and instruments were sent to China from Japan to equip the project at West Lake.

<1995>

Two research groups visited West Lake from Japan, and studied the lake and watershed area of West Lake. During our stay in China, we exchanged views on the operation of our studies with the Chinese researchers. We decided to extend research on this project for another six months in order to take better results and conclusions (supported by the Toyota Foundation, Sumitomo Foundation and Earth Environment Foundation).

<1996>

In September 1996, H. Pei, M. Lee, I. Chu and H. Xen visited Japan with the data from West Lake and discussed the completion of the study with the Japanese researchers. Afterward, T. Okino, N. Ogura and T. Iwakuma took the final report to Hangzhou and presented the conclusions on the remediation attempts of West Lake.

The present report (No.11) of the Suwa Hydrobiological Station, Faculty of Science, is the manuscript of the Japan – China Joint Research on West Lake, Hangzhou, China.

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