Open Symposium

International Symposium on River and Lake Environment 2009

The Open Symposium

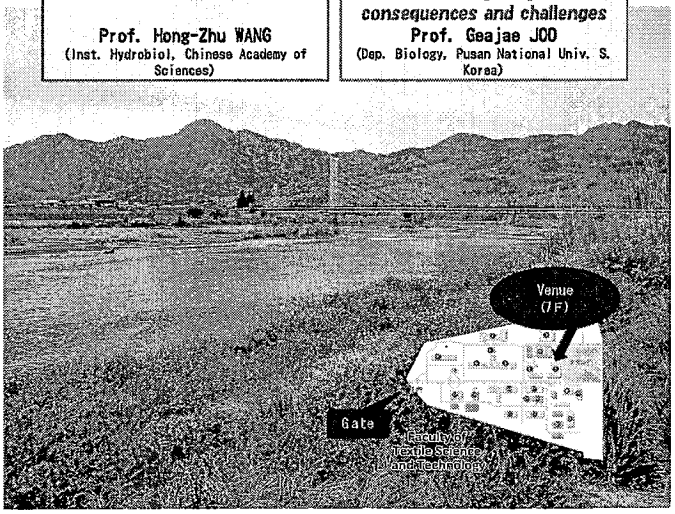
Organized by: The Japanese Society of Limnology (JSL)
Co-organized by: Institute of Mountain Science, Shinshu Univertity;
Global COE program on Fiber Engineering, Shinshu University;
Sponsored by: Research Foundation for the Electrotechnology of Chubu; Ueda Convention Bureau

Environment of Freshwater Bodies In The East Asia

Time: 16:00～18:00, 29(Sat) August, 2009
Venue: Fac. Textile Sci. Tech, Shinshu Univ.

Lecture 1
Riverine floodplains of China: Threats and restoration
Prof. Hong-Zhu WANG
(Inst. Hydrobiol, Chinese Academy of Sciences)

Lecture 2
"Four large river project" in S. Korea: Ecological problems, consequences and challenges
Prof. Geajae JOO
(Dep. Biology, Pusan National Univ. S. Korea)



International Symposium on River and Lake Environment 2009
(国際河川湖沼環境シンポジウム2009)

市民公開講演会

主催：日本陸水学会
共催：信州大学山岳科学総合研究所, 信州大学大学院先進ファイバー工学研究拠点：G-COE,
財団法人中部電力基礎技術研究所, 上田コンベンションビューロー

東アジアにおける河川・湖沼の水事情

日時：2009年8月29日(土) 16:00～18:00
場所：信州大学繊維学部総合研究棟７階

日本語通訳つき

演題1
中国の氾濫原湿地帯の環境問題とその保全
Prof. Hong-Zhu WANG
(中国科学院水生生物研究所教授)

演題2
韓国の四大河川計画：生態学的問題、結果、そして試練
Prof. Geajae JOO
(韓国釜山大学教授)

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Riverine Floodplains of China: Threats and Restoration

Hong-Zhu WANG, Xue-Qin LIU & Hai-Jun WANG

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Riverine floodplains are the most important wetlands in the world. In China, riverine floodplains cover an area of about 1.1×10^6 km^2, being 12% of the land. However, these ecosystems are being seriously threatened by various factors. Therefore, it is crucial and urgent to restore our floodplains. To serve this purpose, we have been conducting the following studies, with focuses on the effects of hydrological alternations and the restoration strategies.

As the largest floodplain in China, the Yangtze floodplain is imperiled significantly by river-lake disconnection. Biodiversity in lakes was found to be reduced by 20-50% after disconnection. By establishing the species-area model of fishes, the minimum protected area of Yangtze-connected lakes is estimated to be about 11000 km^2. It means that at least 5500 km^2 of disconnected lakes should be reconnected with the Yangtze mainstem for effective conservation of biodiversity. To restore the natural connectivity, we are estimating the hydrological requirements of fishes, benthos and macrophytes.

In 2008, we carried out a comprehensive investigation of aquatic biota in the Yellow River, the second longest river of China. The results showed that the biodiversity decreased significantly. Numerous dams on the river are one of the main threats, greatly altering the natural hydrological regime. To provide ecological criteria for the dam re-operations, we are trying to quantify the environmental flow requirements of key organisms such as riparian plants and benthic animals.

Although China's floodplains have been greatly degenerated, our restoration work is just in the very beginning. Since riverine floodplains are integrative ecosystems, the proper strategies to restore and conserve them should be based on whole-basin scales. However, current measures are focused upon limited areas to protect a few endangered species. Therefore, we must change our strategies, and study and restore the floodplain ecosystems from a more holistic point of view.