

WATERFOWL IN WETLANDS OF POYANG LAKE OF CHINA AND LANDSCAPE ECOLOGY INFORMATION SYSTEM

Yang Zhen-guo¹ and Xiong Guang-kui²

1 Seminar for Landscape Ecology of Jiangxi Academy of Sciences, Nanchang 330029, P. R. of China

2 Computer Centre of Jiangxi Normal University, Nanchang, 330027, P. R. of China

Poyang Lake, the largest freshwater lake in China, situated in the northern part of Jiangxi province and the middle and lower reaches of the Changjiang River, is a typical shallow lake with great seasonal variation in water level. Its mechanism of formation and evolution possesses a unique style with distinct physic-chemical property of lake water, special local aquatic animals and plants and unusual types and distributions of lake sediments. There are 258 species of waterbirds. In winter and spring the surface of the water is being covered with numerous waterbirds. The migratory birds reserve covers an area of 22.400 hectares.

The Landscape Ecology Information System of the migratory bird reserve (PRIS) is a regional geographical information system based on the spatial structure combined with island-like polygon of the dykes, to provide multi-source, multi-level, renewable basic data and applied analysis model for forecasting environment changes and waterfowl protection.

The PRIS consists of a database system and a database update system. The interface between the DBS and DBUS is responsible for providing the DBS with real-time and dynamic information to maintain the present situation. The interface between the DBS and MBS is responsible for providing the MBS with necessary information and collecting useful data processed by the MBS.