

## Freshwater Resources and Urban Sustainability— How We Participate?

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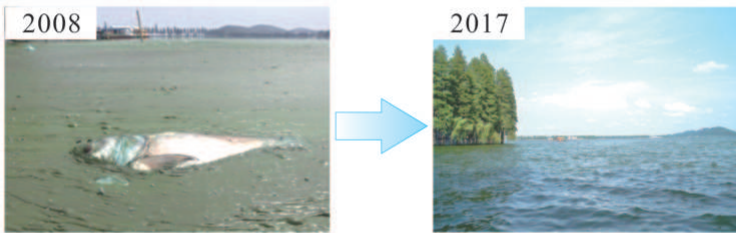
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### Abstract

Freshwater is at the core of sustainable development. In a sustainable world that is achievable in the near future, freshwater and related resources are managed in support of human well-being and ecosystem integrity in a robust economy. Wuhan is the largest freshwater centre of China, as well as one of the megacities having the richest freshwater resources in the world. But in recent years, the aquatic ecosystems of Wuhan downtown appears serious issues such as water pollution, lake shrinking and poor connectivity of urban water systems. Faced with these issues, What can we do as a science museum. The water exhibition hall follows clues of "humanity, ecology and harmony", displays the water culture of Wuhan, water ecological systems and water ecological restoration and protection project, called for the audiences focus on the protection of water ecology. And we strongly encourage the combination of volunteer service and Inquiry based science education.

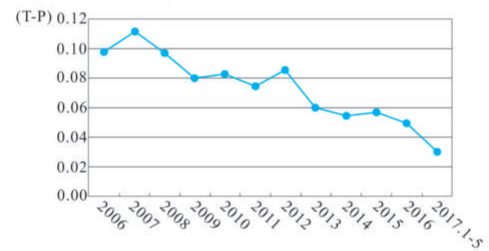
### • Background

Wuhan is the largest freshwater center of China, as well as one of the megacities having the richest fresh water resource in the world. The total fresh water area of Wuhan is 2217.6 square kilometers, coverage of 26.10%, per capita of 114000 square meters. Water, gave birth to the city of Wuhan, which has a 3500 years' history. But in recent years, the aquatic ecosystems of Wuhan downtown appears serious issues such as water pollution, lake shrinking and poor connectivity of urban water systems. Faced with these issues, based on the protection of dynamic balance and benign circulation of the ecological systems, represented by "six lake connected" and "Big East Lake ecological water network construction" project, the dynamic river - lake water network is actively built, the distribution of drainage network is adjusted, the protection and restoration of aquatic ecosystems is strengthened.



The water quality of East Lake has significantly improved in the last decade

The change trend of total phosphorus concentration in East Lake from 2006 to May 2017



### • How We Participate?

#### Interprete the relationship between human and water through the indoor exhibition hall and the outdoor overwater exhibition area

Wuhan museum of science and technology is the largest and most influential science center in Wuhan, and its water exhibition hall is a highlight. The water exhibition hall follows clues of "humanity, ecology and harmony", passes ideas of "the harmony between human and nature, protect the dynamic balance and benign cycle of the ecological systems", displays the water culture of Wuhan, water ecological systems and water ecological restoration and protection project, called for the audiences focus on the protection of water ecology and water environment.



#### The combination of volunteer service and Inquiry based science education

The primary school students in Wuhan inspected the water quality of Han river. By participating in such activities, the teenagers have not only learned scientific research methods, but also enhanced environmental awareness.