The Potential of Non-traditional water use in the eco-city
-----Sino-Singapore Tianjin Eco-city as a case study

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Project summary

Water recycling and more efficient use of water resources is one of the key features in the Eco-city. The intention of this study is to demonstrate the potential and the relative challenge of non-traditional water used for typical domestic use, water cooling, ecological water requirements and creation of recreational waterfront.

Current work
Numerical modelling:
An integrated eco-hydraulics (a two-dimensional hydrodynamic and water quality model and an ecological model Habitat Suitability Index) model has been developed and applied to simulate the ecological water requirements (EWR) in an eco-city.

To keep quality of water flowing through the river in the eco-city within acceptable limits and even optimize water diversion volume, the flow and transport experiment is quite necessary.

Future work
1. Laboratory Studies:
   • Data monitoring to calculate Lake residence time:
   • Optimum Water diversion scheme
2. Develop an integrate non-traditional water use and allocation
3. Incorporation of environmental, industrial, social and economic concerns

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