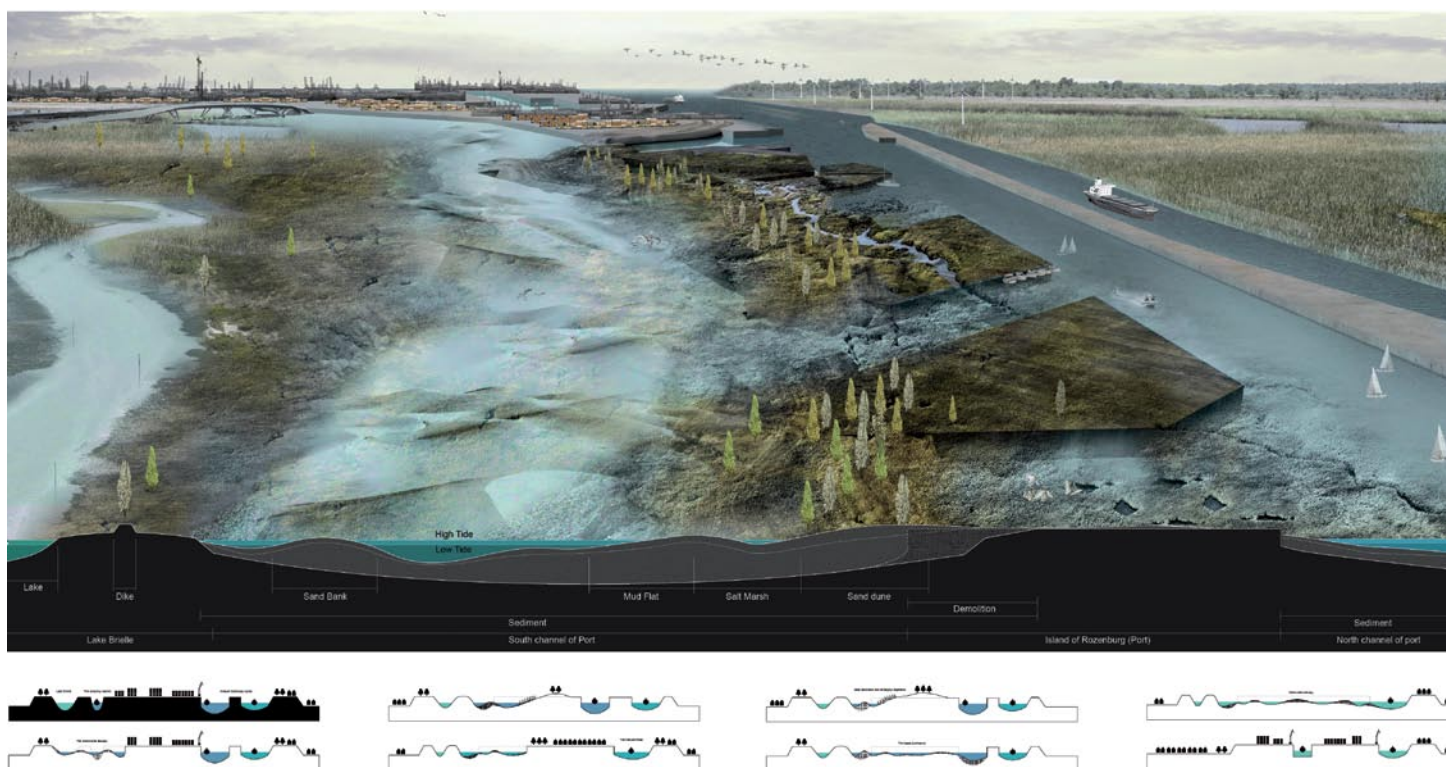


Delta Competition 2010

Delta cities are under increasing pressure due to climate change. The Delta Competition 2010 challenged students to come up with creative and innovative solutions.

Entries were submitted by 24 students from all over the world. The Panel of Judges chaired by Prof. Sybe Schaap (Delft University of Technology) were impressed by the range of subjects and the innovativeness of this year's contenders. The top ten papers have been published in the Delta Competition 2010 book, and the three winning entries are presented below.

www.deltacompetition.com



Ecology as industry

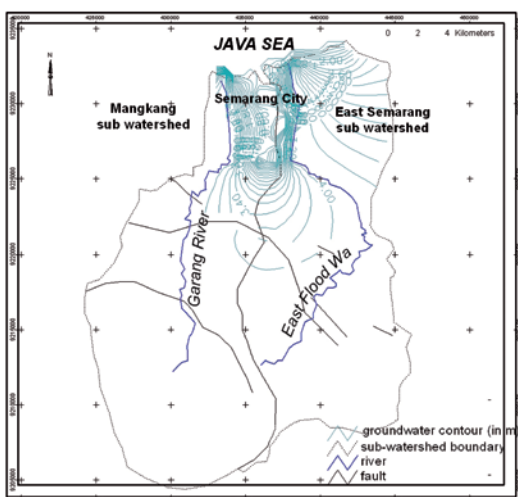
by Haein Lee, Gyoung Tak Park, and Soomin Shin, Harvard University, United States

Ecology as Industry is a long-term vision for de-engineering water management in the Netherlands. The group presented a regional plan for capitalizing upon the local ecology while addressing increasing flood hazards and land subsidence. To achieve this vision they propose they propose a number of transformations, including multi-use de-poldered areas, constructing barrier islands, relocating port activity, new industries of aquaculture and alternative energy production and an expansive recreational landscape. These specific measures were incorporated into a strong overall vision. Ecology as Industry illustrates that the issues facing delta cities require regional approaches that view the delta as a landscape system.



The Big Leak, adaptive responses to New Orleans' land subsidence crisis
 by David Wooden, Virginia University, United States

The Big Leak proposes an adaptable stormwater conveyance system that intentionally “leaks” to maintain water tables in the city. It would do this by replacing the current stormwater conveyance system with surface canals that would act as an ex-filtrating infrastructure for recharging the water table, and thus stopping or reducing the rate of land subsidence. The Big Leak is an intelligently crafted concept for combating subsidence, and offers an integrated and very applicable solution for a sinking city. The jury was impressed by the innovative idea, detailed design of the solution and excellent presentation of this paper.



Groundwater zoning as spatial planning in Semarang
 by Novi Rahmawati, Gadjah Mada University, Indonesia.

Like many of the world's deltas, the Semarang Delta is encountering increasing flood problems because of land subsidence. Groundwater exploitation and construction in parts of the delta are responsible for subsidence of over 16 cm per year. The concept of groundwater zoning – where spatial planning identifies the areas most degraded and at risk of degradation through groundwater abstraction – was considered a very practical solution. The jury recognized the importance of combating subsidence in Semarang and praised Rahmawati's solution, especially as it was supported by a model of the groundwater flow and detailed data. The solution is applicable and highly relevant for many deltas around the world.