

The SNEI Story of Water Sustainability

Discover the innovative water sustainability solutions that we embedded into our design for the Sino-Singapore Nanjing Eco Hi-tech Island (SNEI), effectively transforming a flood plain into a model of sustainable growth.

Creating a 'Sponge City'

- A nature-based solution to achieve natural absorption, infiltration and purification of stormwater runoff.
- Water is harvested and reused across the island via a 50-kilometre rainwater pipe network underground and four drainage pump stations.

HOW IT WORKS

- When it rains, sponge city features such as shallow depressions of native vegetation, bioswale channels, and permeable surfaces absorb the water.
- Soil, rocks and native plants act as a natural filtration system to remove contaminants from the water.

The sponge city initiatives and flood control measures have enabled SNEI to achieve:

Over 85% control rate for surface run-off **Over 60% reduction of diffuse pollution**

As testament to SNEI's efforts in water sustainability, it was among the first batch of projects in Jiangsu designated as a sponge city demonstration zone in 2016.



Harvesting Rainwater in the Built Environment

- Rainwater that infiltrates the ground enters the rainwater pipe network, where it is treated and used for watering plants, washing cars and roads, and replenishing the island's water features.
- Buildings like Jiangdao Technology and Innovation Centre are also equipped with a rainwater harvesting system to offset its own freshwater use.

HOW IT WORKS



Interlocking Blocks



Reno Mattresses



Protecting the Coastline from Floods

- A 22.4-kilometre round-island dyke reinforces the island's embankment against the Yangtze River.

HOW IT WORKS

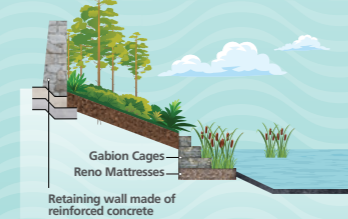
- Interlocking blocks as well as Gabion cages and Reno mattresses, which are steel wire meshes filled with rocks or gravel, are used to protect against erosion of the riverbanks and slopes.

Improving Water Quality of Waterways

- Tributaries are linked to improve water flow and water from the water treatment plant are channelled through artificial wetlands.
- Incorporated ABC (Active, Beautiful, Clean) Water programme to preserve the ecological space and create landscaped environments for residents to enjoy.



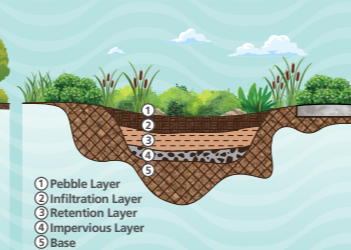
Rivers



Bioswale



Rain Garden



Wetland

