Harbour Area Treatment Scheme (HATS)

- HATS is one of the most important environmental programmes undertaken in Hong Kong to improve the water quality of Victoria Harbour. It involves the implementation of an integrated sewerage system that collects and treats our sewage from both sides of the harbour in an efficient, effective and environmentally sustainable manner.

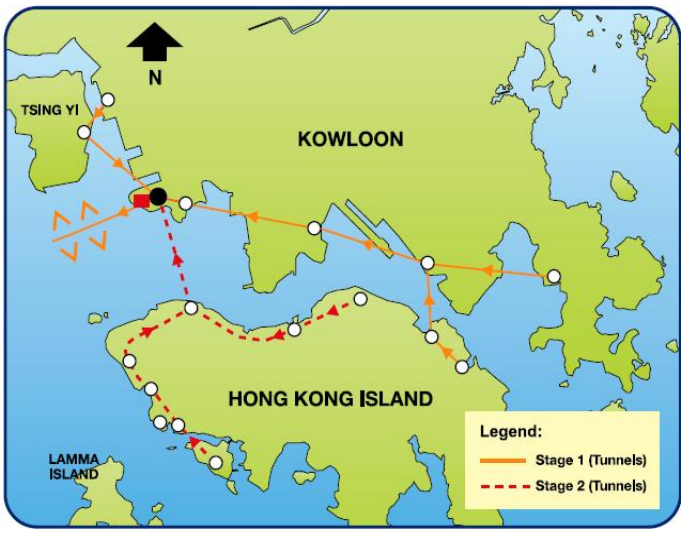
Harbour Area Treatment Scheme (HATS) Stage 1

- HATS Stage 1, comprising the chemically enhanced primary treatment (CEPT) facility at the Stonecutters Island Sewage Treatment Works (SCISTW) and a 23.6 km-long system of tunnels deep underground. It was commissioned in late 2001 and is now treating 1.4 million cu. m of sewage (about 75% of the total sewage generated from both sides of the Victoria Harbour) from the Kowloon Peninsula, Kwai Tsing, Tseung Kwan O and Hong Kong Island East, preventing about 600 tonnes of sewage sludge from entering the harbour every day.

Stonecutters Island Sewage Treatment Works

- The CEPT facility at SCISTW is one of the largest and most efficient plants of its type in the world, and is able to remove 70% organic pollutants (in terms of biochemical oxygen demand), 80% suspended solids, and 50% *E.coli* bacteria from the sewage.

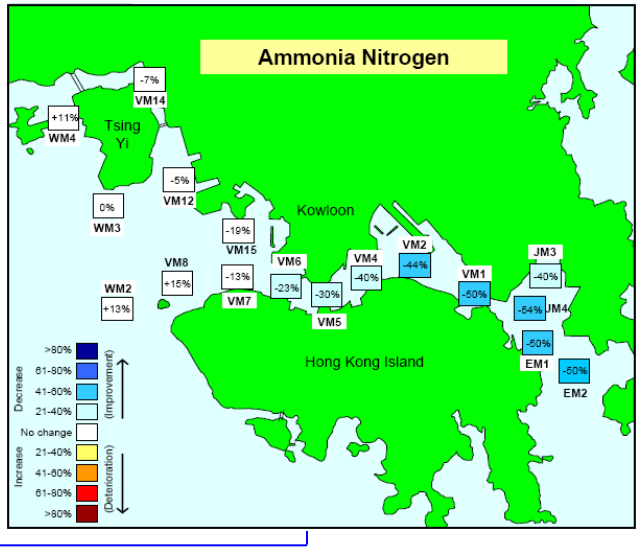
- The next stage of HATS will provide additional facilities to convey the sewage from the remaining HATS catchment, including the northern and south-western coast of the Hong Kong Island for CEPT treatment, and to disinfect all the HATS sewage.

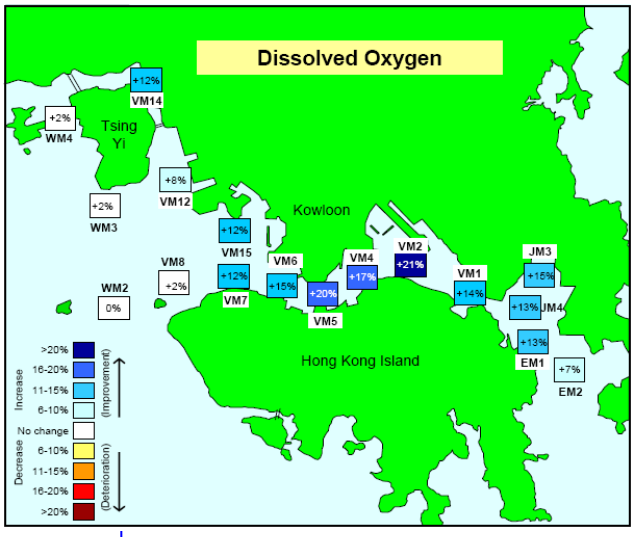


HATS Stage 1 and Stage 2 sewage collection tunnels

Improvements from HATS Stage 1



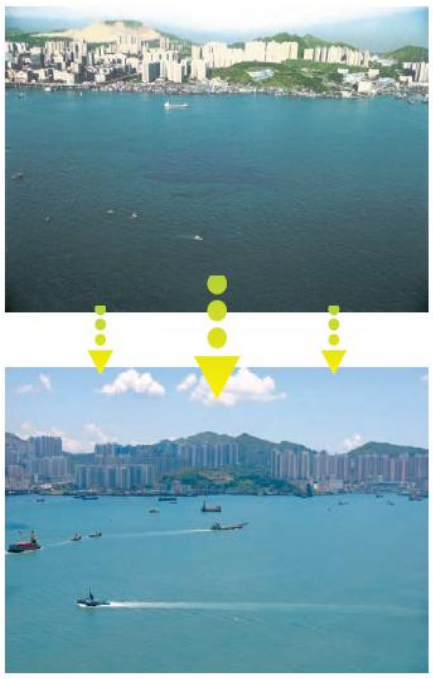





The HATS Stage 1 has achieved a significant improvement in the water quality of Victoria Harbour, particularly for the central and eastern harbour:

- Dissolved oxygen (vital for marine life) levels have risen by 10% on average;
- Ammonia levels (unionized portion of ammonia is harmful to marine life) have reduced by 25% on average;
- Nutrient levels, in terms of total inorganic nitrogen and ortho-phosphate phosphorus (which in rich supply can increase the likelihood of red tides) have reduced by 16% and 36% on average respectively;
- After the commissioning of the Advance Disinfection Facilities installed at SCISTW in March 2010, the overall level of sewage bacteria (*E. coli* – an indicator of disease-causing micro-organism) in Victoria Harbour reduced by about 80%, compared with that before HATS Stage 1.

Sewage plume at Kai Tak removed by **HATS Stage 1**



(Data shown in the figures are the comparison of pre-HATS period (2000-2001) and post-HATS period (2002-2003))