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***For information***

# **Beach Water Quality of Hong Kong in 2004**

## **Introduction**

The purpose of this paper is to brief Members on the water quality of gazetted beaches in Hong Kong in 2004.

## **Background**

2. The Environmental Protection Department (EPD) has implemented a monitoring programme to assess the water quality of 41 gazetted beaches in Hong Kong.

3. The beach water quality is assessed through a ranking system which links the water quality of a beach with swimming-associated health risks as measured by the *E. coli* level. According to this system, beaches are ranked as “Good”, “Fair”, “Poor” or “Very Poor” in accordance with the *E. coli* level. Beaches with annual geometric mean *E. coli* levels below 25 per 100mL are ranked “Good”, between 25 and 180 per 100mL, “Fair”, and those between 181 and 610 per 100mL, “Poor”. Only those in the ranks of “Good” and “Fair” meet the Water Quality Objective (WQO) for bathing water. Beaches ranked “Very Poor” (*E. coli* level exceeding 610 per 100mL which corresponds to a swimming-associated illness rate of more than 15 cases per 1,000 swimmers) are generally considered not suitable for swimming, and therefore beach closure is recommended to safeguard the health of swimmers.

## **Beach Water Quality in 2004**

4. In 2004, a general improvement of beach water quality was observed. Among the 41 gazetted beaches, 25 are ranked “Good”, nine “Fair”, five “Poor” and two “Very Poor” (Figure 1). Although the percentage of WQO compliant beaches remained the same as in 2003, i.e. 83%, the number of “Good” water quality beaches has increased by two to 25 which is about 61% of all gazetted beaches in Hong Kong.

The number of “Very Poor” beaches which are located along the Tsuen Wan coast has also decreased by four to two.

5. The general improvement of beach water quality is probably related to the relatively dry weather in 2004 when polluted run-off from the beach hinterland and overflowing septic tanks due to heavy rainfall were less of a problem. For the last bathing season from March to October, Hong Kong experienced 21% less rainfall than in an average year, while some specific areas received even less. Tsuen Wan, for example, recorded a massive 34% drop.

6. Beaches along the Tsuen Wan coast continued to have more fluctuating water quality. Apart from the potential pollution sources in the unsewered hinterland and the polluted Sham Tseng Nullah, the poor water quality is also related to the high bacterial level in the marine water off the Tsuen Wan coast.

7. The implementation of the Harbour Area Treatment Scheme (HATS) Stage 1 at the end of 2001 has brought about significant improvement in water quality at Shek O, Rocky Bay and Big Wave Bay beaches on the eastern side of the Hong Kong Island but at the same time has elevated the bacterial levels of Tsuen Wan beaches. To improve the water quality of the Tsuen Wan beaches it will be necessary to disinfect the HATS effluent.

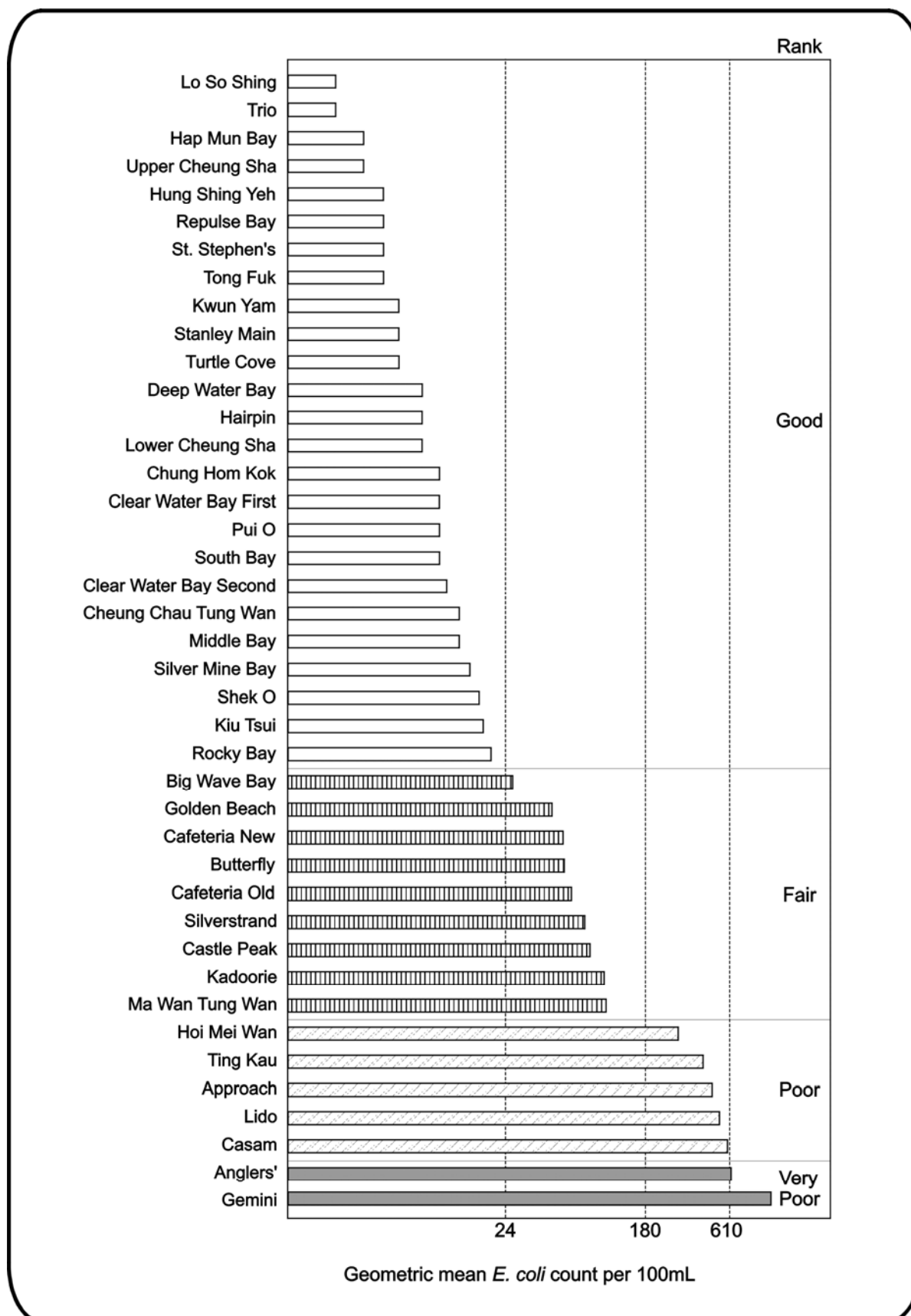
8. Local pollution is being tackled through construction of the Sham Tseng Sewage Treatment Works which was commissioned in January 2004, and provision of public sewers in phases. The provision of public sewers along the Tsuen Wan coast and in the beach hinterlands will be completed in early 2006 and 2009 respectively, but making individual connections from currently unsewered properties to public sewers will still take some more time.

9. In view of the rather lengthy time required to bring about improvement in local water quality, Anglers’, Approach, Casam, Gemini, Hoi Mei Wan, Lido and Ting Kau beaches are recommended to remain closed for swimming in the coming bathing season. Although Approach, Casam, Hoi Mei Wan, Lido and Ting Kau were of “Poor” water quality in 2004, they are also recommended to remain closed as the local and marine pollution sources affecting the beaches along the Tsuen Wan coast still exist.

## **Conclusion**

10. In 2004, although the percentage of WQO compliant beaches was the same as in 2003, a general improvement in beach water quality was observed due to the relatively dry weather. Since all the planned local sewerage works and the remaining stages of HATS will take some years to complete, in order to safeguard the health of swimmers, the beaches along the Tsuen Wan coast, namely Anglers', Approach, Casam, Gemini, Hoi Mei Wan, Lido and Ting Kau are recommended to remain closed for swimming in the coming bathing season.

**Environmental Protection Department**  
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**Figure 1 Annual ranking of gazetted beaches in 2004**