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Beach Water Quality of Hong Kong in 2008

Introduction

The purpose of this paper is to brief Members on the water quality of gazetted beaches in Hong Kong in 2008.

Background

2. The Environmental Protection Department (EPD) implements 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 indicated by the number of *E. coli* bacteria in the water. 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 of 24 per 100 mL or below are ranked as “Good”, between 25 and 180 per 100 mL as “Fair”, and those between 181 and 610 per 100 mL as “Poor”. Only those beaches 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 100 mL, 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 are recommended to be closed to safeguard the health of swimmers.

Beach Water Quality in 2008

4. In 2008, 24 (or 59%) of the 41 gazetted beaches were ranked as “Good”, 10 (or

24%) as “Fair” and seven (or 17%) as “Poor”. None of the beaches was rated as “Very Poor” (**Figure 1**). The total number of beaches complying with the WQO was 34 (or 83%), the same as in the previous five years (2003 - 2007). This represented a substantial improvement from the 63% compliance recorded in 1997 (**Figure 2**).

5. In 2008, there were changes in the annual rankings of three beaches as compared with those in 2007. Pui O Beach on Lantau Island improved from “Fair” to “Good”, while Big Wave Bay Beach in Hong Kong South and Silver Mine Bay Beach on Lantau Island changed from “Good” to “Fair”. The changes were generally within the normal range of water quality fluctuation of the beaches.

Closed beaches in Tsuen Wan

6. The seven beaches with “Poor” rankings were all located along the Tsuen Wan coast, namely Anglers’, Approach, Casam, Gemini, Hoi Mei Wan, Lido and Ting Kau Beaches. They continued to be closed to swimmers in 2008 due to their noncompliance with WQO and poor and unstable water quality in recent years. However, the absence of beaches being ranked as “Very Poor” in the last two bathing seasons (2007 and 2008) was an encouraging sign. Apart from the potential pollution sources in the unsewered hinterlands, the poor water quality was also related to the high bacterial levels in the marine waters off Tsuen Wan coast.

7. To improve the condition of the Tsuen Wan beaches and lower the bacterial levels in the marine waters off Tsuen Wan coast, and central and western Victoria Harbour, the Government is working on the next stage of the Harbour Area Treatment Scheme (HATS Stage 2A), and plans to disinfect effluent from the Stonecutters Island Sewage Treatment Works (STW) by the end of 2009. The disinfection of effluent at the Stonecutters Island STW, together with the provision of public sewers in the area should substantially improve the water quality of Tsuen Wan beaches and pave the way for their re-opening to the public for swimming.

Conclusion

8. Thirty-four (or 83%) of the 41 gazetted beaches complied with the WQO in 2008, the same as in the previous five years.

9. Seven Tsuen Wan beaches (*viz.* Anglers’, Approach, Casam, Gemini, Hoi Mei

Wan, Lido and Ting Kau Beaches) did not meet the WQO in 2008 and were closed for swimming. To ensure an early re-opening of the beaches, the Government is working on the next stage of the Harbour Area Treatment Scheme (HATS Stage 2A), and plans to disinfect effluent from the Stonecutters Island STW by the end of 2009. In view of their poor and unstable water quality, the seven Tsuen Wan beaches will remain closed for swimming in the 2009 bathing season.

Environmental Protection Department
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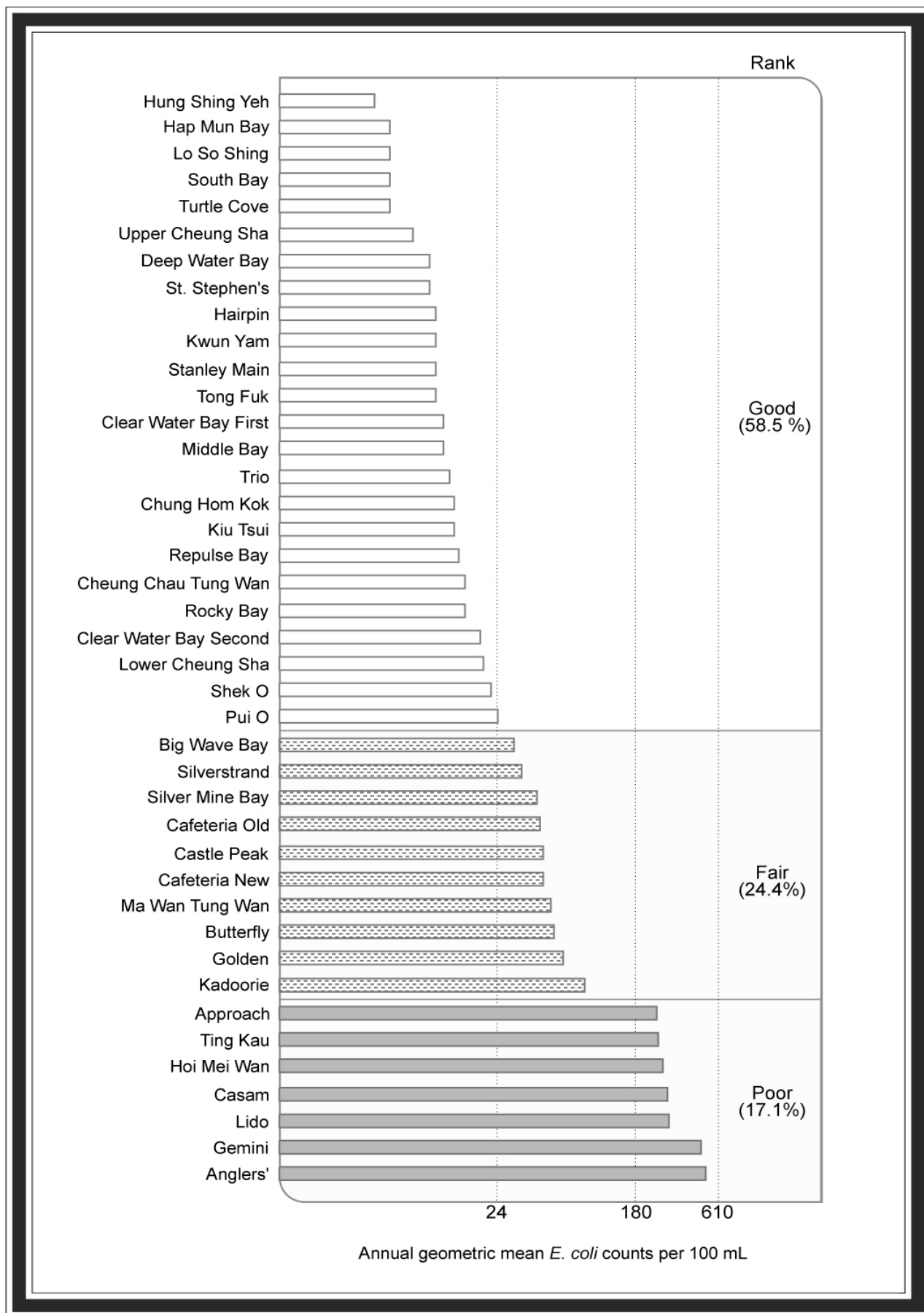


Figure 1

Annual beach rankings of 2008

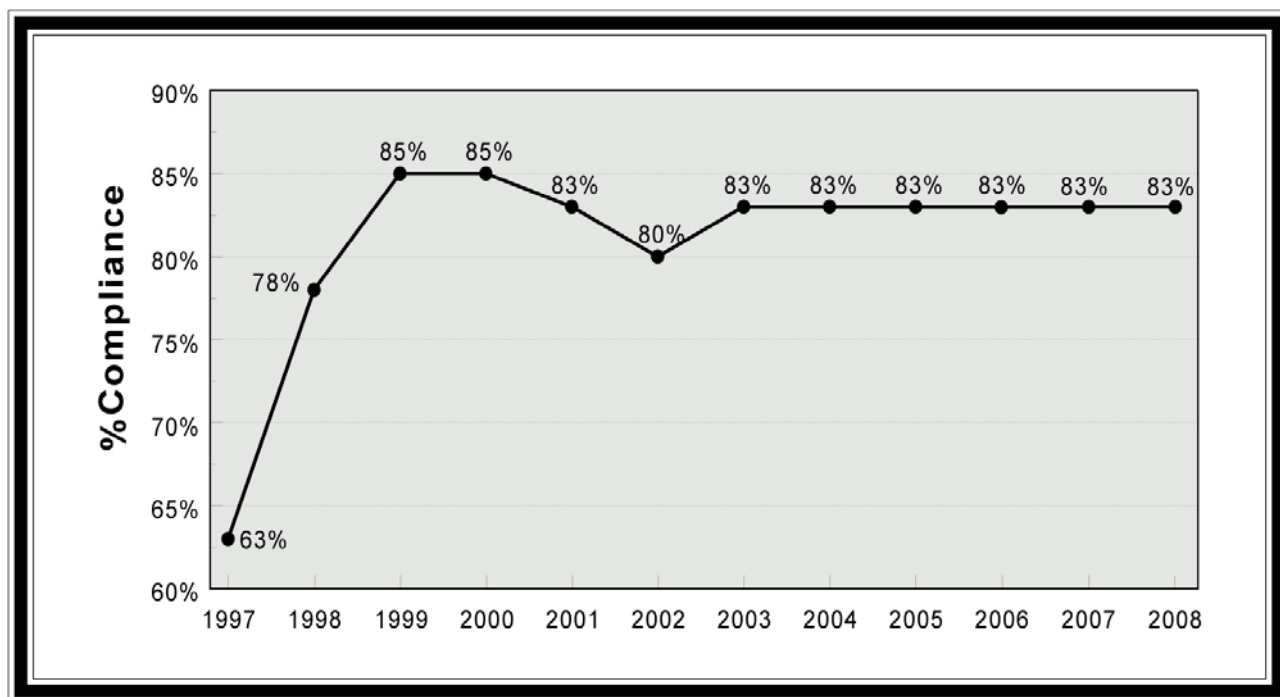


Figure 2 **Level of compliance with the Water Quality Objective at the 41 gazetted beaches in Hong Kong, 1997 – 2008**