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Beach Water Quality of Hong Kong in 2011

Introduction

The purpose of this paper is to brief Members on the water quality of gazetted beaches in Hong Kong in 2011.

Background

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

3. 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 respective *E. coli* levels. 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 waters. 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 2011

4. In 2011, 31 (or 76%) of the 41 gazetted beaches were ranked as “Good” and the remaining 10 (or 24 %) were ranked as “Fair” (**Figures 1 and 2**). Same as 2010, none of the beaches was rated as “Poor” or “Very Poor”, thus maintaining full compliance with the WQO for bathing waters. As compared with 2010, the number of beaches receiving the “Good” ranking has increased from 23 to 31.

5. There has been a noticeable trend in the improvement of beach water quality in Hong Kong in recent years. The percentage of beaches complying with the WQO has changed from 74% in 1986 (29 out of 39 beaches) to 63% (26 out of 41 beaches) in 1997, and then improved to 100% in 2010 and 2011 (all 41 beaches) (**Figure 3**). These improvements are the results of the enforcement of pollution control under the Water Pollution Control Ordinance and the Livestock Waste Control Scheme introduced under the Waste Disposal Ordinance, as well as the construction of sewerage infrastructure, including the Harbour Area Treatment Scheme Stage 1, the Advance Disinfection Facilities at the Stonecutters Island Sewage Treatment Works and the extension of the sewerage network to the beach hinterland.

6. The beaches with “Good” water quality ranking were largely located in the Southern District (Hong Kong Island South), Outlying Islands, Sai Kung and Tsuen Wan. In 2011, all 12 beaches in the Southern District were “Good”. Of the nine beaches monitored on the Outlying Islands, all except Silver Mine Bay Beach were ranked as “Good”. In the Sai Kung area, all six beaches were “Good” with Hap Mun Bay Beach and Trio Beach being the cleanest gazetted beaches in Hong Kong in terms of overall *E. coli* levels. On the western side, all six beaches along the Tuen Mun coast received a “Fair” ranking.

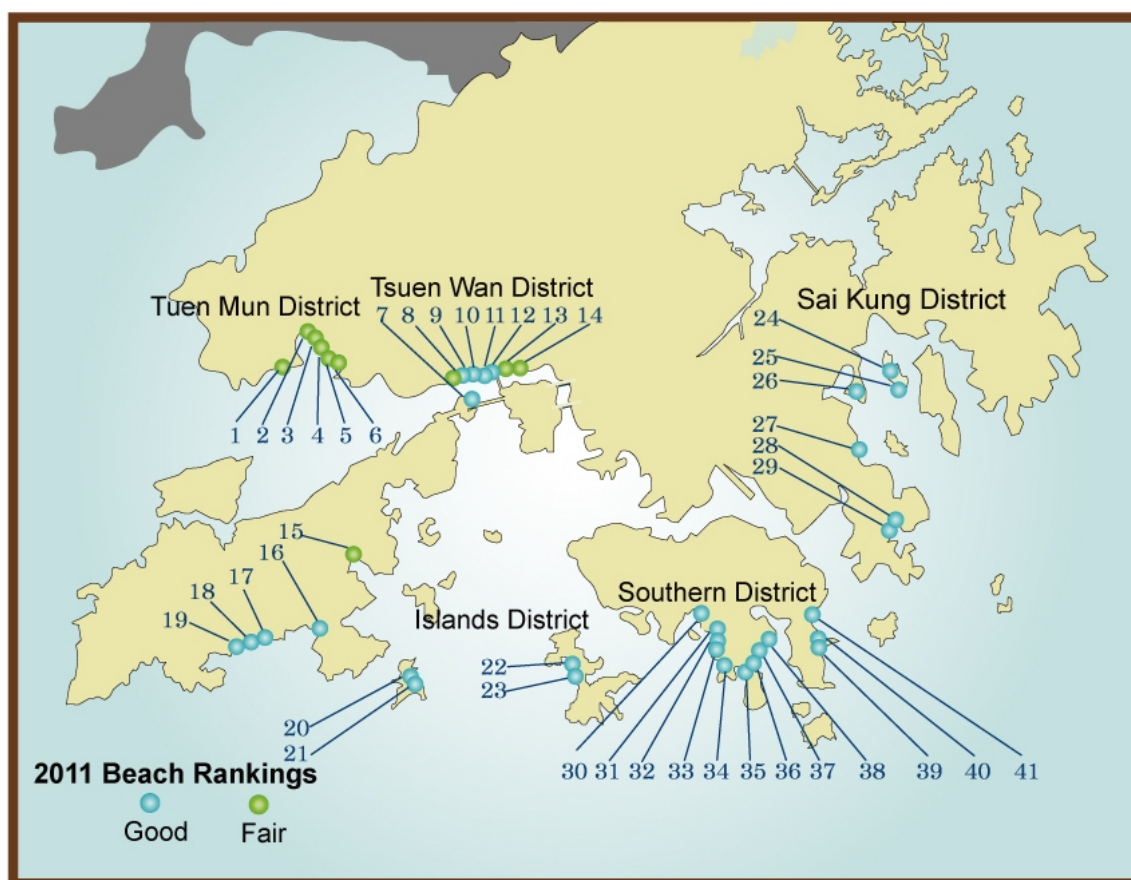
7. In the Tsuen Wan area, all beaches have continued to show improvement in water quality in 2011. With all the Tsuen Wan beaches attaining the WQO for bathing waters since 2010, four previously closed beaches, namely Approach Beach, Casam Beach, Hoi Mei Wan Beach and Lido Beach, were reopened to the public for swimming in June 2011. The Government plans to re-open the remaining three beaches, namely Anglers’ Beach, Gemini Beaches and Ting Kau Beach, in the swimming season of 2013 after the completion of extensive construction and improvement works on the beach facilities.

Conclusion

8. Through continuous efforts of the Government to implement pollution abatement measures over the past years, all Hong Kong’s beaches have now achieved the required standard for bathing waters for two consecutive years (2010 and 2011). Close monitoring of all the beaches will continue in 2012 to ascertain that the observed achievement can be sustained and that the beach water quality can continue to meet the WQO.

Environmental Protection Department
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Figure 1 Distribution of gazetted beaches and annual ranking in 2011



Tuen Mun District

1. Butterfly
2. Castle Peak
3. Kadoorie
4. Cafeteria Old
5. Cafeteria New
6. Golden

Tsuen Wan District

7. Ma Wan Tung Wan
8. Anglers' *
9. Gemini *
10. Hoi Mei Wan
11. Casam
12. Lido
13. Ting Kau *
14. Approach

Islands District

15. Silver Mine Bay
16. Pui O
17. Lower Cheung Sha
18. Upper Cheung Sha
19. Tong Fuk
20. Cheung Chau Tung Wan
21. Kwun Yam
22. Hung Shing Yeh
23. Lo So Shing

Sai Kung District

24. Kiu Tsui
25. Hap Mun Bay
26. Trio
27. Silverstrand
28. Clear Water Bay First
29. Clear Water Bay Second

Southern District

30. Deep Water Bay
31. Repulse Bay
32. Middle Bay
33. South Bay
34. Chung Hom Kok
35. St. Stephen's
36. Stanley Main
37. Hairpin *
38. Turtle Cove
39. Shek O
40. Rocky Bay *
41. Big Wave Bay

* Closed Beaches

Figure 2 Level of compliance with the bacteriological Water Quality Objective for gazetted beaches in 2011

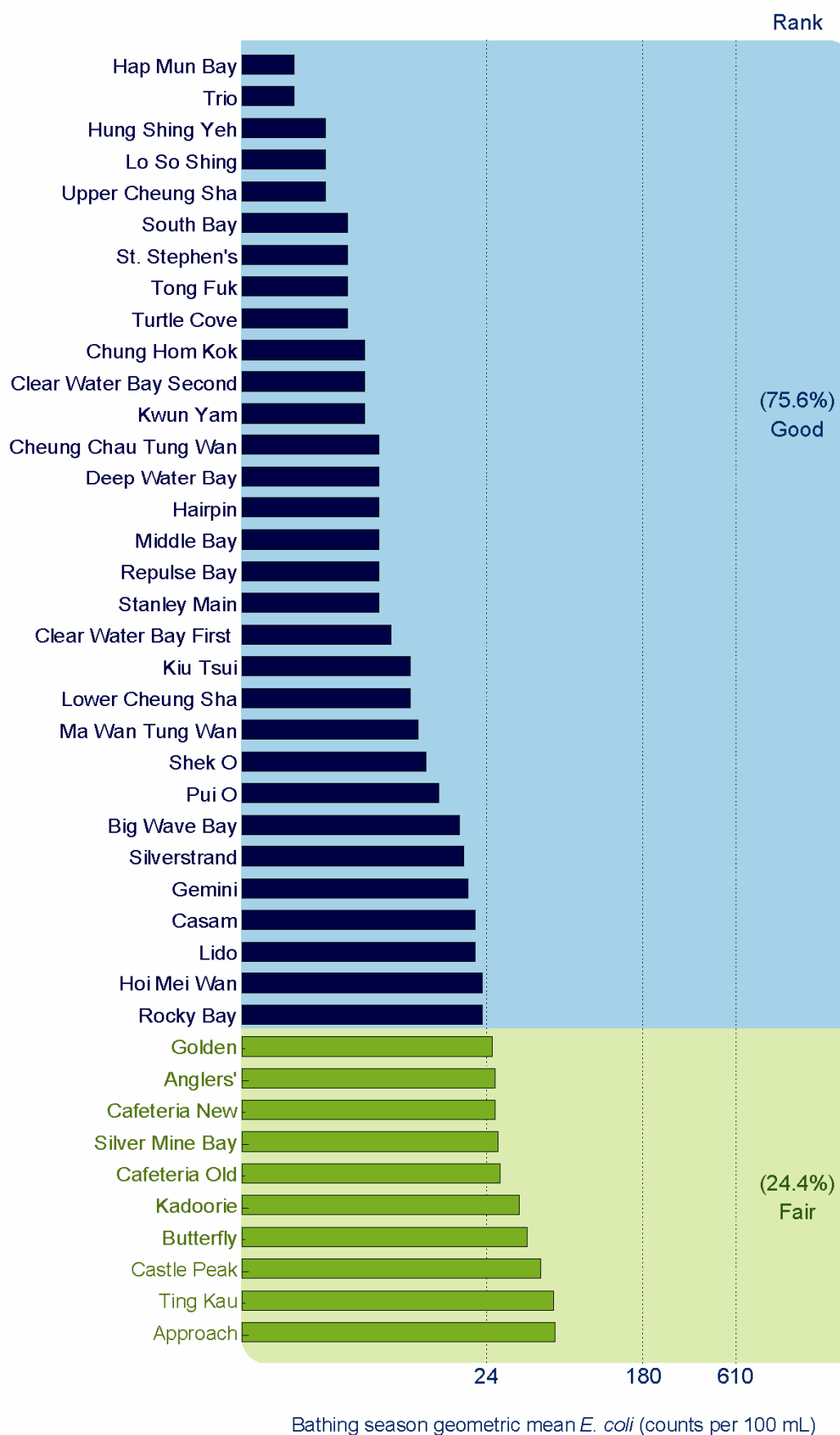


Figure 3 Annual beach ranking in 1997 and the marked improvement over the last 4 years (2008, 2009, 2010 and 2011)

