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Beach Water Quality of Hong Kong in 2017

INTRODUCTION

The purpose of this paper is to brief Members on the water quality of gazetted beaches in Hong Kong in 2017.

BACKGROUND

2. The Environmental Protection Department (EPD) implements a monitoring programme to assess the water quality of 41 gazetted beaches in Hong Kong through weekly sampling during the bathing season between March and October.

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 water. Under 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”, between 181 and 610 per 100 mL as “Poor”, and those exceeding 610 per 100 mL as “Very Poor”. Only those beaches in the ranks of “Good” and “Fair” meet the Water Quality Objective (WQO) for bathing waters. Beaches ranked as “Very Poor” (i.e. those with *E. coli* level that 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 2017

4. In 2017, all the 41 gazetted beaches continued to meet the WQO for bathing waters and have remained suitable for swimming since 2010. Of these 41 gazetted beaches, 23 (or 56%) were ranked as “Good” and the remaining 18 (or 44 %) were ranked as “Fair” (**Figures 1 and 2**). None of the beaches was rated as “Poor” or “Very Poor”.

5. The water quality of Tsuen Wan beaches continued to be satisfactory and suitable for swimming after the commissioning of Harbour Area Treatment Scheme (HATS) Stage 2A in December 2015. The seven beaches along Castle Peak Road had once been closed owing to unsatisfactory water quality before 2010. Since the completion of sewerage along Castle Peak Road in the beach hinterland and the commissioning of the Advanced Disinfection Facilities of the HATS in March 2010, the water quality of these seven beaches has improved significantly and met the WQO for bathing beaches. This has led to the gradual re-opening of all these beaches during 2011 – 2014.

6. Overall speaking, the number of beaches ranked as “Good” in 2017 has increased from 18 to 23, largely owing to a relatively sunny bathing season of 2017. When compared to the same period in 2016, the number of bright sunshine hours was 16% higher whereas the cumulative rainfall was 3% lower. Generally speaking, the sewerage systems in the beach hinterland help safeguard the beach water quality in the long term. Although there was occasional temporary water quality deterioration at individual beaches after heavy rainstorms in the summer months (i.e. from June to August) of 2017, the changes in *E. coli* levels were still within the normal range of fluctuation of the bacteriological water quality and had no overall adverse impact on the bathing beaches.

CONCLUSION

7. Through continuous efforts of the Government to implement pollution control and environmental improvement measures such as the implementation of the Water Pollution Control Ordinance, Livestock Waste Control Scheme, HATS and extension of sewerage to the beach hinterland over the past years, the percentage of gazetted beaches complying with the WQO has gradually improved from 74% in 1986 and maintained at 100% since 2010 (see **Figure 3**). All gazetted beaches in Hong Kong have now achieved the required standard for bathing waters for eight consecutive years. We will continue to closely monitor the beach water quality in 2018.

Environmental Protection Department
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Figure 1 Annual ranking of gazetted beaches in 2017

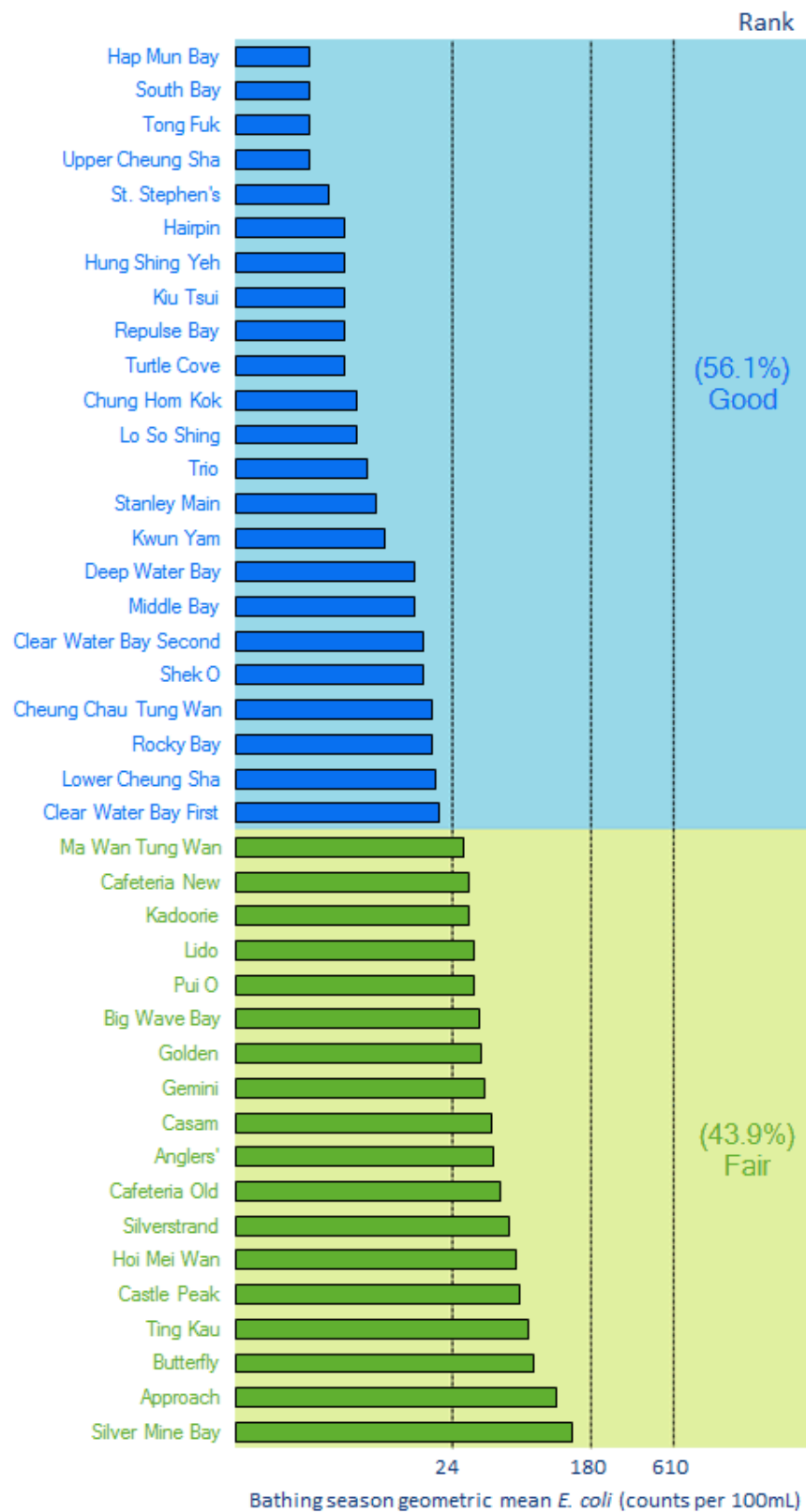
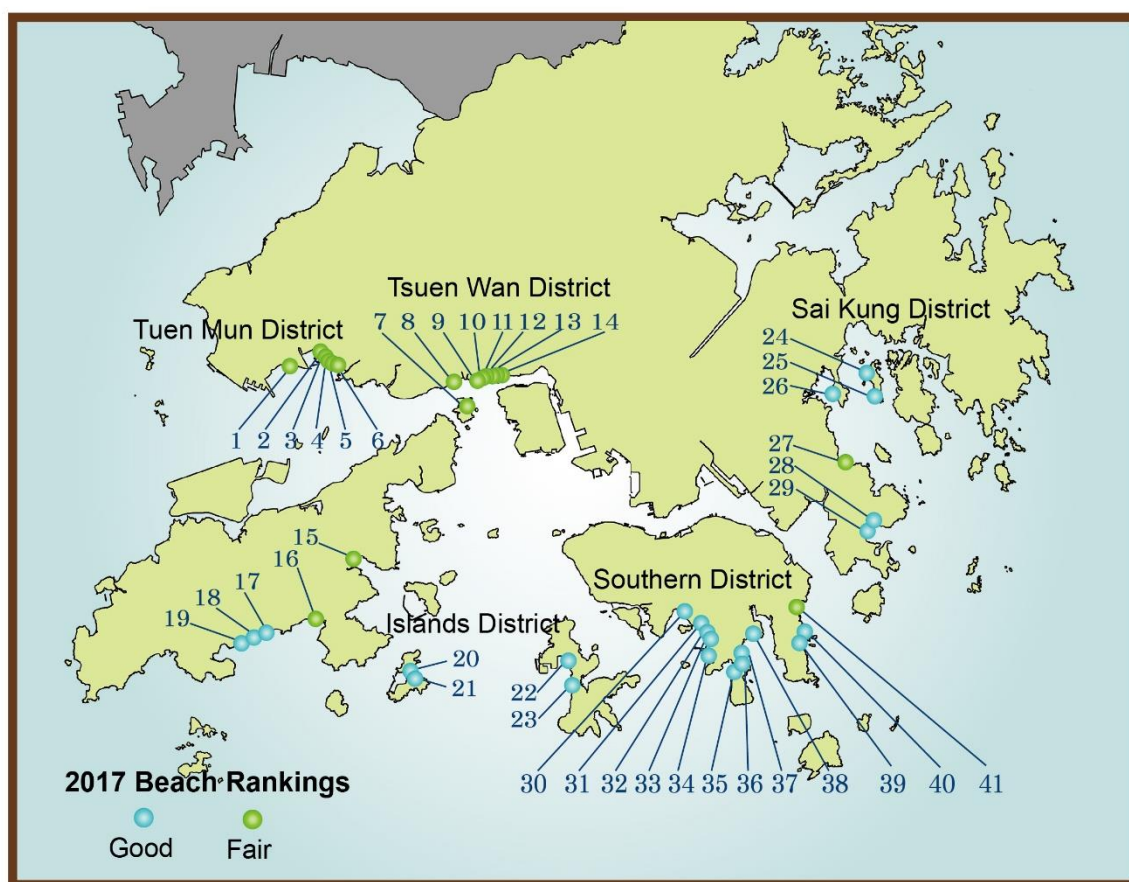


Figure 2 Distribution of gazetted beaches and their annual ranking in 2017



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

* Beaches not open for swimming (no lifeguard service provided by Leisure and Cultural Services Department)

Figure 3 Annual ranking of gazetted beaches from 1986 to 2017

