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Beach Water Quality of Hong Kong in 2019

INTRODUCTION

The purpose of this paper is to brief Members on the water quality of gazetted beaches in Hong Kong in 2019.

BACKGROUND

2. The Environmental Protection Department (EPD) runs a regular 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 bacteriological Water Quality Objective (WQO) for bathing waters. For beaches ranked as “Very Poor”, their *E. coli* levels correspond to a swimming-associated illness rate of more than 15 cases per 1,000 swimmers, and they are generally considered not suitable for swimming.

BEACH WATER QUALITY IN 2019

4. In 2019, all 41 gazetted beaches continued to comply with the bacteriological WQO for bathing waters. Among these beaches, 21 (or 51%) were ranked as “Good”, and the remaining 20 (or 49 %) were “Fair” (see **Figures 1 and 2**). No beach was in the “Poor” or “Very Poor” category.

5. Overall speaking, the beach water quality in 2019 was within the normal range of natural fluctuations and there was unstable weather in the 2019 bathing season with cumulative rainfall 65% higher than in the same period in 2018. Temporary deterioration of beach water quality would sometimes occur after rain due to flushing of pollutants from the hinterlands into the bathing zones through surface runoff, especially after the first flush in spring and early summer. Coupled with this effect was the more cloudy weather in some months (e.g. May and July), as sunshine would help speed up the natural recovery of beach water quality.

6. Discounting the effect of year-to-year meteorological fluctuations, we can see a clear trend of beach water quality improvement in the past two decades. The percentage of gazetted beaches complying with the bacteriological WQO has increased from 74% in 1986 to 100% in 2010, and the full compliance rate has been maintained ever since (see **Figure 3**). This improvement demonstrates the effectiveness of the Government's sustained efforts in extending sewerage systems to the beach hinterlands, implementing the Harbour Area Treatment Scheme (HATS), as well as exercising pollution control and environmental improvement measures through the Water Pollution Control Ordinance and Livestock Waste Control Scheme.

CONCLUSION

7. In summary, through enduring efforts of the Government in extending the sewerage infrastructure and implementing various pollution control and environmental improvement measures, all gazetted beaches in Hong Kong have continued to achieve the required standard for bathing waters for ten consecutive years since 2010. The EPD will continue to monitor the beach water quality closely in 2020.

Environmental Protection Department
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Figure 1 Annual ranking of gazetted beaches in 2019

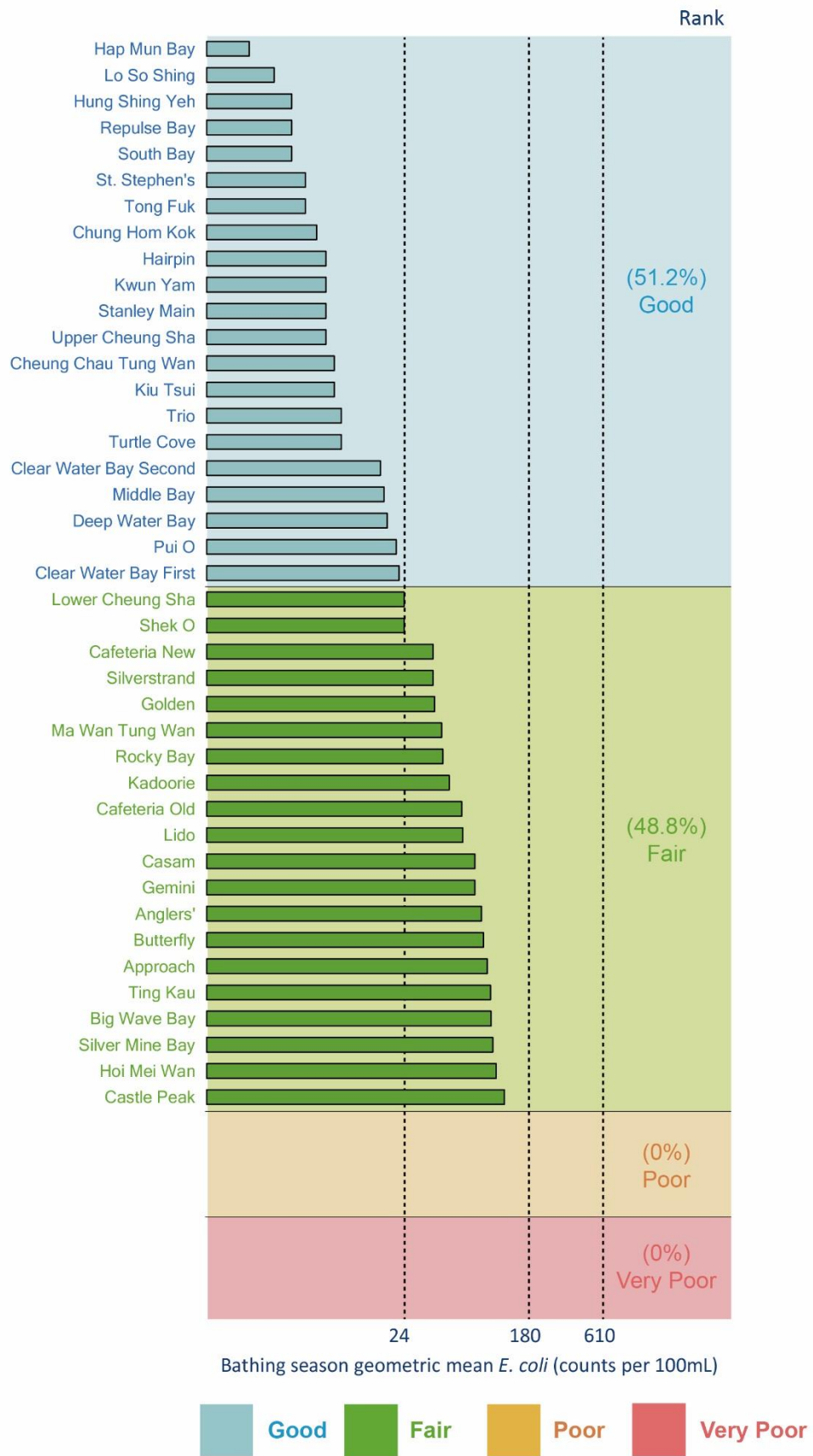
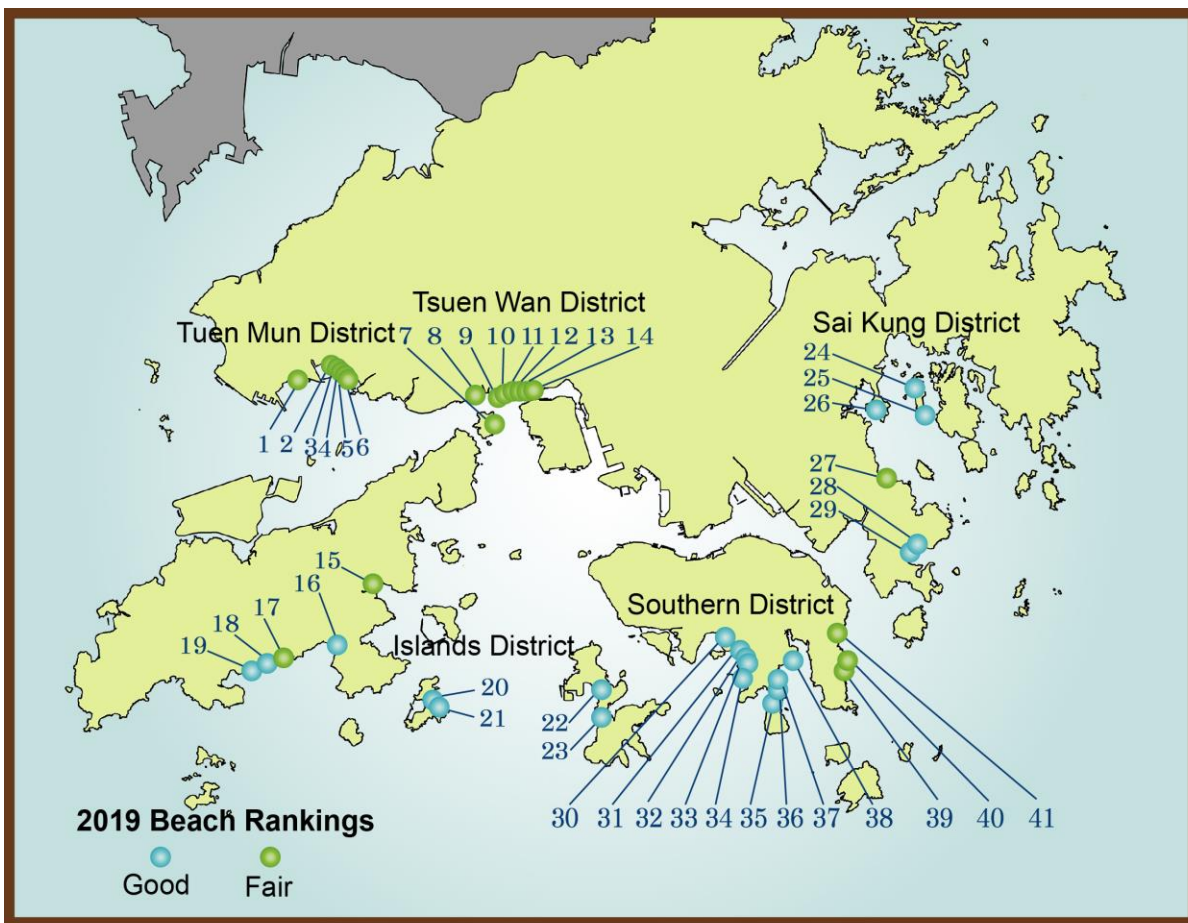


Figure 2 Distribution of gazetted beaches and their annual ranking in 2019



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 2019

