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## **Beach Water Quality of Hong Kong in 2016**

### **INTRODUCTION**

The purpose of this paper is to brief Members on the water quality of gazetted beaches in Hong Kong in 2016.

### **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 2016**

4. In 2016, 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, 18 (or 44%) were ranked as “Good” and the remaining 23 (or 56 %) were ranked as “Fair” (**Figure 1**). The beaches with “Good” water quality ranking were largely located in the Southern District, Islands District and Sai Kung District (**Table 1** and **Figure 2**). None of the beaches was rated as “Poor” or “Very Poor”.

Table 1 Number of gazetted beaches with “Good” and “Fair” annual ranking in various districts

District	Good	Fair
Southern	9	3
Outlying Islands	6	3
Sai Kung	3	3
Tuen Mun	0	6
Tsuen Wan	0	8

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 which have remained open to the public since then.

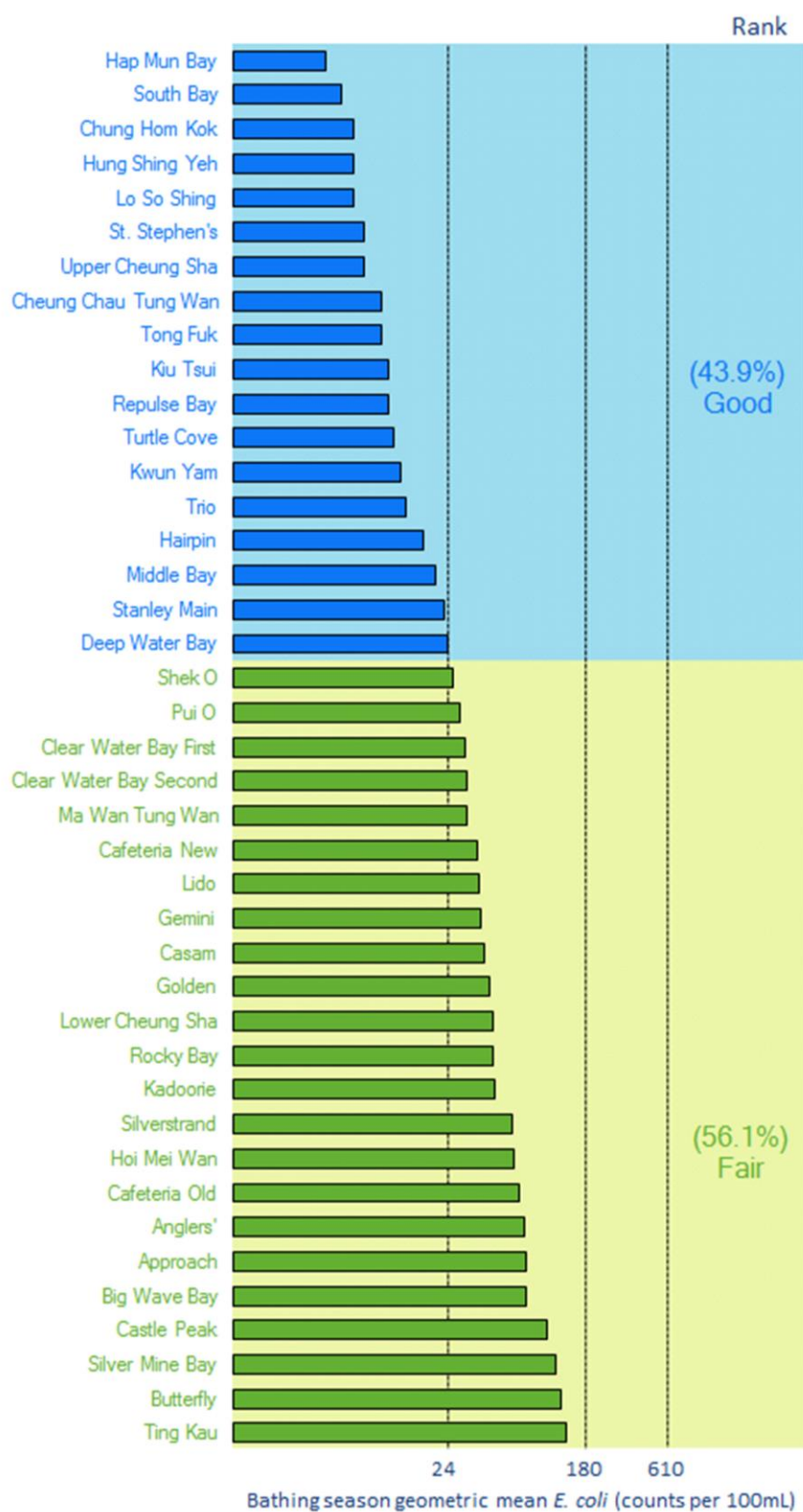
6. Overall speaking, the number of beaches ranked as “Good” in 2016 has decreased from 25 to 18 as compared with 2015. This was mainly due to the combined effects of heavy rainfall and fewer bright sunshine hours in the bathing season of 2016. The cumulative rainfall recorded in the bathing season of 2016 was 17% higher than the average in the past 30 years (1986 – 2015) while the number of bright sunshine hours was 13% lower than that in the same period. Despite the annual ranking of seven beaches have changed from “Good” to “Fair” in 2016, the changes in *E. coli* levels are within the normal range of fluctuation of the bacteriological water quality and have no overall adverse impact on the health of swimmers.

## CONCLUSION

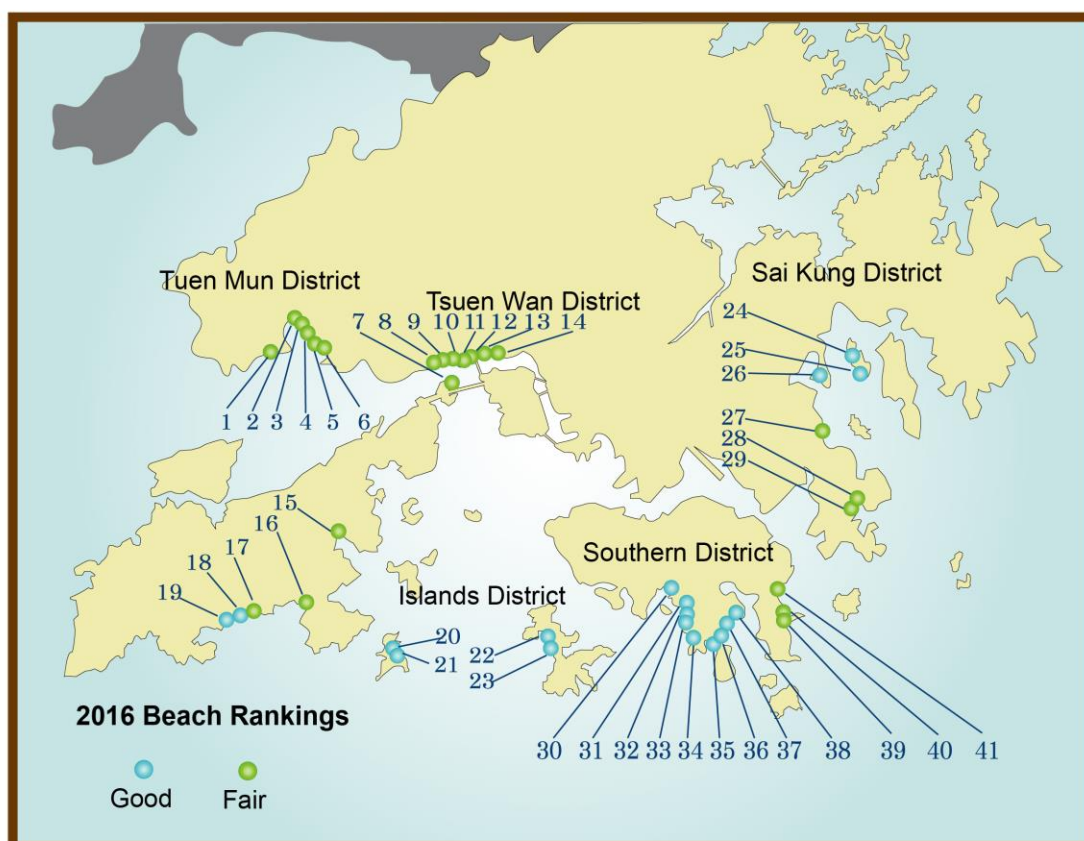
7. Through continuous efforts of the Government to implement pollution control and environmental improvement measures such as the implementation of the Water Pollution Control Ordinance, Livestock Waste Control Scheme, HATS and extension of sewerage to the beach hinterland over the past years, the percentage 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 seven consecutive years. We will continue to closely monitor the water quality of all the beaches in 2017 to ascertain that the observed achievement can be sustained and that the beach water quality can continue to meet the WQO.

**Environmental Protection Department**  
**March 2017**

**Figure 1 Annual ranking of gazetted beaches in 2016**



**Figure 2 Distribution of gazetted beaches and their annual ranking in 2016**



**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 2016

