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**for information**

## **Beach Water Quality in Hong Kong for 1997**

### **INTRODUCTION**

The purpose of this paper is to brief Members on the water quality of gazetted beaches in Hong Kong in 1997 bathing season.

### **BACKGROUND**

A comprehensive report on beach water quality is published by the Environmental Protection Department (EPD) annually. The report serves the following main purposes :

- (a) to enable the Director of Environmental Protection to judge whether the water quality of the beaches has achieved the relevant water quality objectives and thus assess the effectiveness of existing pollution control programmes;
- (b) to enable the Provisional Urban Council and Provisional Regional Council, which are the beach management authorities, to decide whether gazetted beaches are suitable for swimming;
- (c) to provide a source of reference and an educational tool for academics and others who have a professional interest in the water quality of beaches; and
- (d) to inform the public of the state of our beaches and the health risks associated with swimming there.

### **STATUS OF HONG KONG BEACH WATER**

3. The water quality of 41 gazetted beaches in the territory is monitored under EPD's beach water quality monitoring programme. The 1997 annual report is now ready and enclosed with this paper.
4. The water quality status of a beach is assessed through a ranking system which links pollution level with swimming-associated health risks. According to the system, beaches are ranked as "good", "fair", "poor" or "very poor". Only those in the ranks of "good" and "fair" meet the relevant water quality objective.
5. The ranks of the gazetted beaches for the year 1997, which are shown in the annual report, are reproduced in Fig. 1 for easy reference. In the 1997 bathing season, 10 gazetted beaches were ranked "good", 16 "fair", 12 "poor" and 3 "very poor". The 3 beaches with "very poor" water quality were Anglers', Approach and Ting Kau in the Tsuen Wan District. They were closed to the public in the 1997 bathing season.

6. The water quality of most gazetted beaches in Hong Kong in the 1997 bathing season was more or less the same as compared with the position in 1996, as illustrated in Fig.2. Significant improvement in water quality was observed at Rocky Bay, as illustrated in Fig. 3. This was due to both the commissioning of the Shek O Sewage Screening Plant in early 1997 and the subsequent interception and diversion of polluted flows from the beach hinterland to the new plant.

7. The water quality of Silvermine Bay has deteriorated and was ranked "poor" during 1997. The deterioration in water quality was mainly attributed to the heavy rainfall in 1997. Most village houses at Mui Wo are still served by septic tanks/soakaway systems, and frequent heavy rainfalls flushed out pollutants accumulated in the beach hinterland into the beach water. The planned provision of village sewerage will bring about improvement in the water quality.

8. During the 1997 bathing season, there were three pollution incidents which led to the temporary closure of the beaches in Tuen Mun and three beaches on Hong Kong Island South. The Government has implemented a Beach Pollution Response Plan which helps to strengthen the interdepartmental coordination in dealing with such incidents. The Environmental Protection Department has also increased the beach monitoring frequency such that all gazetted beaches are monitored once every week, and information on the beach water quality is disseminated to the public through weekly press releases during the bathing season.

9. The report also highlights the sources of pollution of beaches in various districts and the remedial actions planned or being undertaken. In order to bring about early improvement of the beach water quality, there is a need for the Drainage Services Department to carry out regular inspection and maintenance of sewage treatment facilities and work up contingency plan to prepare for emergency incidents. Early desilting of the stormwater systems near bathing beaches is also necessary.

10. The more longer term improvement of beach water quality will have to be achieved through the various local sewerage improvement works. In that respect, the Sewerage Master plans are being reviewed to identify scope for bringing forward those works packages associated with the beach hinterland. The installation of dry weather flow interceptors will also be considered together with property connections at certain beaches. It is envisaged that when the various sewerage improvement works are completed in the next few years and local domestic discharges are connected to the sewerage systems, there will be great improvement in water quality of all gazetted beaches in Tuen Mun and Tsuen Wan districts.

## CONCLUSION

11. The general water quality of most beaches had been maintained at a level suitable for swimming. The improving trend observed at Rocky Bay Beach, which has been closed for years, highlights the importance of sewerage improvement works. The deterioration trend at beaches in Tuen Mun and Tsuen Wan districts has stalled and a reverse trend will be observed when most of the sewerage improvement works are completed within the next few years.

**Environmental Protection Department**  
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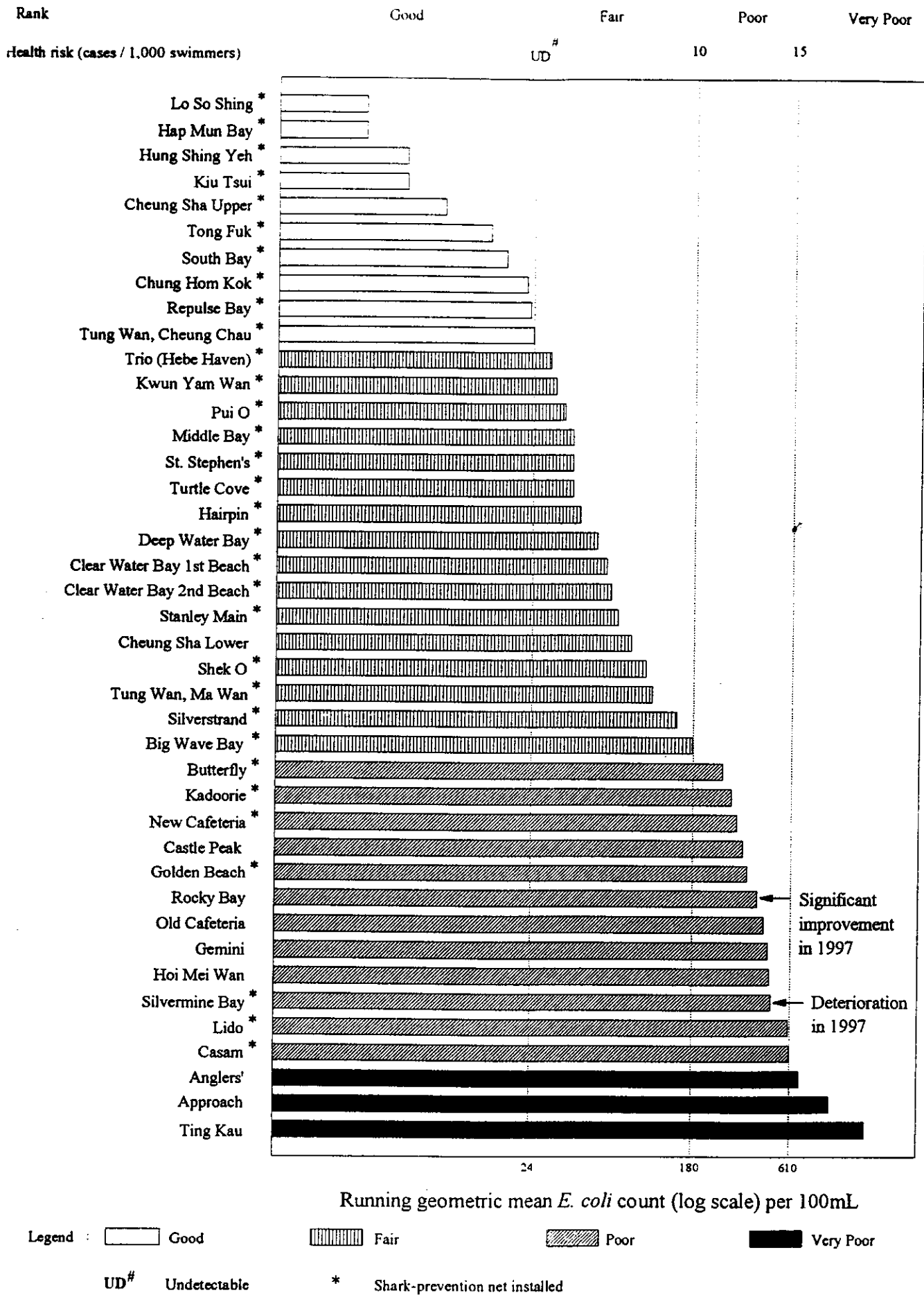
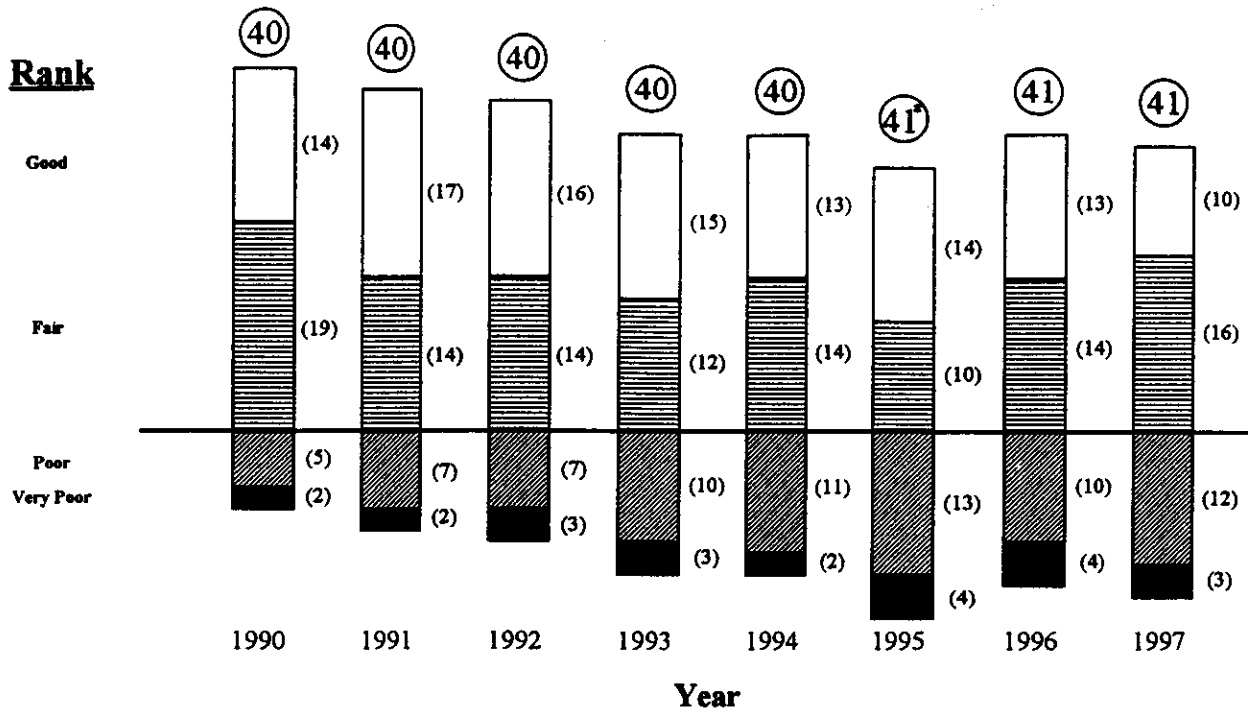
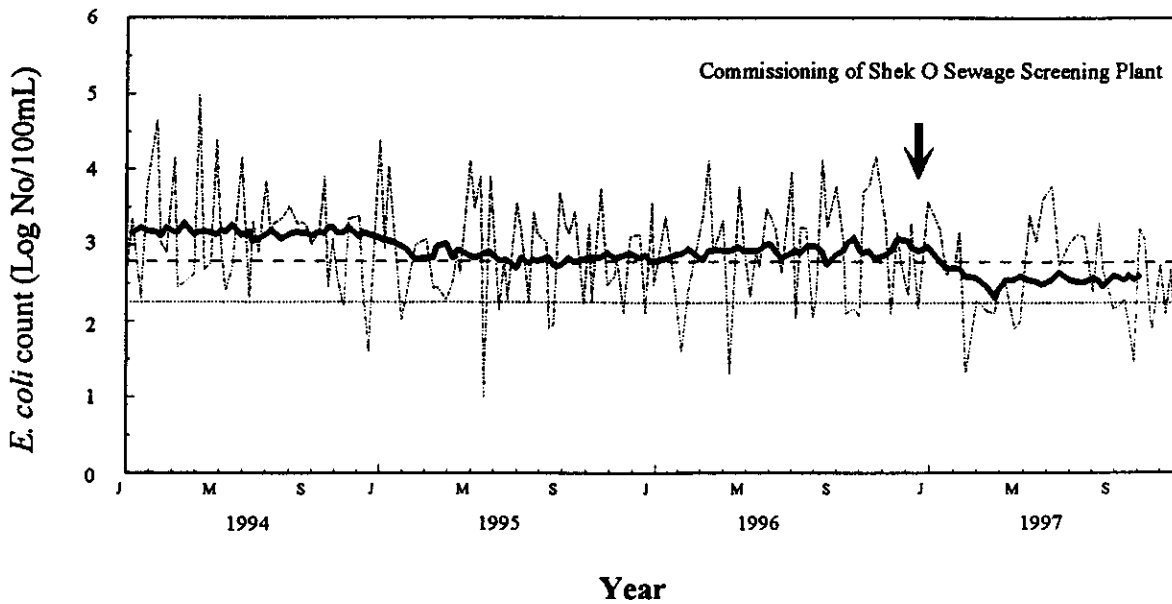


Figure 1 Rankings of gazetted beaches in Hong Kong based on the results of water quality monitoring during the 1997 bathing season



Legend : Figure in bracket indicates number of beaches of that rank; circled figure indicates total number of gazetted beaches in the year.  
 \* : Golden Beach was gazetted in 1995.  
 Note : Campers and Pak Sha Chau Beaches were degazetted in October 1995, and are not included in this figure.

Figure 2 Rankings of Hong Kong gazetted beaches in the past eight years



Legend : — Trend line  
 - - - - 610 *E. coli* / 100mL density level  
 ..... 180 *E. coli* / 100mL density level

Figure 3 Commissioning of the Shek O Sewage Screening Plant resulted in improvement in water quality at Rocky Bay Beach