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For information

River and Marine Water Quality in Hong Kong in 2006

Introduction

The Environmental Protection Department (EPD) conducts long-term monitoring of river and marine water quality and publishes the annual reports in the following year. The 2006 river and marine water quality reports are now available for public's viewing at and downloading from EPD's website (<http://www.epd.gov.hk>).¹ This paper summarises the state of rivers and marine waters in Hong Kong in 2006 for Members' information.

River Water Quality

2. The water quality of Hong Kong rivers continued to improve in 2006. In terms of compliance with the statutory Water Quality Objectives (WQOs), the overall compliance reached a record level of 86%, up from 85% in 2005 and 76% in 1997. This was the result of the implementation of pollution abatement legislation and schemes, including the Water Pollution Control Ordinance, Livestock Waste Control Scheme and Sewerage Master Plans.

3. A similar trend was observed in the Water Quality Index (WQI) grading, which reflected organic pollution and the general health of the rivers. In 2006, 81% of the river monitoring stations were in the 'Excellent' or 'Good' grade as compared to 68% in 1997. Among these, a record level of 58% of the stations graded 'Excellent', further advanced from 51% in 2005. The majority of the river stations in Lantau Island, Eastern New Territories, Southwestern New Territories and Kowloon were in the "Excellent" or "Good" categories. On the other hand, 14% of the river stations in the territory remained 'Bad' or 'Very Bad'. These were mostly found in the Northwestern New Territories, and were impacted by discharges from livestock farms and unsewered villages. The problem should be alleviated with reducing livestock pollution and increasing sewerage provision in the next few years.

¹ To further save the earth's precious resources, CD-ROMs are no longer produced. From this year onwards, only web-based versions of the reports will be produced.

Marine Water Quality

4. In 2006, the marine water quality in Hong Kong was generally good and stable. The overall compliance with the marine WQOs reached 87%, showing an improvement over 2005 (85%) and returning to the peak level of 2002-2004.

5. The Port Shelter and Mirs Bay Water Control Zones (WCZs) continued to enjoy excellent water quality, fully (100%) complying with the WQOs. Following the commissioning of the Harbour Area Treatment Scheme (HATS) Stage 1 at the end of 2001, the water quality of the eastern and central Victoria Harbour continued to improve. The average WQO compliance for the Eastern Buffer, Junk Bay and Victoria Harbour WCZs increased from 83% in 2001 to 97% in 2006. While the eastern part of Victoria Harbour has experienced a reduction in *E. coli*, the central and western areas saw an increase in bacterial levels which persisted in 2006. The planned disinfection of effluent from the Stonecutters Island Sewage Treatment Works will improve the situation.

6. The Tolo Harbour WCZ has continued to improve in the past decade with the WQO compliance rate rising steadily from 64% in 1997 to 86% in 2006. In the Southern, Western Buffer and North Western WCZs, the water quality was largely stable with compliance rates ranging between 73% and 93%. The Deep Bay WCZ had the lowest WQO compliance rate (40%) in the territory. While pollution in the inner Deep Bay area remained serious, there were early signs of recovery in the form of decreasing nutrients (nitrogen and phosphorous) and bacteria levels in the last two years. In 2006, a total of 12 red tides were reported in the territory, much fewer than the 41 reported in 2005. There was no record of any red tide-related fish kill during the year.

Conclusions

7. In 2006, the river water quality in Hong Kong continued to improve with 81% of the monitoring stations achieving a “Good” or “Excellent” WQI grading. However, the major rivers in the Northwestern New Territories remained unsatisfactory due to pollution from livestock farms and unsewered villages.

8. For marine waters, compliance with the WQOs reached 87% in 2006. The water quality improvements resulting from the implementation of the HATS Stage 1 were generally sustained; whereas the central and western Victoria Harbour continued to have high *E. coli* bacterial counts. Within Deep Bay, while pollution in the inner area remained serious, there were some signs of improvement having taken place over the last two years.

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