



33/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong  
香港灣仔告士打道5號稅務大樓33樓

## **ACE Paper 10/2014**

*For information by circulation*

### **River and Marine Water Quality in Hong Kong in 2013**

#### **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 2013 river and marine water quality reports are now available for the public's reference at the EPD's website (<http://www.epd.gov.hk>) <sup>[1]</sup>. This paper summarizes the state of rivers and marine waters in Hong Kong in 2013 for Members' information.

#### **RIVER WATER QUALITY**

2. The overall water quality of Hong Kong's rivers in 2013 continued to perform well. In terms of compliance with the statutory Water Quality Objectives (WQOs), the compliance rate for the year was 90% compared with 89% in 2012.
3. With regard to the Water Quality Index (WQI) which indicates the general health of the inland water courses, 65% of the river monitoring stations were graded "Excellent" and 22% "Good" in 2013. These stations are mainly located in Lantau, eastern and southwestern New Territories, and Kowloon.
4. The good compliance rates (**Figure 1 of Annex**) were the result of implementation of pollution control legislation, including the Water Pollution Control Ordinance and the Livestock Waste Control Scheme introduced under the Waste Disposal Ordinance, and the extension of the sewerage network to local villages under the Sewerage Master Plans and the gradual connection of village

---

<sup>1</sup> EPD ceased producing CD-ROMs since 2007, and only web-based versions of the reports are available.

houses to the new sewers.

5. In spite of the improving water quality trend, 35% of the 82 monitoring stations still contained high (over 10 000 cfu/100mL) to very high (over 100 000 cfu/100mL) levels of *E. coli* bacteria. These stations are mostly located in the northwestern part of the New Territories (for example Yuen Long Creek and Kam Tin River), and some in North District (for example River Indus, River Beas and River Ganges) and eastern New Territories (for example Tai Po River). The water quality will further improve, when public sewers are extended to more villages in the unsewered areas in these areas as recommended in the North District Sewerage Master Plan (SMP) and Yuen Long and Kam Tin SMP.

## MARINE WATER QUALITY

6. The overall WQO compliance rate for 2013 was 83% compared with 78% in 2012 (**Figure 2 of Annex**). The higher overall WQO compliance rate was mainly due to improvement in compliance rate with the total inorganic nitrogen (TIN) objective from 34.8% in 2012 to 56.5% in 2013. The changes can be due to normal fluctuations. A longer observation period is needed to judge if the improvement is steady.

7. Three Water Control Zones (WCZs) had higher overall compliance rate in 2013, while one WCZ had lower overall compliance rate. The improvement in overall compliance rate in Victoria Harbour (83%), Western Buffer (92%) and Port Shelter (100%) WCZs was mainly due to a higher compliance rate with the TIN objective. For the Deep Bay WCZ (40%), the overall compliance rate was same as recorded between 2008 and 2011. The lower compliance rate in 2013 compared with 2012 was due to the non-compliance with the unionized ammoniacal nitrogen (NH<sub>3</sub>-N) objective at the two Inner Deep Bay stations.

8. The compliance rate for the other six WCZs in 2013 remained unchanged: 69 % for the Southern WCZ, 71 % for the Tolo WCZ, 72 % for the North Western WCZ, and 100 % for the Mirs Bay WCZ, the Eastern Buffer WCZ, and the Junk Bay WCZ.

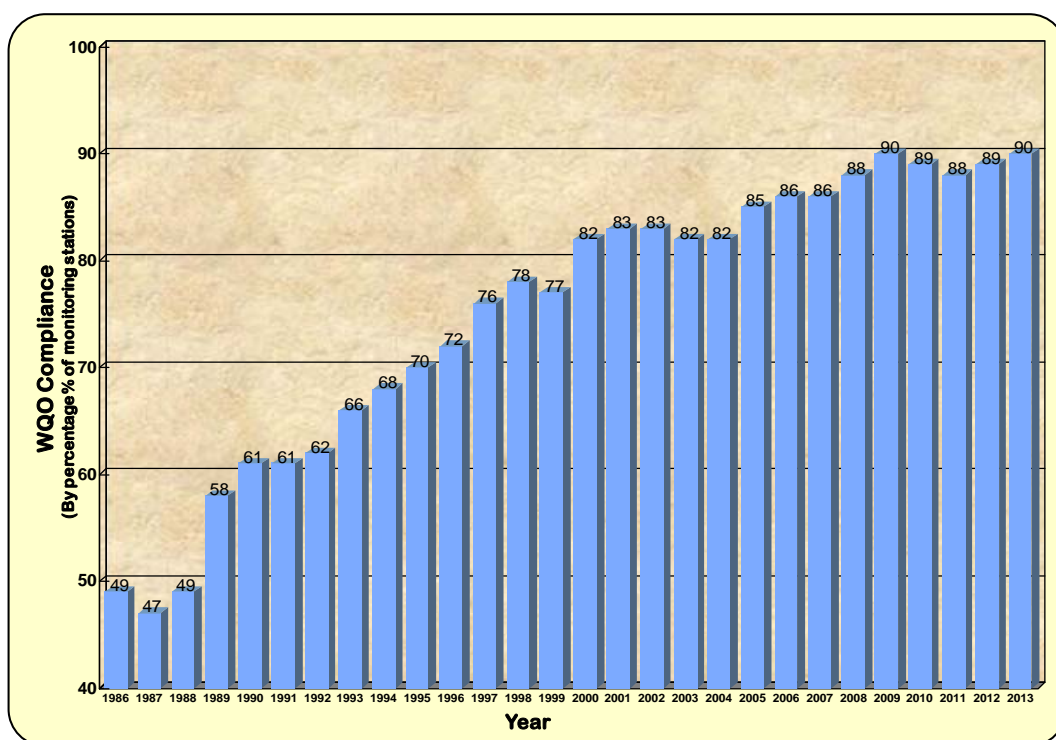
9. A total of 8 red tide incidents were reported in the territory in 2013 as compared to 18 incidents in 2012. There was no record of any red tide-related fish kill during 2013.

## CONCLUSIONS

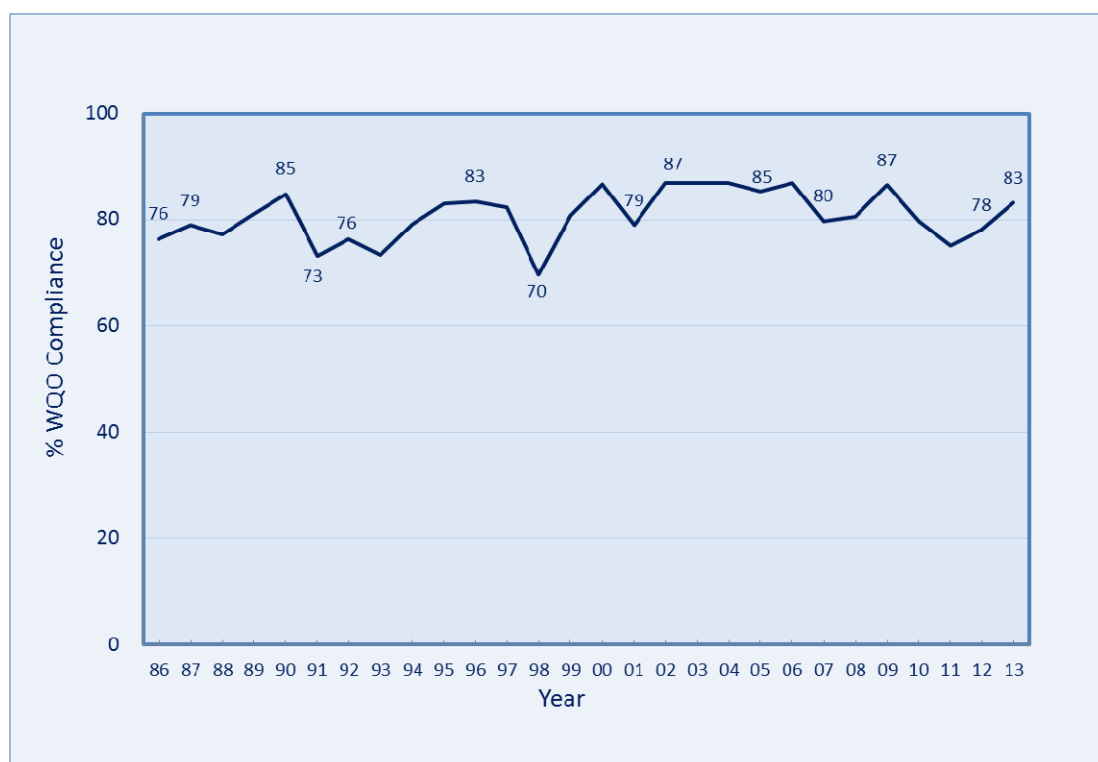
10. In 2013, the river water quality in Hong Kong continued to perform well with 87% of the monitoring stations achieving a “Good” or “Excellent” WQI grading. However, *E. coli* levels in excess of 10 000 cfu/100ml were still found in 35% of the monitoring stations located mostly in the northwestern part of the New Territories, and some in North District and eastern New Territories.

11. For marine waters, the overall WQO compliance rate for 2013 was 83%, compared with 78% in 2012. The improved overall compliance rate in 2013 was mainly due to a higher compliance rate with the TIN objective in some WCZs. On the other hand, the drop in the overall compliance rate in the Deep Bay WCZ was due to a slight increase in the NH<sub>3</sub>-N levels resulting in a lower compliance rate with the NH<sub>3</sub>-N objective.

**Environmental Protection Department**  
**November 2014**



**Figure 1** Overall compliance with the river WQOs in Hong Kong, 1986-2013



**Figure 2** Overall compliance with the marine WQOs in Hong Kong, 1986-2013