

State of water environmental issues

China

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Enclosed Water Bodies

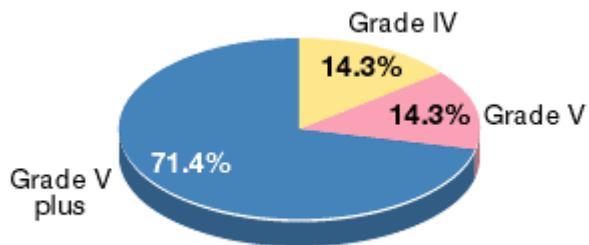
In 2003, 28 major lakes and reservoirs were monitored. Among them, one was Grade II, accounting for 3.6%; six were Grade III, accounting for 21.4%; seven were Grade IV, accounting for 25%; four were Grade V, accounting for 14.3%; and ten were worse than Grade V, accounting for 35.7%.

Water quality Grades in main Lakes and Reservoirs in 2003

	Number	Grade I - III	Grade IV - V	Grade V plus	Major pollution indicators
Three Lakes	3	0	0	3	TN, TP
Big freshwater Lakes	10	3	4	3	TN, TP
City's lakes	5	0	3	2	TN, TP
Large reservoir	10	4	4	2	TN, TP
Total	28	7	11	10	TN, TP
percentage (%)	100.0	25.0	39.3	35.7	TN, TP

Taihu Lake:

The water body was seriously polluted. Among the 21 sections monitored, none was within Grade I-III. Grade IV, V and/or worse accounted for 14.3%, 14.3%, and 71.4% of all sections monitored respectively. However, significant improvement was observed as compared with the water quality of the previous year. The main pollution indicators were total phosphorus and total nitrogen. The nutrient index was 57.8, which was light eutrophication.



Quality Grades in main body of Taihu Lake

Major Pollution Indicator Values in Main Body of Taihu Lake in 2003

Area in Taihu Lake Valley	Permanganate Value (mg/L)	TP (mg/L)	TN (mg/L)	Trophic index
Wulihu Lake	6.11	0.132	7.09	66.2
Meilianghu Lake	5.38	0.109	4.79	63.0
West inshore area	4.88	0.104	3.34	61.3
East inshore area	3.76	0.039	1.75	49.8
Center area	3.73	0.049	2.05	54.1
Agerage	4.28	0.071	2.86	57.8

Dianchi Lake:

Dianchi Lake was seriously polluted. Compared with the previous year, the water quality had declined slightly. The water quality of both Caohai and Waihai was worse than Grade V. Caohai was more polluted than Waihai. The permanganate index of Waihai met Grade III standards. Total phosphorus was Grade V. The main pollution indicators were total nitrogen and total phosphorus. The nutrient indexes were 76.4 and 62.7 respectively for Caohai and Waihai, and was 72.0 for the entire lake on average. This indicated that the lake had serious eutrophication problems.

Chaohu Lake:

The western part of the lake was worse than Grade V. The eastern part of the lake was Grade V. On the average, the lake was worse than Grade V. Compared with the previous year, the water quality was about the same. Permanganate index reached Grade III water quality standards. The main pollution indicators were total nitrogen and total phosphorus.

Other Large Lakes:

Among the 10 other large fresh water lakes, Xingkai Lake was Grade II, Erhai and Bositeng were Grade III, Hongze and Boyang were Grade IV, Dongting was Grade V, Nansi, Baiyangdian, Dalai, and Jingpo were worse than Grade V. The main pollution indicators were total nitrogen, total phosphorus, and BOD. Erhai, Dongting and Boyang had medium eutrophication. Hongze, Dalai, and Nansi had light eutrophication.

The water quality in Large freshwater Lakes in 2003

Name of Lake	Trophic indicator	Grade of nutrition condition	Water quality	Major pollution indicators
Xingkaihu Lake	—	—	Grade II	
Erhai Lake	46.6	Mesotrophic	Grade III	TN
Hongzehu Lake	55.0	Light eutrophic	Grade IV	TN
Poyanghu Lake	43.3	Mesotrophic	Grade IV	TPATN
Dongtinghu Lake	44.1	Mesotrophic	Grade V	TP
Baiyangdian Lake	—	—	Grade V plus	TNABOD5
Dalaihu Lake	56.4	Light eutrophic	Grade V plus	TNATP
Jingbohu Lake	47.8	Mesotrophic	Grade V plus	Total Hg
Bositeng Lake	—	—	Grade III	TN
Nansihu lake	53.5	Light eutrohic	Grade V plus	TNATP

Lakes in Cities:

Lakes in cities had poor water quality. Kunming Lake of Beijing and the Xihu Lake of Hangzhou were Grade IV. Xuanwu Lake of Nianjing, Donghu Lake of Wuhan, and Daming Lake of Jinan were worse than Grade V. The main pollution indicators were total nitrogen and total phosphorus.

The water quality in Urban Lakes in 2003

Name of Lake	Trophic indicator	Grade of nutrition condition	Water quality	Major pollution indicators
Kunminghu Lake	47.2	Mesotropher	Grade IV	TN, oils
Xihu Lake	63.0	Middle eutropher	Grade IV	TP, TN
Xuanwuhu Lake	62.2	Middle eutropher	Grade V	TN, TP
Donghu Lake	66.4	Middle eutropher	Grade V plus	TP, TN
Daminghu Lake	73.4	Hyper eutropher	Grade V plus	TN, TP

Large Reservoirs:

Among the 10 large reservoirs monitored, Miyun Reservoir, Qiandao Reservoir, Shimen Reservoir, and Dongpu Reservoir were Grade III, Yuqian Reservoir and Danjiangkou Reservoir were Grade IV, Dahuofang Reservoir and Songhuahu Reservoir were Grade V, Lao PDRhan Reservoir and Menlou Reservoir were worse than Grade V. The main pollution indicators of these large reservoirs monitored were total nitrogen and total phosphorus. The eutrophication of these reservoirs was slight.

Reference: Report on the State of the Environment of China (2003) State Environmental Protection Administration of China