

Supplementary Materials

Table S1 COD emissions in secondary industrial sectors from 2002 to 2012

sectors	COD emission (ton)				
	2002	2005	2007	2010	2012
2	77,414.4	57,387.561	81,685.4	100,174	122,356
3	24,326.2	16,728.947	21,364.1	32,593	13,033
4	27,104	75,186.736	58,061.8	42,208	54,224
5	22,627.7	20,740.266	10,421.7	8,703	7,631
6	1,074,556.1	1,024,842.672	929,837.3	842,960	858,448
7	264,577.9	298,628.114	344,903	300,608	277,437
8	73,561.3	96,450.388	88,870.4	77,514	78,046
9	21,765	28,802.244	20,338.1	15,258	16,420
10	1,641,673.8	1,602,578.263	1,577,104.6	954,718	627,227
11	60,245.8	83,343.423	82,145.7	81,719	80,418
12	801,724	816,210.657	709,678.7	695,627	581,848
13	67,127.9	52,843.597	45,028.7	31,162	32,352
14	177,307.8	210,562.961	165,426.4	136,120	103,265
15	13,121	20,215.678	28,036.9	25,307	32,422
16	41,673.9	33,002.057	24,823.4	25,150	17,246
17	23,981.9	38,095.337	26,969.8	53,823	32,116
18	10,814.1	9,591.149	10,608	12,770	7,700
19	17,917.1	16,690.6	26,596.6	28,572	33,498
20	2,465.8	9,353.647	6,703.5	4,020	1,815
21	9,618.9	4,844.859	7,465.8	4,864	9,119
22	99,534.6	132,158.664	60,662.8	54,844	30,906
23	3,972.3	9,463.732	15,369.8	2,721	1,003
24	7,078.4	23,685.427	15,343.8	25,441	9
25	73,950.7	250,294.272	173,292.3	99,475	1,141

Table S2 NH₃-N emissions in secondary industrial sectors from 2002 to 2012

sectors	NH ₃ -N emission(ton)				
	2002	2005	2007	2010	2012
2	591.5	2,166.1	3,335.1	5,669.4	3,678
3	1,927.8	2,416.4	1,480.9	1,001.6	852
4	873.6	896.2	1,363.1	3,351.2	1,369
5	666.1	1,566.5	267.5	376	397
6	54,934.3	82,976.8	39,161.9	38,059.7	39,367
7	9,052.2	16,564.8	16,512.6	17,409.7	19,337
8	5516	9,849.9	9,063.9	5,820.3	7,510
9	1,757.8	2,193.7	847.9	564.4	542
10	32,120.8	42,453.3	29,964.9	25,203.4	20,963
11	18,285.3	16,263.5	10,414.8	7,706.3	14,821
12	203,118.1	234,572.1	141,711.9	87,792.2	96,291
13	759.2	1,454.2	2,692.2	2,028.4	1,836
14	24,096.7	31,347.9	17,586.1	15,337.7	21,949
15	303.9	753	1,084.5	1,889.2	2,735
16	5,936.3	3,278.9	2,299.2	1,921.2	1,272
17	1,838	1,992.5	1,670.6	2,605.8	2,156
18	331.6	348.1	520.1	727.9	608
19	546.6	1,002.1	2,097.8	2,738.1	2,942
20	88.8	550.1	381.9	383.2	140
21	169.1	270.5	311.2	258.1	613
22	2,794.4	5,507.2	1,800.9	4,677.9	2,023
23	1,509.5	6,275.2	3,278.6	954.6	157
24	489.6	2,189.5	782.9	969.5	0
25	11,272.6	13,329.2	17,644.9	17,926.4	66

Table S3 Quantity of nitrogen fertilizer

year	quantity of nitrogen fertilizer (10 ⁴ ton)
2002	2,157.3
2005	2,229.3
2007	2,297.2
2010	2,353.7
2012	2,399.9

Table S4 Water use and return water in industrial sectors (10⁴m³)

sectors	2002		2005		2007	2010	2012
	water use	return water	water use	return water	return water	return water	return water
2	342,392	104,765	203,987	46,650	73,040	104,765	142,220
3	167,328	11,555	184,175	11,252	9,988	11,555	9,367
4	276,995	54,205	254,823	45,375	59,406	54,205	73,621
5	39,994	8,058	46,146	13,464	10,002	8,058	7,865
6	800,877	275,841	541,103	208,007	257,442	275,841	289,804
7	420,512	245,470	318,514	172,232	225,169	245,470	237,252
8	56,377	40,212	38,155	27,523	38,068	40,212	43,584
9	16,042	7,182	45,131	7,366	6,673	7,182	5,421
10	905,434	396,348	776,103	369,902	427,490	396,348	346,342
11	1,897,106	70,024	1,580,316	68,122	73,126	70,024	87,474
12	4,543,434	415,987	4,784,917	436,024	426,459	415,987	379,667
13	197,628	32,313	319,351	48,248	40,265	32,313	29,440
14	3,856,219	148,066	4,747,700	203,668	188,669	148,066	134,983
15	88,586	30,152	44,439	21,057	33,335	30,152	33,589
16	95,926	22,769	170,858	26,976	21,621	22,769	18,080
17	120,580	26,219	103,002	24,653	22,048	26,219	28,804
18	33,004	11,652	20,063	8,108	8,660	11,652	9,367
19	171,675	35,965	80,994	18,745	29,621	35,965	48,173
20	24,196	4,965	38,857	7,241	7,195	4,965	2,451
21	7,041	3,706	4,737	2,395	4,728	3,706	8,674
22	9,091,372	129,624	15,352,850	251,145	174,796	129,624	95,575
23	30,412	1,931	51,802	4,099	2,837	1,931	953
24	89,928	31,189	105,729	18,819	15,932	31,189	12
25	43,373	10,387	222,332	118,708	50,997	10,387	0

Table S5 Water use, water consumption and return water (10⁸m³)

year	2002	2005	2007	2010	2012
Total water use	5,497	5,633	5,819	6,022	6,131
Agriculture	3,738	3,583	3,602	3,691	3,899
Second industry	1,143	1,284	1,402	1,445	1,380
Urban living water use	319	676	710	765	742
Rural living water use	297				
Ecological water use		90	105	120	110
Total water Consumption	2,985	2,960	3,022	3,182	3,245
Agriculture	2,392	2,256	2,254	2,342	2,505
Second industry	274	278	332	356	331
Urban living water use	77	367	375	395	320
Rural living water use	261				
Ecological water use		59	604	89	88
Return water	631	717	750	972	785
Agriculture	1,346	1,327	1,348	1,349	1,395
Second industry	353	408	415	602	364
Living return water	278	309	335	370	421