

5.01 Number of specified legal sites in accord with the Water Pollution Control Act

	Total number of specified legal sites	Breakdown of water discharge regulations			
		Emission per day is more than 50 m3	Specified sites dealing with harmful substances	Emission per day is less than 50 m3	Specified sites dealing with harmful substances
FY1985	279,762 (5,035)	29,890 (4,797)	3,900 (849)	249,872 (238)	9,507 (25)
1986	280,443 (4,740)	29,802 (4,518)	3,854 (765)	250,641 (222)	9,035 (20)
1987	281,057 (4,728)	29,968 (4,514)	3,983 (800)	251,089 (214)	9,253 (19)
1988	285,860 (5,168)	31,420 (4,901)	4,067 (817)	254,440 (267)	9,030 (25)
FY1989	287,679 (5,018)	31,692 (4,757)	4,295 (759)	255,987 (261)	12,953 (16)
1990	290,328 (5,008)	32,190 (4,742)	4,328 (803)	258,138 (266)	13,295 (16)
1991	304,663 (5,004)	36,548 (4,733)	4,387 (771)	268,115 (271)	14,022 (20)
1992	303,810 (5,009)	36,901 (4,751)	4,430 (801)	266,909 (258)	13,613 (22)
1993	305,318 (4,741)	36,939 (4,507)	5,025 (848)	268,379 (234)	13,233 (22)
1994	305,987 (5,106)	37,948 (4,849)	5,295 (918)	268,039 (257)	13,546 (29)
1995	303,807 (5,124)	38,417 (4,861)	5,258 (917)	265,390 (263)	13,024 (28)
1996	303,100 (4,989)	38,534 (4,745)	5,128 (893)	264,566 (244)	13,146 (26)
1997	298,967 (4,676)	38,127 (4,455)	4,934 (836)	260,840 (221)	12,707 (20)
1998	298,044 (4,599)	38,386 (4,382)	5,178 (861)	259,658 (217)	12,432 (16)
1999	298,529 (4,528)	38,415 (4,299)	4,712 (718)	260,114 (229)	12,005 (18)
2000	298,245 (4,462)	38,502 (4,221)	4,815 (734)	259,743 (241)	12,127 (22)
2001	297,973 (4,617)	38,751 (4,365)	5,091 (811)	259,222 (252)	11,892 (29)
2002	296,157 (4,551)	38,292 (4,304)	4,582 (774)	257,865 (247)	10,975 (27)
2003	293,481 (4,289)	37,226 (4,027)	4,434 (664)	256,255 (262)	10,926 (27)
2004	292,379 (4,188)	37,017 (3,926)	4,475 (677)	255,362 (262)	10,526 (32)
2005	290,759 (4,158)	36,543 (3,874)	4,424 (603)	254,216 (284)	10,567 (33)
2006	289,091 (4,118)	36,139 (3,842)	4,471 (651)	252,952 (276)	11,234 (43)
2007	280,517 (3,906)	35,506 (3,662)	4,330 (617)	245,011 (244)	10,757 (37)
2008	276,952 (3,854)	34,807 (3,595)	4,336 (639)	242,145 (259)	10,611 (36)
2009	274,039 (3,813)	34,271 (3,543)	4,179 (628)	239,768 (270)	10,348 (31)
2010	271,242 (3,743)	33,964 (3,492)	4,156 (622)	237,278 (251)	10,119 (24)
2011	266,860 (3,685)	33,529 (3,440)	4,025 (623)	233,331 (245)	10,046 (24)
2012	267,009 (3,559)	33,067 (3,321)	3,931 (545)	233,146 (238)	10,917 (28)
2013	265,946 (3,485)	32,589 (3,241)	3,877 (541)	232,300 (244)	11,388 (31)

Parentthesized is the number of specified legal sites specially facilitated with, in accord with Seto Inland Sea environment preservation special measures law.

Source: "Enforcement status of Water Pollution Control Law etc.," Water Environment Division, Environment Management Bureau, MOE, the Government of Japan.

5.02 Number of specified legal sites by prefecture in accord with Water Pollution Control Act

	FY2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Hokkaido	7,127	6,936	6,818	6,569	6,372	6,332	6,242	6,186	6,252	6,129	6,361	6,130
Aomori	5,353	5,299	5,445	5,401	5,494	5,374	5,035	4,984	4,974	4,861	4,856	4,788
Iwate	5,489	5,521	5,414	5,339	5,346	5,287	5,282	5,266	5,228	5,173	5,288	5,300
Miyagi	6,714	6,699	6,746	6,725	6,717	6,761	5,787	5,758	5,771	5,703	5,792	5,631
Akita	4,380	4,405	4,401	4,241	4,310	4,181	3,974	3,939	3,847	3,737	3,781	3,735
Yamagata	4,235	4,206	4,245	4,235	4,289	4,331	4,364	4,282	3,660	3,672	3,712	3,753
Fukushima	7,991	7,940	7,975	7,973	7,899	7,892	7,827	7,711	7,643	7,649	7,652	8,037
Ibaraki	9,750	9,767	9,783	10,039	9,580	8,634	9,346	9,327	9,279	9,000	9,353	8,905
Tochigi	8,445	8,490	8,183	8,174	8,220	8,240	8,239	8,234	8,233	8,233	8,251	8,198
Gunma	5,230	5,237	5,345	5,387	5,484	5,376	5,270	5,285	5,300	5,308	5,275	5,242
Saitama	10,276	10,081	10,161	9,314	9,608	9,670	9,670	9,625	9,461	9,577	9,590	9,482
Chiba	11,836	11,491	11,302	11,199	11,022	10,787	10,581	10,401	10,260	10,194	10,278	10,597
Tokyo	1,777	1,855	1,878	2,216	2,289	2,325	2,304	2,295	2,265	2,218	3,352	3,333
Kanagawa	8,960	8,985	8,904	8,775	8,564	8,229	8,142	8,017	7,915	7,800	7,832	7,792
Niigata	10,857	10,841	10,784	10,787	10,694	10,635	10,593	10,498	10,145	9,477	8,917	8,664
Toyama	3,386	3,382	3,389	3,412	3,430	3,458	3,472	3,486	3,452	3,383	3,421	3,448
Ishikawa	4,180	4,079	4,064	3,979	3,979	3,982	3,837	3,911	3,871	3,824	3,835	3,856
Fukui	2,788	2,813	2,891	2,906	2,772	2,648	2,542	2,474	2,457	2,430	2,431	2,398
Yamanashi	5,385	5,361	5,301	5,312	5,302	5,195	5,148	5,153	5,124	5,067	5,049	5,013
Nagano	13,073	13,046	13,058	13,077	12,986	12,941	12,911	12,871	12,670	12,499	12,587	12,447
Gifu	8,898	8,843	8,873	8,874	8,827	8,820	8,790	8,714	8,614	8,545	8,538	8,573
Shizuoka	12,581	12,573	12,552	12,476	12,378	12,535	12,499	11,853	11,941	11,848	12,290	11,541
Aichi	14,372	14,138	14,001	13,849	13,695	13,393	13,139	12,894	12,658	12,468	12,203	12,172
Mie	8,544	8,592	8,663	8,618	8,484	8,516	8,549	8,568	8,547	8,513	8,525	8,565
Shiga	3,580	3,523	3,418	3,422	3,284	3,238	2,957	2,902	3,165	2,866	2,897	3,467
Kyoto	4,920	4,798	4,760	4,874	5,063	5,048	5,036	5,038	4,791	4,693	4,579	4,524
Osaka	5,516	5,362	5,230	5,214	4,936	5,001	4,965	4,468	4,029	3,403	4,569	4,572
Hyogo	10,700	10,667	10,538	10,027	9,986	9,825	9,783	9,680	9,071	8,984	9,283	9,344
Nara	3,058	3,070	3,270	3,332	3,340	3,358	3,356	3,355	3,101	3,107	3,124	3,254
Wakayama	3,631	3,672	3,721	3,953	3,951	3,871	3,843	3,853	3,678	3,643	3,678	3,705
Tottori	2,465	2,430	2,366	2,269	2,351	2,345	2,370	2,326	2,316	2,309	2,333	2,396
Shimane	3,875	3,355	3,330	3,325	3,341	3,348	3,256	3,233	3,179	3,101	3,123	3,126
Okayama	5,894	5,898	5,896	5,723	5,713	5,680	5,604	5,571	5,031	5,020	5,020	4,801
Hiroshima	7,315	7,289	7,270	7,520	7,159	6,636	6,491	6,308	5,788	5,764	5,799	5,814
Yamaguchi	4,781	4,780	4,251	4,249	4,241	4,243	4,242	4,236	3,900	3,911	3,950	3,946
Tokushima	4,224	4,256	4,303	4,323	4,316	4,324	4,334	4,356	4,148	4,159	4,175	4,187
Kagawa	4,924	4,924	4,931	4,929	4,923	4,841	4,700	4,580	4,290	4,296	4,280	4,108
Ehime	5,743	5,290	5,236	5,077	5,046	4,972	4,859	4,726	4,329	4,185	4,197	4,132
Kochi	3,291	3,287	3,300	3,320	3,288	3,309	3,318	3,203	3,210	3,049	2,951	2,947
Fukuoka	6,789	6,583	6,545	6,462	6,544	6,184	6,096	5,899	5,510	5,048	5,200	5,372
Saga	2,891	2,872	2,896	2,908	2,907	2,952	2,980	2,991	2,906	2,733	3,497	3,539
Nagasaki	5,647	5,634	5,397	5,468	5,651	5,789	5,889	5,954	6,182	6,144	5,421	5,639
Kumamoto	8,413	8,474	8,532	8,584	8,865	3,579	3,103	3,198	3,211	3,299	3,445	3,471
Oita	5,466	5,477	5,607	5,546	5,652	5,733	5,624	5,663	5,273	5,374	5,434	5,344
Miyazaki	4,059	3,953	4,009	3,942	4,009	4,066	4,107	4,176	4,189	4,154	4,051	3,883
Kagoshima	5,724	5,763	5,825	5,817	5,287	5,246	5,236	5,284	5,311	5,314	5,479	5,416
Okinawa	1,624	1,544	1,572	1,598	1,497	1,387	1,260	1,307	1,324	1,311	1,355	1,377
Total	296,157	293,481	292,379	290,759	289,091	280,517	276,952	274,039	267,499	263,175	267,009	265,964

Source: "Enforcement status of Water Pollution Control Law etc.," Water Environment Division, Environment Management Bureau, MOE, the Government of Japan.

5.03 Total research results of emission of water pollution substances (fiscal year 2013)

	Number of subjected business establishments	Effluent concentration (mg/L)		
		Average	Maximum	Minimum
BOD	21,142	7.10	2,900.00	0.00
COD	17,215	11.64	8,612.00	0.00
Cadmium and its compounds	609	0.01	1.20	0.00
Organic phosphorus compound	409	0.15	7.20	0.00
Hexavalent chromium compounds	946	0.05	2.00	0.00
Arsenic and its compounds	659	0.01	1.50	0.00
Total mercury	477	0.00	0.01	0.00
Alkyl mercury compounds	258	0.00	0.03	0.00
PCB	332	0.00	0.01	0.00
Trichloroethylene	539	0.01	0.30	0.00
Tetrachloroethylene	507	0.25	3.20	0.00

Source: "Comprehensive survey of emission of water pollution substance in fiscal year 2013," Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

5.04 Achievement status of the environmental quality standards on health issues. (non-achievement rate)

	FY2013									FY2012		
	Rivers		Lakes		Sea areas		Total			Total		
	a: Number of exceeding points	b: Number of monitoring points	a: Number of exceeding points	b: Number of monitoring points	a: Number of exceeding points	b: Number of monitoring points	a: Number of exceeding points	b: Number of monitoring points	a / b (%)	a: Number of exceeding points	b: Number of monitoring points	a / b (%)
Cadmium	4	3,082	0	266	0	823	4	4,171	0.10	5	4,163	0
Total cyanide	0	2,771	0	220	0	695	0	3,686	0	0	3,776	0
Lead	2	3,239	0	266	0	841	2	4,346	0.05	6	4,304	0.14
Hexavalent chromium	0	2,898	0	239	0	783	0	3,920	0	0	3,927	0
Arsenic	24	3,186	1	267	0	837	25	4,290	0.58	28	4,304	0.65
Total mercury	1	2,988	0	248	0	833	1	4,069	0	1	4,084	0
Alkyl mercury	0	651	0	68	0	175	0	894	0	0	963	0
PCB	0	1,743	0	163	0	431	0	2,337	0	0	2,393	0
Dichloromethane	0	2,707	0	218	0	565	0	3,490	0	0	3,475	0.00
Carbon tetrachloride	0	2,657	0	215	0	529	0	3,401	0	0	3,406	0
1,2-dichloroethane	1	2,686	0	218	0	562	1	3,466	0	1	3,480	0.03
1,1-dichloroethylene	0	2,696	0	218	0	562	0	3,476	0	0	3,487	0
cis-1,2-dichloroethylene	0	2,696	0	218	0	562	0	3,476	0	0	3,517	0
1,1,1-trichloroethane	0	2,715	0	223	0	562	0	3,500	0	0	3,504	0
1,1,2-trichloroethane	0	2,694	0	218	0	562	0	3,474	0	0	3,496	0
Trichloroethylene	0	2,795	0	229	0	576	0	3,600	0	0	3,581	0
Tetrachloroethylene	0	2,795	0	229	0	576	0	3,600	0	0	3,582	0
1,3-dichloropropene	0	2,685	0	225	0	529	0	3,439	0	0	3,431	0
Thiuram	0	2,641	0	221	0	506	0	3,368	0	0	3,366	0
Simazine	0	2,671	0	221	0	509	0	3,401	0	0	3,395	0
Thiobencarb	0	2,662	0	221	0	509	0	3,392	0	0	3,394	0
Benzene	0	2,652	0	217	0	571	0	3,440	0	0	3,435	0
Selenium	0	2,683	0	210	0	565	0	3,458	0	0	3,453	0
Nitrate nitrogen and nitrite nitrogen	2	3,011	0	341	0	722	2	4,074	0.05	3	4,220	0.07
Fluorine	14 (25)	2,685 (2,696)	0	234 (234)	-	(29)	14 (25)	2,919 (2,959)	0.48	15 (23)	2,944 (2,996)	0.51
Boron	1 (91)	2,555 (2,645)	0 (9)	224 (233)	-	(27)	1 (100)	2,779 (2,905)	0.04	1 (83)	2,865 (2,975)	0
1,4-dioxane	0	2,596	0	210	0	581	0	3,387	0	1	3,336	0.03
Total (total number of points)	49 <49>	3,947	1 <1>	405	0 <0>	1,057	44 <50>	5,409	0.81	56	5,378	1.04

Note

- Nitrate nitrogen and nitrite nitrogen, fluorine, and boron have been included in water quality measurements across the country since 1999.
- Environmental standards of fluorine and boron are not applicable to sea areas.

Measurement points of sea areas of these two items as described in () are for reference purpose only and are excluded from environmental standards as well as the total field.

Also, in rivers and lakes, a number of factors, not including exceeded points of environmental standards which are affected in the sea, are described. These points are described below () for reference.

Upper number in the total field: the number of points without overlaps.

Lower number in the total field: gross number of points counted as one when it detects multiple exceeding values beyond environmental standards. Non-achievement rates are calculated based on the number "44" which is equivalent to the number of points that detects multiple exceeding value beyond the environmental standards.

Source: "Results of water quality measurement in public waters FY2013," Environment Management Bureau, MOE, the Government of Japan

5.05 Transition of achievement results of environmental standards (BOD or COD)

	Rivers	Lakes	Sea areas	Tokyo Bay	Ise Bay	Osaka Bay	Seto Inland Sea*	Seto Inland Sea	Ariake Sea	Yatsushiro Sea	Total	Number of Water Areas
FY1974	51.3	41.9	70.7	44	47	67	-	67	88	75	54.9	1,927
1975	57.1	38.6	72.4	44	53	67	-	69	81	100	59.6	2,394
1976	57.6	40.7	76.4	67	47	67	-	72	88	86	60.6	2,586
1977	58.5	35.2	76.9	61	47	67	-	73	81	93	61.2	2,769
1978	59.5	37.6	75.3	61	53	67	-	75	94	93	61.7	2,814
1979	65.0	41.8	78.2	61	53	67	-	76	88	93	66.7	2,866
1980	67.2	41.6	79.8	61	53	67	-	72	88	79	68.7	2,913
1981	63.3	42.7	81.6	61	59	75	81	81	94	86	66.0	2,935
1982	65.3	41.7	81.3	61	41	67	83	81	94	93	67.5	2,982
1983	65.9	40.8	79.8	61	53	67	83	81	94	93	67.7	3,009
1984	63.4	42.7	81.3	61	47	67	81	81	94	100	66.1	3,044
1985	67.7	41.2	80.0	61	47	67	81	81	94	93	69.0	3,052
1986	68.6	40.0	81.2	63	59	67	79	78	94	100	69.9	3,061
1987	68.3	43.1	82.6	63	47	67	81	80	94	86	70.1	3,070
1988	73.3	44.2	82.7	63	65	67	81	81	88	93	73.9	3,083
1989	73.8	46.3	82.4	63	53	67	79	78	94	93	74.3	3,092
1990	73.6	44.2	77.6	63	59	67	75	75	94	100	73.1	3,103
1991	75.4	42.3	80.2	63	59	67	79	78	94	100	75.0	3,123
1992	75.4	44.6	80.9	74	53	67	79	78	88	100	75.2	3,149
1993	77.3	46.1	79.5	63	65	67	73	72	94	100	76.5	3,147
1994	67.9	40.6	79.2	63	47	67	77	76	94	100	68.9	3,170
1995	72.3	39.5	78.6	63	56	67	75	75	93	100	72.1	3,181
1996	73.6	42.0	81.1	63	56	67	79	78	93	100	73.7	3,231
1997	80.9	41.0	74.9	63	44	67	75	75	93	86	78.1	3,244
1998	81.0	40.9	73.6	63	44	67	75	76	80	79	77.9	3,258
1999	81.5	45.1	74.5	63	50	67	75	75	93	79	78.7	3,270
2000	82.4	42.3	75.3	63	56	67	77	76	87	43	79.4	3,274
2001	81.5	45.8	79.3	68	56	67	75	74	93	86	79.5	3,291
2002	85.1	43.8	76.9	68	44	67	69	69	87	86	81.7	3,300
2003	87.4	55.2	76.2	68	50	67	70	70	93	86	83.8	3,301
2004	89.8	50.9	75.5	63	50	67	67	67	80	71	85.2	3,313
2005	87.2	53.4	76.0	63	50	67	74	74	87	64	83.4	3,319
2006	91.2	55.6	74.5	68	44	67	71	70	87	64	86.3	3,334
2007	90.0	50.3	78.7	63	56	67	78	77	80	86	85.8	3,324
2008	92.3	53.0	76.4	74	56	67	72	72	93	79	87.4	3,331
2009	92.3	50.0	79.2	68	56	67	77	77	93	86	87.6	3,335
2010	92.5	53.2	78.3	63	56	67	81	80	87	79	87.8	3,337
2011	93.0	53.7	78.4	68	56	67	79	78	80	64	88.2	3,326
2012	93.1	55.3	79.8	63	56	67	79	78	87	86	88.6	3,330
2013	92.0	55.1	77.3	63	56	67	77	77	87	79	87.3	3,335

BOD is applied for Rivers, COD for Lakes and Sea Areas.

Achievement rate (%) = (number of Achievement water areas/ number of specified types of water areas) × 100

Mikawa Bay is included in Ise Bay.

Section with a gray background (Seto Inland Sea*) does not include Osaka Bay. Osaka Bay is included in Seto Inland Sea.

Source: "Measurement Results of Water Quality in Public Waters FY2013," Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

5.06 Status of water quality of enclosed sea area (annual average of COD)

		FY2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	average of the last 10 years
Tokyo Bay	Average (mg/L)	2.8	2.8	2.7	2.5	2.6	2.5	2.8	2.7	2.7	2.6	2.7 mg/L
	Category A	1.9	2.2	2.0	1.8	2.3	1.7	2.3	2.1	2.3	2.0	
	Category B	2.8	2.7	2.7	2.5	2.4	2.5	2.9	2.7	2.7	2.5	
	Category C	3.1	3.2	3.0	2.9	2.9	2.8	3.1	3.0	3.2	2.9	
	Total points of environment standards ㉑	49	49	49	49	49	49	49	49	49	49	
	Environment standards point to satisfy standard level ㉒	31	31	30	30	38	35	25	35	29	29	
Ise Bay (including Mikawa Bay)	㉒ / ㉑ (%)	63	63	61	61	78	71	51	71	59	59	3.1 mg/L
	Average (mg/L)	3.0	3.1	3.3	3.2	3.4	2.9	3.1	2.8	2.8	3.1	
	Category A	2.7	2.8	3.0	2.6	3.1	2.5	2.6	2.5	2.6	2.8	
	Category B	2.8	2.9	3.0	3.2	3.0	2.8	2.8	2.6	2.7	2.8	
	Category C	3.6	3.6	3.8	3.7	4.0	3.2	3.8	3.5	3.8	3.7	
	Total points of environment standards ㉑	32	32	32	32	32	32	32	32	32	32	
Osaka Bay	Environment standards point to satisfy standard level ㉒	14	14	13	17	15	17	17	16	17	19	2.8 mg/L
	㉒ / ㉑ (%)	44	44	41	53	47	53	53	50	53	59	
	Average (mg/L)	2.9	2.9	2.7	2.7	2.8	2.8	2.8	2.5	2.7	2.6	
	Category A	2.5	2.5	2.4	2.4	2.5	2.4	2.4	2.3	2.4	2.4	
	Category B	3.1	3.1	2.8	2.8	2.9	2.8	3.0	2.7	2.9	2.7	
	Category C	3.2	3.2	3.0	2.9	3.0	3.2	3.1	2.5	2.8	2.8	
Seto Inland Sea (excluding Osaka Bay)	Total points of environment standards ㉑	28	28	28	28	28	28	28	28	28	28	2.0 mg/L
	Environment standards point to satisfy standard level ㉒	14	13	18	16	15	15	16	18	15	17	
	㉒ / ㉑ (%)	50	46	64	57	54	54	57	64	54	61	
	Average (mg/L)	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	2.1	
	Category A	1.9	1.8	1.9	1.8	1.8	1.7	1.7	1.7	1.8	1.8	
	Category B	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.0	2.0	
Seto Inland Sea (including Osaka Bay)	Category C	2.8	3.0	3.0	2.8	2.7	2.8	2.7	2.7	2.7	2.5	2.0 mg/L
	Total points of environment standards ㉑	426	426	426	426	423	401	421	424	424	424	
	Environment standards point to satisfy standard level ㉒	260	294	277	322	297	310	323	323	334	325	
	㉒ / ㉑ (%)	61	69	65	76	70	77	77	76	79	77	
	Average (mg/L)	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.1	
	Category A	1.9	1.8	1.9	1.8	1.8	1.7	1.7	1.8	1.8	1.9	
Ariake Sea	Category B	2.4	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.0	2.0	2.0 mg/L
	Category C	2.9	3.1	3.0	2.8	2.8	2.8	2.8	2.7	2.6	2.5	
	Total points of environment standards ㉑	454	454	454	454	451	429	449	452	452	452	
	Environment standards point to satisfy standard level ㉒	274	307	295	338	312	325	339	340	349	342	
	㉒ / ㉑ (%)	60	68	65	74	69	76	76	75	77	76	
	Average (mg/L)	2.1	1.8	1.8	1.9	1.8	1.8	1.9	2.3	2.3	2.1	
Yatsushiro Sea	Category A	2.4	2.1	2.0	2.2	1.9	2.0	2.2	2.1	2.1	2.0	1.8 mg/L
	Category B	1.9	1.5	1.5	1.6	1.4	1.5	1.5	2.6	2.3	2.2	
	Category C	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.2	2.0	2.0	
	Total points of environment standards ㉑	34	34	34	34	34	34	34	34	34	34	
	Environment standards point to satisfy standard level ㉒	25	26	26	25	28	28	25	20	19	26	
	㉒ / ㉑ (%)	74	76	76	74	82	82	74	59	56	76	
Yatsushiro Sea	Average (mg/L)	1.8	2.0	1.9	1.9	1.6	1.7	1.8	1.9	1.9	1.9	1.8 mg/L
	Category A	1.6	1.8	1.8	1.7	1.5	1.6	1.7	1.8	1.6	1.7	
	Category B	1.9	2.1	2.0	2.0	1.6	1.8	1.9	2.1	1.9	1.9	
	Category C	2.5	3.1	2.8	2.6	2.1	2.6	2.5	2.4	2.3	2.4	
	Total points of environment standards ㉑	29	29	29	29	29	29	29	29	29	29	
	Environment standards point to satisfy standard level ㉒	22	19	20	26	26	27	26	21	27	23	
Yatsushiro Sea	㉒ / ㉑ (%)	76	66	69	90	90	93	90	72	93	79	

Note:

As calculation in the nationwide system is inaccurate, manually calculated values are used in this table.

Source: "Measurement Results of Water Quality in Public Waters FY2013," Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

5.07 Transition of status of water quality in the specified lakes (COD)

(Unit: mg / L)

	Category	Number of points	FY2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Kamafusa Dam	A A	1	2.7	2.7	2.6	2.2	2.3	2.5	2.6	2.5	2.4	2.5
			2.5	2.3	2.1	2.0	2.1	2.3	2.5	2.4	2.2	2.4
Hachirogata Regulating Pond	A	3	13.0	12.0	12.0	9.5	10.0	8.8	9.7	10.0	12.0	9.4
			7.1	7.5	8.8	7.5	6.8	6.8	7.5	7.2	8.5	6.3
Kasumigaura Lake	(Nishiura)	A	4	9.0	8.9	9.3	9.7	9.8	10.0	10.0	9.0	8.3
				7.8	7.6	8.2	8.5	8.4	9.3	8.2	8.1	7.5
	(Lake Kitaura)	A	2	9.3	8.1	9.4	9.8	10.0	11.0	12.0	9.1	9.2
				8.3	7.7	8.4	9.5	9.3	10.0	9.1	8.0	8.3
	(Hitachitonegawa)	A	2	8.0	7.9	8.9	9.6	9.7	10.0	9.2	8.3	7.2
				7.7	7.4	8.1	8.8	8.7	9.3	9.2	8.5	8.0
Lake Inba-numa	A	1	10.0	9.6	10.0	12.0	9.6	9.8	10.0	13.0	12.0	14
			9.4	8.1	8.6	11.0	8.5	8.6	8.9	11.0	11.0	12
Lake Teganuma	B	1	10.0	9.3	9.6	9.7	9.1	10.0	9.6	10.0	11.0	10
			8.9	8.2	7.9	8.4	8.2	8.6	8.9	9.3	9.6	9.5
Lake Suwa	A	3	6.2	7.3	7.4	6.2	6.8	6.0	6.7	4.9	6.7	7.5
			5.3	5.7	5.5	5.1	5.3	4.8	4.5	4.0	4.9	5.9
Lake Nojiri	A A	2	1.9	1.7	1.8	2.0	2.3	2.4	2.2	2.2	2.3	2.4
			1.6	1.6	1.6	1.6	1.9	2.1	1.9	1.9	2.0	2.0
Lake Biwa	(North lake)	A A	4	2.7	3.0	2.5	2.9	3.0	3.0	2.9	2.8	2.6
				2.5	2.6	2.4	2.6	2.7	2.7	2.6	2.5	2.6
	(South lake)	A A	4	4.2	4.2	3.7	4.3	4.3	4.7	5.0	4.5	5.3
				3.1	3.2	2.9	3.4	3.5	3.5	3.7	3.3	3.7
Lake Nakaumi	A	12	7.3	5.3	5.9	5.6	6.0	5.9	5.3	5.4	5.4	5.6
			4.8	4.2	4.5	4.5	4.4	4.1	3.8	3.4	3.6	4.0
Lake Shinji	A	5	5.4	4.9	4.8	6.2	6.1	5.5	5.9	6.1	6.5	5.7
			4.8	4.5	4.3	5.4	5.4	4.8	5.1	5.1	5.3	4.9
Lake Kojima	B	2	9.0	8.3	8.0	7.9	8.1	7.5	8.0	7.8	7.7	7.4
			7.7	7.5	7.4	7.0	7.3	7.1	7.6	7.6	6.9	6.7
Whole designated lakes		46	5.7	5.4	5.5	6.0	5.8	6.0	6.0	5.9	6.0	5.7

Note:

Upper row indicates 75% of the Environmental Quality Standards values for COD. Lower row for the annual average of the same.

75% values for COD refer to the highest among them. The annual COD average values are taken from the average values of all measuring points

Values for whole specified lakes are calculated from mean values of each lakes by averaging them. (Hachirogata Regulating Pond was excluded until FY2007. It was included in FY 2008.)

Hachirogata Regulating Pond was designated as a specified lake in December 2007.

The number of points describe the number of measuring points of the Environmental Quality Standards in each lakes of FY2013.

Source: "Measurement Results of Water Quality in Public Waters FY2013," Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

5.08 Transition of Achievement Status of Environmental Quality Standards for total nitrogen and total phosphorus in marine waters

	Total Nitrogen			Total Phosphorus			Total Nitrogen, Total Phosphorus		
	Number of type designation water area	Number of achievement water area	Achievement rate (%)	Number of type designation water area	Number of achievement water area	Achievement rate (%)	Number of type designation water area	Number of achievement water area	Achievement rate (%)
FY1995	9	2	22.2	9	4	44.4	9	2	22.2
1996	29	20	69.0	29	16	55.2	29	16	55.2
1997	49	33	67.3	49	32	65.3	49	27	55.1
1998	112	83	74.1	112	94	83.9	112	79	70.5
1999	124	96	77.4	124	107	86.3	124	90	72.6
2000	132	102	77.3	132	112	84.8	132	94	71.2
2001	145	128	88.3	145	127	87.6	145	119	82.1
2002	152	134	88.2	152	134	88.2	152	122	80.3
2003	152	135	88.8	152	135	88.8	152	128	84.2
2004	152	126	82.9	152	134	88.2	152	119	78.3
2005	152	131	86.2	152	134	88.2	152	125	82.2
2006	152	133	87.5	152	132	86.8	152	122	80.3
2007	152	141	92.8	152	133	87.5	152	125	82.2
2008	152	140	92.1	152	136	89.5	152	129	84.9
2009	151	143	94.7	151	128	84.8	151	123	81.5
2010	152	137	90.1	152	133	87.5	152	124	81.6
2011	151	142	94.0	151	132	87.4	151	128	84.8
2012	149	132	88.6	149	131	87.9	149	125	83.9
2013	149	141	94.6	149	137	91.9	149	132	88.6

It is an achievement water area only when both Total Nitrogen and Total Phosphorus satisfy the Environmental Quality Standards (EQS.)

No sea area is subjected to EQS for only Total Nitrogen nor for only Total Phosphorus.

Survey on Total Nitrogen and Total Phosphorus in Sea area began in 1995.

Source: "Measurement Results of Water Quality in Public Waters FY2013," Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

5.09 Transition of Achievement Status of Environment Standards of total nitrogen and total phosphorus in lakes

	Total Nitrogen			Total Phosphorus			Total Nitrogen, Total Phosphorus		
	Number of type designation water area	Number of achievement water area	Achievement rate (%)	Number of type designation water area	Number of achievement water area	Achievement rate (%)	Number of type designation water area	Number of achievement water area	Achievement rate (%)
FY1984	3	0	0.0	3	0	0.0	3	0	0.0
1985	7	1	14.3	17	9	52.9	17	8	47.1
1986	15	2	13.3	31	17	54.8	31	15	48.4
1987	17	2	11.8	37	16	43.2	37	15	40.5
1988	21	1	4.8	42	16	38.1	42	13	31.0
1989	22	3	13.6	45	17	37.8	45	16	35.6
1990	22	3	13.6	47	24	51.1	47	20	42.6
1991	22	1	4.5	48	17	35.4	48	14	29.2
1992	22	1	4.5	48	23	47.9	48	18	37.5
1993	22	1	4.5	48	19	39.6	48	15	31.3
1994	23	1	4.3	49	23	46.9	49	20	40.8
1995	23	1	4.3	50	24	48.0	50	18	36.0
1996	24	3	12.5	51	27	52.9	51	24	47.1
1997	25	3	12.0	54	25	46.3	54	23	42.6
1998	27	3	11.1	60	25	41.7	60	23	38.3
1999	27	2	7.4	64	30	46.9	64	27	42.2
2000	28	2	7.1	67	31	46.3	67	27	40.3
2001	32	2	6.3	79	35	44.3	79	30	38.0
2002	32	3	9.4	81	34	42.0	81	28	34.6
2003	32	2	6.3	93	47	50.5	93	40	43.0
2004	35	3	8.6	98	50	51.0	98	43	43.9
2005	35	4	11.4	103	54	52.4	103	48	46.6
2006	35	3	8.6	109	57	52.3	109	50	45.9
2007	35	4	11.4	110	57	51.8	110	51	46.4
2008	37	3	8.1	112	64	57.1	112	56	50.0
2009	39	6	15.4	115	67	58.3	115	60	52.2
2010	38	5	13.2	117	62	53.0	117	59	50.4
2011	39	5	12.8	119	61	51.3	119	57	47.9
2012	39	5	12.8	119	65	54.6	119	61	51.3
2013	39	5	12.8	119	62	52.1	119	60	50.4

Note:

It is an achievement water area when Total Nitrogen fulfills environment standards.

It is an achievement water area when Total Phosphorus fulfills environment standards.

In regard to achievement on environment standards for Total Nitrogen and Total Phosphorus,

For the water area where both Total Nitrogen and Total Phosphorus environment standards are applicable, it is an achievement water area only when both Total Nitrogen and Total Phosphorus fulfills environment standards.

For the water area where only Total Phosphorus environment standards are applicable, it is an achievement water area when Total Phosphorus fulfills the environment standards.

No lake area is subjected to Total Nitrogen only environment standards.

Survey on Total Nitrogen and Total Phosphorus in Lake began in 1984.

Source: "Measurement Results of Water Quality in Public Waters FY2013," Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

5.10 Transition of pollutant load generation in designated pollution control areas and pollutant load reduction target volumes

① Transition of pollutant load generation in the total pollutant load control areas and the pollutant load reduction target for COD

		Performance Quantity of the Pollutant Load							(Unit: t/day)
		FY1979	1984	1989	1994	1999	2004	2009	Reduction Target...
									FY2014
Tokyo Bay	Domestic Wastewater	324	290	243	197	167	144	124	119
	Industrial Wastewater	115	83	76	59	52	42	36	36
	Others	38	40	36	30	28	25	23	22
	Sub Total	477	413	355	286	247	211	183	177
Ise Bay	Domestic Wastewater	151	150	141	134	118	99	81	71
	Industrial Wastewater	119	101	97	83	76	65	57	56
	Others	37	35	34	29	27	22	20	19
	Sub Total	307	286	272	246	221	186	158	146
Seto Inland Sea	Domestic Wastewater	488	444	400	365	319	261	221	201
	Industrial Wastewater	429	367	356	309	286	245	193	215
	Others	95	89	82	72	67	55	54	56
	Sub Total	1,012	900	838	746	672	561	468	472
Total	Domestic Wastewater	963	884	784	696	604	504	426	391
	Industrial Wastewater	663	551	529	451	414	352	286	307
	Others	170	164	152	131	122	102	97	97
	Sub Total	1,796	1,599	1,465	1,278	1,140	958	809	795

The pollutant load reduction target volume for COD during FY2014 was established at the seventh stage of total pollutant load control.

Seven stages of total pollutant load control were implemented. The first stage by the end of fiscal year 1984, the second 1989, the third 1994, the fourth 1999, the fifth 2004, the sixth 2009 and the seventh 2014.

Source: materials by Office for Environmental management of Enclosed Coastal Seas, Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

② Transition of pollutant load generation in the total pollutant load control areas and the pollutant load reduction target for Nitrogen content

		Performance Quantity of the Pollutant Load							(Unit: t/day)
		FY1979	1984	1989	1994	1999	2004	2009	Reduction Target...
									FY2014
Tokyo Bay	Domestic Wastewater	201	187	183	175	164	136	122	118
	Industrial Wastewater	96	82	72	50	41	29	26	25
	Others	67	64	64	55	49	43	37	38
	Sub Total	364	333	319	280	254	208	185	181
Ise Bay	Domestic Wastewater	69	73	64	64	60	52	47	44
	Industrial Wastewater	52	49	42	39	29	26	22	22
	Others	66	63	62	58	54	51	49	49
	Sub Total	188	185	168	161	143	129	118	115
Seto Inland Sea	Domestic Wastewater	189	188	201	205	184	159	143	138
	Industrial Wastewater	249	225	223	259	191	117	95	111
	Others	228	226	232	233	221	200	195	191
	Sub Total	666	639	656	697	596	476	433	440
Total	Domestic Wastewater	459	448	448	444	408	347	312	300
	Industrial Wastewater	397	356	337	348	261	172	143	158
	Others	361	353	358	346	324	294	281	278
	Sub Total	1,218	1,157	1,143	1,138	993	813	736	736

The pollutant load reduction target volume for Nitrogen content during FY2014 was established at the seventh stage of total pollutant load control.

Total pollutant load control for Nitrogen content were implemented at the fifth stage. The fifth stage was in 2004, the sixth 2009 and the seventh 2014.

The Pollutant Load generation prior to 1994 were collected and calculated from concerned prefectural data.

Source: materials by Office for Environmental management of Enclosed Coastal Seas, Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

③ Transition of pollutant load generation in the total pollutant load control areas and the pollutant load reduction target for phosphorus

		Performance Quantity of the Pollutant Load							(Unit: t/day)
		FY1979	1984	1989	1994	1999	2004	2009	Reduction Target...
									FY2014
Tokyo Bay	Domestic Wastewater	24.9	17.6	15.1	14.2	13.5	10.4	9.0	8.5
	Industrial Wastewater	9.5	6.4	5.2	4.3	3.5	1.8	1.4	1.4
	Others	6.8	6.2	5.6	4.5	4.1	3.1	2.5	2.2
	Sub Total	41.2	30.2	25.9	23.0	21.1	15.3	12.9	12.1
Ise Bay	Domestic Wastewater	9.8	6.7	6.3	6.4	6.5	5.1	4.3	3.9
	Industrial Wastewater	7.0	6.5	5.3	4.8	4.1	2.9	2.5	2.5
	Others	7.6	7.2	7.2	6.1	4.6	2.8	2.2	2.3
	Sub Total	24.4	20.4	18.8	17.3	15.2	10.8	9.0	8.7
Seto Inland Sea	Domestic Wastewater	29.6	19.1	16.6	16.8	16.0	12.4	11.4	10.7
	Industrial Wastewater	20.4	16.2	14.2	13.3	13.2	8.0	6.5	7.0
	Others	12.9	11.7	11.9	11.0	11.2	10.2	10.1	9.7
	Sub Total	62.9	47.0	42.7	41.1	40.4	30.6	28.0	27.4
Total	Domestic Wastewater	64.3	43.4	38.0	37.4	36.0	27.9	24.7	23.1
	Industrial Wastewater	36.9	29.1	24.7	22.4	20.8	12.7	10.4	10.9
	Others	27.3	25.1	24.7	21.6	19.9	16.1	14.8	14.2
	Sub Total	128.5	97.6	87.4	81.4	76.7	56.7	49.9	48.2

The pollutant load reduction target volume for Phosphorus content during FY2014 was established at the seventh stage of total pollutant load control.

Total pollutant load control for Phosphorus content were implemented at the fifth stage. The fifth stage was aimed at 2004, the sixth 2009 and the seventh 2014.

The Pollutant Load generation prior to 1994 were collected and calculated from concerned prefectural data.

Source: materials by Office for Environmental management of Enclosed Coastal Seas, Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

5.11 Number of occurrences of Red Tides in Seto Inland Sea

	Confirmed cases	Confirmed cases with damage to fisheries
FY1971	136	39
1972	164	23
1973	210	18
1974	269	17
1975	255	29
1976	299	18
1977	196	27
1978	151	15
1979	172	17
1980	188	8
1981	171	8
1982	166	18
1983	165	13
1984	130	5
1985	170	8
1986	162	14
1987	107	12
1988	117	10
1989	124	6
1990	108	7
1991	107	5
1992	100	6
1993	105	6
1994	96	2
1995	90	10
1996	89	12
1997	135	11
1998	105	11
1999	112	7
2000	106	10
2001	97	7
2002	89	8
2003	106	8
2004	118	13
2005	115	7
2006	94	11
2007	99	9
2008	116	19
2009	104	7
2010	91	9
2011	89	11
2012	116	18
2013	83	9

Source: "Red tides in Seto Inland Sea" Setonaikai Fisheries Coordination Office, Ministry of Agriculture, Forestry and Fisheries

5.12 Licensed landfill area of Seto inland sea

	Area (ha)
FY1965	2,197.2
1966	479.9
1967	1,230.0
1968	1,010.3
1969	3,595.2
1970	1,464.9
1971 ~ 1973	6,391.5
1974	390.3
1975	546.9
1976	266.1
1977	1,040.5
1978	991.3
1979	271.6
1980	534.1
1981	300.9
1982	110.7
1983	427.9
1984	206.9
1985	198.2
1986	266.8
1987	1,691.5
1988	399.9
1989	379.3
1990	265.2
1991	173.7
1992	147.8
1993	244.3
1994	462.0
1995	565.7
1996	315.7
1997	462.3
1998	465.3
1999	1,016.0
2000	146.3
2001	398.2
2002	35.2
2003	49.5
2004	43.9
2005	76.5
2006	17.8
2007	37.6
2008	94.4
2009	14.9
2010	33.4
2011	18.4
2012	1.8
2013	68.4

Note:

1965 ~ 1970 run from 1st January to 31st December, after 1974 they run from previous year 2nd November to 1st November.

1971 ~ 1973 runs from 1st January 1971 to 1st November 1973.

Source: Materials by Office for Environmental Management of Enclosed Coastal Seas, Water Environment Division, Environment Management Bureau, MOE, the Government of Japan

5.13 Amount of sea gravel in coastal prefectures in Seto Inland Sea

	Amount of sea gravel (thousand/m ³)
FY1968	6,052
1969	12,745
1970	21,966
1971	17,750
1972	17,301
1973	22,829
1974	21,975
1975	21,245
1976	20,187
1977	23,379
1978	28,384
1979	30,017
1980	29,314
1981	26,463
1982	25,828
1983	25,021
1984	23,274
1985	24,093
1986	24,356
1987	29,719
1988	27,056
1989	25,512
1990	25,491
1991	24,254
1992	24,904
1993	23,179
1994	23,958
1995	25,152
1996	23,913
1997	20,396
1998	19,904
1999	19,282
2000	17,397
2001	14,938
2002	13,123
2003	9,881
2004	9,435
2005	7,072
2006	4,628
2007	5,160
2008	4,931
2009	4,309
2010	3,687
2011	3,420
2012	3,640
2013	4,302

Including amount of sea gravel on outside the scope of Law concerning Special Measures for Conservation of the Environment of the Seto Inland Sea.

Source: "Schedules of status report of gravel extraction work," Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism.

**5.14 Number of excess cases of confirmed groundwater contamination incidents by determined fiscal year
(as of the end of fiscal year 2013)**

	Total	Number of confirmed contamination incidents			
		VOC	Heavy Metals	Nitric acid/nitrous acid	Complex contamination
~ FY1983	76 (34)	64 (26)	9 (6)	2 (1)	1 (1)
1984	55 (27)	50 (25)	4 (2)	0 (0)	1 (0)
1985	75 (35)	75 (35)	0 (0)	0 (0)	0 (0)
1986	46 (22)	46 (22)	0 (0)	0 (0)	0 (0)
1987	60 (26)	54 (24)	2 (0)	2 (2)	2 (0)
1988	98 (45)	94 (43)	0 (0)	2 (0)	2 (2)
1989	237 (132)	215 (116)	16 (13)	3 (1)	3 (2)
1990	207 (103)	178 (86)	21 (12)	4 (2)	4 (3)
1991	145 (68)	121 (57)	18 (8)	5 (2)	1 (1)
1992	116 (57)	91 (41)	16 (9)	4 (4)	5 (3)
1993	140 (61)	59 (32)	55 (21)	24 (6)	2 (2)
1994	148 (88)	63 (39)	56 (35)	29 (14)	0 (0)
1995	165 (77)	62 (29)	45 (25)	58 (23)	0 (0)
1996	165 (90)	53 (25)	54 (35)	58 (30)	0 (0)
1997	168 (96)	42 (23)	56 (29)	83 (41)	4 (3)
1998	285 (166)	137 (92)	40 (24)	102 (47)	6 (3)
1999	344 (226)	93 (62)	72 (39)	175 (124)	4 (1)
2000	428 (322)	87 (57)	107 (77)	224 (180)	10 (8)
2001	386 (287)	68 (42)	79 (60)	230 (180)	9 (5)
2002	393 (287)	67 (41)	81 (54)	239 (187)	6 (5)
2003	455 (324)	74 (51)	85 (54)	288 (213)	8 (6)
2004	411 (294)	89 (48)	110 (80)	204 (160)	8 (6)
2005	367 (258)	100 (56)	113 (81)	145 (116)	9 (5)
2006	355 (269)	94 (50)	106 (83)	139 (124)	16 (12)
2007	350 (281)	79 (43)	126 (107)	139 (126)	6 (5)
2008	315 (261)	51 (33)	118 (100)	134 (119)	12 (9)
2009	295 (249)	62 (41)	98 (82)	129 (120)	6 (6)
2010	271 (241)	41 (29)	97 (85)	130 (124)	3 (3)
2011	256 (244)	46 (40)	96 (91)	108 (107)	6 (6)
2012	241 (232)	35 (32)	112 (108)	90 (88)	4 (2)
2013	255 (252)	44 (42)	106 (105)	103 (103)	2 (2)
Parameter	7,325 (5,154)	2,434 (1,382)	1,898 (1,425)	2,853 (2,244)	140 (103)

Parenthesized is the combined numbers of "excess cases" and "temporary achievement cases" as of the end of FY2013.

Source: "Test result of groundwater quality measure in FY2013," Environment Management Bureau, MOE, the Government of Japan

5.15 Itemized breakdown of groundwater contamination cases (as of the end of fiscal year 2013)

Item category	Item name	Number of cases					
		Excess cases		Temporary achievement cases	Improvement case	Non-survey case	
		Item that exceeds	Item that does not exceed currently (Note 2)				
VOC	Dichloromethane	56	18	12	7	16	1
	Carbon tetrachloride	107	31	22	13	39	2
	Vinyl chloride monomer	167	108	22	28	6	3
	1,2-dichloroethane	85	29	21	11	19	5
	1,1-dichloroethylene	259	35	106	46	64	8
	1,2-dichloroethylene	328	173	60	67	22	6
	1,1,1-trichloroethane	122	13	24	21	56	8
	1,1,2-trichloroethane	40	12	14	8	6	0
	Trichloroethylene	1,163	359	172	212	331	89
	Tetrachloroethylene	1,395	549	68	249	409	120
	1,3-dichloropropene	0	0	0	0	0	0
Heavy metals	Benzene	289	99	10	26	140	14
	1,4-dioxane	12	9	1	2	0	0
	Cadmium	16	9	1	1	5	0
	Total cyanide	43	22	5	4	11	1
	Lead	287	76	28	47	106	30
	Hexavalent chromium	65	27	3	17	15	3
	Arsenic	1,146	770	23	117	126	110
	Total mercury	120	48	6	17	33	16
	Alkyl mercury	0	0	0	0	0	0
	PCB	10	4	1	0	4	1
	Thiuram	0	0	0	0	0	0
	Simazine	0	0	0	0	0	0
	Thiobencarb	0	0	0	0	0	0
	Selenium	21	12	3	1	3	2
	Fluorine	475	322	15	60	40	38
	Boron	193	126	11	19	18	19
Nitrate nitrogen and nitrite nitrogen		2,853	1,761	0	483	432	177
Parameter		7,325	3,972	1,182	1,611	560	

Note:

Contamination may happen in multiple items in one case, and the total may not foot the parameter.

"Item that does not exceed currently" refers to the case where contamination happened multiple times in the past and currently EQS is satisfied but in other times EQS is not satisfied.

Source: "Results of the FY 2013 Water Quality Survey of underground water," Environmental Management Bureau, MOE, the Government of Japan

5.16 Results of water quality survey of groundwater

Research group	Research item	General monitoring survey			Survey of contaminated wells and vicinities		Continue surveyance or Regular monitoring survey		Remark	
		Number of survey	Exceeding number	Exceeding rate (%)	Number of survey	Exceeding number	Number of survey	Exceeding rate	Standard type	Standard value
Cadmium	1997	2,094	0	0	41	0	748	0	Environmental standards	0.01mg/L or less
	1998	3,102	0	0	50	0	340	0		
	1999	3,152	1	0.0	30	0	333	0		
	2000	2,997	0	0	35	0	252	0		
	2001	3,003	0	0	45	0	237	0		
	2002	3,242	0	0	25	0	298	0		
	2003	3,591	0	0	31	0	308	0		
	2004	3,247	0	0	73	0	246	0		
	2005	3,092	0	0	56	0	216	0		
	2006	3,166	0	0	27	0	117	0		
	2007	3,160	0	0	56	0	154	0		
	2008	2,871	0	0	48	0	230	0		
	2009	3,185	0	0	24	0	79	0		
	2010	2,996	0	0	52	0	54	0		
	2011	2,910	2	0.0	76	0	31	1		
Total cyanide	2012	2,899	0	0	24	0	49	2	Environmental standards	Should not be detected
	2013	2,904	0	0	24	0	44	2		
	1997	1,909	0	0	45	0	715	0		
	1998	2,659	0	0	42	0	282	0		
	1999	2,786	0	0	25	0	297	0		
	2000	2,616	0	0	26	0	230	0		
	2001	2,660	0	0	47	0	225	0		
	2002	2,639	0	0	28	2	284	0		
	2003	2,870	0	0	50	2	300	0		
	2004	2,723	0	0	46	0	236	0		
	2005	2,830	0	0	28	0	218	1		
	2006	2,904	0	0	40	0	120	1		
	2007	2,737	0	0	44	0	155	0		
	2008	2,508	0	0	40	0	234	0		
	2009	2,904	0	0	21	0	101	0		
Lead	2010	2,774	0	0	36	0	73	0	Environmental standards	0.01mg/L or less
	2011	2,713	0	0	30	0	54	0		
	2012	2,642	0	0	27	0	60	1		
	2013	2,736	0	0	26	0	55	0		
	1997	2,456	8	0.3	71	6	771	8		
	1998	3,312	8	0.2	90	1	374	5		
	1999	3,198	15	0.5	84	0	374	7		
	2000	3,360	10	0.3	82	3	298	13		
	2001	3,382	13	0.4	110	4	275	6		
	2002	3,484	8	0.2	149	7	346	8		
	2003	3,689	21	0.6	164	6	349	7		
	2004	3,566	14	0.4	145	2	344	11		
	2005	3,374	15	0.4	162	6	306	10		
	2006	3,484	8	0.2	130	2	220	10		
	2007	3,466	12	0.3	296	4	283	8		
Hexavalent chromium	2008	3,193	10	0.3	232	7	360	10	Environmental standards	0.05mg/L or less
	2009	3,219	11	0.3	115	1	189	9		
	2010	3,041	12	0.4	426	14	173	9		
	2011	2,975	13	0.4	282	4	149	16		
	2012	2,962	12	0.4	138	2	178	15		
	2013	2,964	9	0.3	215	4	205	13		
	1997	2,290	1	0.0	45	0	781	12		
	1998	3,232	0	0	60	0	403	11		
	1999	3,129	0	0	25	0	376	11		
	2000	3,187	1	0.0	49	2	285	9		
	2001	3,175	0	0	38	2	264	11		
	2002	3,308	0	0	25	0	325	11		
	2003	3,562	1	0.0	60	1	334	10		
	2004	3,420	0	0	49	0	291	15		
	2005	3,286	0	0	58	0	267	14		
Arsenic	2006	3,387	0	0	58	1	173	15	Environmental standards	0.01mg/L or less
	2007	3,388	1	0.0	74	0	208	15		
	2008	3,116	0	0	68	1	284	15		
	2009	3,189	0	0	48	27	140	14		
	2010	3,015	0	0	43	0	124	21		
	2011	2,882	0	0	33	0	117	22		
	2012	2,849	0	0	50	0	129	20		
	2013	2,869	0	0	43	0	139	23		
	1997	2,564	52	2.0	264	53	1,059	192		
	1998	3,424	45	1.3	275	32	688	234		
	1999	3,310	45	1.4	186	29	695	223		
	2000	3,386	65	1.9	380	83	613	238		
	2001	3,422	44	1.3	284	108	626	246		
	2002	3,520	53	1.5	255	49	720	261		
	2003	3,760	54	1.4	217	32	727	270		
	2004	3,666	74	2.0	441	138	727	285		
Total mercury	2005	3,457	61	1.8	411	100	834	293	Environmental standards	0.0005mg/L or less
	2006	3,663	78	2.1	318	66	786	301		
	2007	3,591	73	2.0	326	71	693	305		
	2008	3,239	77	2.4	394	107	826	315		
	2009	3,338	63	1.9	236	43	568	292		
	2010	3,088	66	2.1	589	78	580	300		
	2011	3,038	57	1.9	440	85	582	308		
	2012	3,017	68	2.3	331	67	600	313		
	2013	3,020	63	2.1	383	47	647	332		
	1997	2,102	1	0.0	53	0	809	15		
	1998	2,981	1	0.0	68	5	413	15		
	1999	3,084	0	0	55	2	383	16		
	2000	2,833	2	0.1	43	2	302	16		
	2001	2,907	3	0.1	270	34	300	18		
	2002	3,253	0	0	44	0	351	15		
	2003	3,318	1	0.0	60	0	353	9		
	2004	3,235	5	0.2	63	4	289	12		
	2005	3,120	3	0.1	108	6	256	14		
	2006	3,234	3	0.1	35	3	157	14		
	2007	3,233	5	0.2	73	8	197	13		
	2008	2,944	2	0.1	71	5	275	25		
	2009	3,154	2	0.1	39	4	145	23		
	2010	2,999	0	0	45	2	119	24		
	2011	2,908	0	0	75	3	107	21		
	2012	2,886	1	0.0	46	5	117	19		
	2013	2,900	1	0.0	68	4	113	20		

5.16 Results of water quality survey of groundwater

Research group	Research item	General monitoring survey			Survey of contaminated wells and vicinities		Continue surveyance or Regular monitoring survey		Remark	
		Number of survey	Exceeding number	Exceeding rate (%)	Number of survey	Exceeding number	Number of survey	Exceeding rate	Standard type	Standard value
Alkyl mercury	1997	748	0	0	38	0	513	0	Environmental standards	Should not be detected
	1998	1,315	0	0	21	0	121	0		
	1999	1,278	0	0	37	0	85	0		
	2000	1,048	0	0	26	0	57	0		
	2001	1,075	0	0	43	0	61	0		
	2002	1,020	0	0	25	0	108	0		
	2003	931	0	0	24	0	106	0		
	2004	993	0	0	33	0	52	0		
	2005	1,008	0	0	77	0	34	0		
	2006	762	0	0	21	0	38	0		
	2007	683	0	0	22	0	50	0		
	2008	545	0	0	22	0	53	0		
	2009	523	0	0	30	0	43	0		
	2010	500	0	0	35	0	38	0		
	2011	692	0	0	22	0	38	0		
P C B	2012	450	0	0	26	0	41	0	Environmental standards	Should not be detected
	2013	642	0	0	25	0	44	0		
	1997	1,096	0	0	21	0	548	0		
	1998	1,852	0	0	21	0	141	0		
	1999	1,930	0	0	25	0	132	0		
	2000	1,818	0	0	26	0	113	0		
	2001	2,044	0	0	26	0	125	0		
	2002	1,738	0	0	25	0	164	0		
	2003	1,816	0	0	24	0	148	0		
	2004	1,899	0	0	26	0	117	0		
	2005	1,883	0	0	30	0	61	0		
	2006	1,830	0	0	21	0	53	0		
	2007	1,732	0	0	21	0	45	0		
	2008	1,685	0	0	48	0	55	0		
	2009	2,082	0	0	21	0	30	0		
Trichlorethylene	2010	2,005	0	0	35	0	32	0	Environmental standards	0.03mg/L or less
	2011	1,946	0	0	23	0	15	0		
	2012	1,969	0	0	22	0	20	0		
	2013	2,057	2	0.1	40	0	16	0		
	1997	3,692	5	0.1	617	19	3,912	279		
	1998	4,492	17	0.4	1,251	34	3,301	242		
	1999	4,455	15	0.3	916	37	3,338	267		
	2000	4,225	22	0.5	846	47	3,054	292		
	2001	4,371	11	0.3	586	14	3,070	301		
	2002	4,414	10	0.2	436	21	2,954	286		
	2003	4,473	16	0.4	457	22	3,001	265		
	2004	4,234	18	0.4	457	19	2,922	243		
	2005	3,968	11	0.3	370	21	2,704	263		
	2006	3,911	6	0.2	346	15	2,490	260		
	2007	3,948	7	0.2	314	13	2,331	231		
Tetrachlorethylene	2008	3,658	3	0.1	431	22	2,470	237	Environmental standards	0.01mg/L or less
	2009	3,676	2	0.1	411	14	2,220	226		
	2010	3,366	1	0.0	464	15	2,123	215		
	2011	3,285	1	0.0	387	13	2,049	182		
	2012	3,245	2	0.1	468	8	2,021	171		
	2013	3,235	4	0.1	413	9	1,997	157		
	1997	3,692	8	0.2	635	40	3,965	696		
	1998	4,492	28	0.6	1,255	73	3,362	645		
	1999	4,451	23	0.5	921	49	3,376	589		
	2000	4,225	17	0.4	825	15	3,104	653		
	2001	4,374	10	0.2	620	39	3,072	624		
	2002	4,414	7	0.2	435	31	2,945	595		
	2003	4,472	21	0.5	431	22	2,992	586		
	2004	4,248	22	0.5	477	39	2,950	556		
	2005	3,961	6	0.2	328	39	2,710	559		
1,1,1-trichloroethane	2006	3,922	13	0.3	346	21	2,509	537	Environmental standards	1mg/L or less
	2007	3,938	12	0.3	323	21	2,327	543		
	2008	3,680	9	0.2	411	24	2,472	520		
	2009	3,679	5	0.1	405	30	2,186	513		
	2010	3,363	4	0.1	453	8	2,083	473		
	2011	3,283	7	0.2	393	18	2,004	448		
	2012	3,242	3	0.1	430	26	1,967	414		
	2013	3,233	7	0.2	390	17	1,945	424		
	1997	3,603	0	0	612	0	3,636	0		
	1998	4,436	1	0.0	1,189	0	3,123	0		
	1999	4,362	0	0	879	0	2,987	3		
	2000	4,219	0	0	808	0	2,539	2		
	2001	4,290	0	0	564	0	2,586	3		
	2002	4,270	0	0	377	0	2,379	2		
	2003	4,312	0	0	359	0	2,417	2		
	2004	3,990	0	0	389	0	2,320	3		
	2005	3,739	0	0	207	0	2,123	1		
	2006	3,717	0	0	187	0	1,820	0		
	2007	3,635	0	0	193	0	1,631	0		
	2008	3,473	0	0	172	0	1,608	0		
	2009	3,430	0	0	186	0	1,443	0		
	2010	3,222	0	0	309	0	1,355	0		
	2011	3,189	0	0	239	0	1,212	0		
	2012	3,150	0	0	216	0	1,196	0		
	2013	3,136	0	0	207	0	1,162	0		

5.16 Results of water quality survey of groundwater

Research group	Research item	General monitoring survey			Survey of contaminated wells and vicinities		Continue surveyance or Regular monitoring survey		Remark	
		Number of survey	Exceeding number	Exceeding rate (%)	Number of survey	Exceeding number	Number of survey	Exceeding rate	Standard type	Standard value
Carbon tetrachloride	1997	2,828	2	0.1	253	2	1,843	22	Environmental standards	0.002mg/L or less
	1998	3,631	2	0.1	388	2	1,376	24		
	1999	3,695	3	0.1	372	0	1,413	21		
	2000	3,675	2	0.1	291	3	1,272	24		
	2001	3,700	0	0	313	2	1,341	22		
	2002	3,814	3	0.1	232	5	1,323	22		
	2003	3,824	0	0	146	0	1,318	22		
	2004	3,661	4	0.1	221	2	1,287	23		
	2005	3,554	3	0.1	106	1	1,017	26		
	2006	3,628	3	0.1	103	4	888	23		
	2007	3,536	0	0	96	0	798	25		
	2008	3,379	0	0	72	2	799	26		
	2009	3,340	1	0.0	102	1	702	24		
	2010	3,120	1	0.0	193	1	653	29		
Dichloromethane	2011	3,036	0	0	153	2	567	21	Environmental standards	0.02mg/L or less
	2012	3,005	0	0	170	3	556	19		
	2013	2,986	1	0.0	182	3	513	16		
	1997	2,805	2	0.1	124	0	1,167	0		
	1998	3,729	1	0.0	349	0	768	0		
	1999	3,740	0	0	223	0	770	3		
	2000	3,534	0	0	229	0	744	0		
	2001	3,548	1	0.0	280	0	802	0		
	2002	3,635	1	0.0	146	0	835	0		
	2003	3,865	1	0.0	169	1	890	0		
	2004	3,535	0	0	141	0	877	0		
	2005	3,381	0	0	52	0	730	1		
	2006	3,455	0	0	97	1	627	1		
	2007	3,370	0	0	88	0	571	0		
1,2-dichloroethane	2008	3,276	0	0	72	0	557	0	Environmental standards	0.004mg/L or less
	2009	3,349	0	0	98	0	486	0		
	2010	3,178	0	0	141	0	467	0		
	2011	3,121	0	0	145	0	398	0		
	2012	3,077	0	0	138	0	389	0		
	2013	3,087	0	0	106	0	360	0		
	1997	2,762	1	0.0	123	0	1,295	2		
	1998	3,580	0	0	328	9	867	5		
	1999	3,687	1	0.0	254	0	1,030	7		
	2000	3,301	1	0	296	6	959	6		
	2001	3,316	0	0	345	1	1,055	12		
	2002	3,360	2	0.1	155	0	1,094	11		
	2003	3,555	0	0	148	0	1,129	9		
	2004	3,267	0	0	172	0	1,104	9		
1,1-dichloroethylene	2005	3,136	0	0	55	0	1,102	7	Environmental standards	0.02mg/L or less
	2006	3,300	1	0.0	120	1	872	8		
	2007	3,198	0	0	112	0	690	10		
	2008	3,120	0	0	88	0	650	5		
	2009	3,203	0	0	105	0	580	7		
	2010	3,025	0	0	177	1	597	4		
	2011	2,984	0	0	145	0	535	3		
	2012	2,953	0	0	178	0	516	5		
	2013	2,985	1	0.0	182	3	513	16		
	1997	2,862	0	0	351	3	2,010	24		
	1998	3,594	2	0.1	905	9	1,685	26		
	1999	3,727	1	0.0	729	3	1,804	35		
	2000	3,650	2	0.1	702	11	1,831	37		
	2001	3,668	0	0	535	1	1,964	41		
1,1,2-trichloroethane	2002	3,771	1	0.0	244	0	1,967	40	Environmental standards	0.006mg/L or less
	2003	3,846	0	0	322	2	2,032	38		
	2004	3,744	2	0.1	404	2	2,077	39		
	2005	3,584	1	0.0	264	4	2,026	46		
	2006	3,651	0	0	215	0	1,890	33		
	2007	3,567	0	0	255	1	1,843	30		
	2008	3,337	0	0	340	0	1,885	31		
	2009	3,306	0	0	347	0	1,804	2		
	2010	3,078	0	0	468	0	1,764	4		
	2011	3,037	0	0	342	0	1,750	3		
	2012	3,001	0	0	419	0	1,721	3		
	2013	2,979	0	0	378	0	1,689	2		
	1997	2,836	0	0	123	0	1,264	0		
	1998	3,574	0	0	174	0	854	0		
1,3-dichloropropene	1999	3,679	0	0	239	0	989	6	Environmental standards	0.002mg/L or less
	2000	3,286	0	0	278	2	962	6		
	2001	3,308	0	0	307	1	1,052	4		
	2002	3,359	0	0	146	0	1,084	5		
	2003	3,590	0	0	148	0	1,120	3		
	2004	3,259	1	0.0	191	1	1,107	2		
	2005	3,127	0	0	74	0	1,014	4		
	2006	3,240	1	0.0	159	2	773	4		
	2007	3,136	1	0.0	118	0	715	9		
	2008	2,987	0	0	65	2	659	3		
	2009	3,170	1	0.0	123	0	583	1		
	2010	2,938	0	0	175	0	599	1		
	2011	2,878	0	0	153	0	522	0		
	2012	2,851	1	0.0	183	0	529	1		
	2013	2,876	0	0	121	0	509	0		
1,3-dichloropropene	1997	2,586	0	0	93	0	785	0	Environmental standards	0.002mg/L or less
	1998	3,179	0	0	98	0	368	0		
	1999	3,181	0	0	178	0	385	0		
	2000	3,039	0	0	162	0	372	0		
	2001	2,898	0	0	81	0	412	0		
	2002	3,085	0	0	95	0	454	0		
	2003	3,082	0	0	115	0	509	0		
	2004	3,043	0	0	103	0	520	0		
	2005	2,886	0	0	41	0	437	0		
	2006	2,940	0	0	71	0	347	0		
	2007	2,883	0	0	78	0	294	0		
	2008	2,799	0	0	46	0	317	0		
	2009	2,922	0	0	89	0	261	0		
	2010	2,773	0	0	124	0	270	0		
	2011	2,661	0	0	93	0	216	0		
	2012	2,646	0	0	116	0	220	0		
	2013	2,645	0	0	30	0	210	0		

5.16 Results of water quality survey of groundwater

Research group	Research item	General monitoring survey			Survey of contaminated wells and vicinities		Continue surveyance or Regular monitoring survey		Remark	
		Number of survey	Exceeding number	Exceeding rate (%)	Number of survey	Exceeding number	Number of survey	Exceeding rate	Standard type	Standard value
Thiuram	1997	2,376	0	0	16	0	609	0	Environmental standards	0.006mg/L or less
	1998	2,764	0	0	8	0	195	0		
	1999	2,490	0	0	2	0	186	0		
	2000	2,528	0	0	10	0	171	0		
	2001	2,506	0	0	2	0	201	0		
	2002	2,494	0	0	3	0	258	0		
	2003	2,625	0	0	2	0	233	0		
	2004	2,472	0	0	4	0	204	0		
	2005	2,322	0	0	4	0	222	0		
	2006	2,411	0	0	1	0	92	0		
	2007	2,404	0	0	0	0	81	0		
	2008	2,330	0	0	15	0	90	0		
	2009	2,585	0	0	0	0	53	0		
	2010	2,509	0	0	14	0	47	0		
	2011	2,432	0	0	1	0	32	0		
	2012	2,451	0	0	1	0	35	0		
	2013	2,460	0	0	2	0	34	0		
Simazine	1997	2,369	0	0	16	0	598	0	Environmental standards	0.003mg/L or less
	1998	2,826	0	0	41	0	194	0		
	1999	2,549	0	0	2	0	190	0		
	2000	2,508	0	0	10	0	174	0		
	2001	2,638	0	0	7	0	205	0		
	2002	2,547	0	0	3	0	258	0		
	2003	2,614	0	0	2	0	233	0		
	2004	2,628	0	0	4	0	204	0		
	2005	2,402	0	0	4	0	222	0		
	2006	2,478	0	0	1	0	92	0		
	2007	2,471	0	0	3	0	81	0		
	2008	2,391	0	0	15	0	91	0		
	2009	2,643	0	0	0	0	52	0		
	2010	2,563	0	0	14	0	47	0		
	2011	2,420	0	0	1	0	32	0		
	2012	2,448	0	0	1	0	34	0		
	2013	2,457	0	0	2	0	34	0		
Thiobencarb	1997	2,381	0	0	16	0	598	0	Environmental standards	0.02mg/L or less
	1998	2,759	0	0	8	0	194	0		
	1999	2,476	0	0	2	0	186	0		
	2000	2,453	0	0	10	0	171	0		
	2001	2,575	0	0	2	0	201	0		
	2002	2,487	0	0	3	0	258	0		
	2003	2,573	0	0	2	0	233	0		
	2004	2,539	0	0	4	0	204	0		
	2005	2,319	0	0	4	0	222	0		
	2006	2,409	0	0	1	0	92	0		
	2007	2,399	0	0	0	0	81	0		
	2008	2,327	0	0	15	0	90	0		
	2009	2,583	0	0	0	0	52	0		
	2010	2,506	0	0	14	0	47	0		
	2011	2,419	0	0	1	0	32	0		
	2012	2,448	0	0	1	0	34	0		
	2013	2,456	0	0	2	0	34	0		
Benzene	1997	2,695	0	0	106	4	815	2	Environmental standards	0.01mg/L or less
	1998	3,536	0	0	178	4	451	2		
	1999	3,610	0	0	243	2	442	0		
	2000	3,436	0	0	211	1	425	1		
	2001	3,324	0	0	266	1	496	11		
	2002	3,363	1	0.0	136	1	544	6		
	2003	3,590	0	0	118	0	606	4		
	2004	3,524	0	0	107	0	604	3		
	2005	3,389	2	0.1	122	1	517	3		
	2006	3,485	0	0	96	0	466	3		
	2007	3,396	0	0	168	4	410	2		
	2008	3,238	0	0	156	0	431	5		
	2009	3,277	0	0	139	1	367	4		
	2010	3,106	0	0	177	0	353	3		
	2011	3,044	0	0	154	0	302	3		
	2012	2,999	0	0	158	0	324	3		
	2013	3,010	0	0	104	1	293	4		
Selenium	1997	2,220	0	0	46	1	595	1	Environmental standards	0.01mg/L or less
	1998	2,935	0	0	41	0	198	0		
	1999	2,758	0	0	27	0	192	0		
	2000	2,634	0	0	36	0	193	0		
	2001	2,600	0	0	24	0	203	0		
	2002	2,650	0	0	37	1	272	0		
	2003	2,919	0	0	24	0	276	0		
	2004	2,698	1	0.0	32	0	242	0		
	2005	2,599	1	0.0	48	0	218	0		
	2006	2,713	0	0	35	0	119	0		
	2007	2,830	0	0	46	0	157	0		
	2008	2,624	0	0	64	0	208	0		
	2009	2,965	0	0	21	0	81	0		
	2010	2,818	0	0	49	0	58	0		
	2011	2,738	0	0	23	0	47	0		
	2012	2,725	0	0	22	0	46	0		
	2013	2,720	0	0	24	0	46	0		
Nitrate nitrogen and nitrite nitrogen	1999	3,374	173	5.1	650	182	807	66	Environmental standards	10mg/L or less
	2000	4,167	253	6.1	1,682	479	988	165		
	2001	4,017	231	5.8	1,343	535	1,113	272		
	2002	4,207	247	5.9	1,199	296	1,324	423		
	2003	4,288	280	6.5	1,101	309	1,504	501		
	2004	4,260	235	5.5	928	283	1,750	637		
	2005	4,122	174	4.2	714	221	1,815	651		
	2006	4,193	179	4.3	769	266	1,732	715		
	2007	4,432	172	4.1	608	128	1,654	729		
	2008	3,830	167	4.4	461	96	1,045	757		
	2009	3,895	149	3.8	500	96	1,713	788		
	2010	3,361	144	4.3	691	160	1,723	813		
	2011	3,227	117	3.6	427	89	1,677	796		
	2012	3,240	117	3.6	401	94	1,625	769		
	2013	3,289	107	3.3	389	60	1,629	760		

5.16 Results of water quality survey of groundwater

Research group	Research item	General monitoring survey			Survey of contaminated wells and vicinities		Continue surveyance or Regular monitoring survey		Remark	
		Number of survey	Exceeding number	Exceeding rate (%)	Number of survey	Exceeding number	Number of survey	Exceeding rate	Standard type	Standard value
Fluorine	1999	2,049	24	1.2	147	12	268	9	Environmental standards	0.8mg/L or less
	2000	3,276	25	0.8	658	112	417	19		
	2001	3,558	25	0.7	285	31	839	53		
	2002	4,117	16	0.4	207	31	446	80		
	2003	3,934	27	0.7	218	29	455	83		
	2004	3,542	19	0.5	142	18	441	89		
	2005	3,703	30	0.8	270	47	601	108		
	2006	3,817	32	0.8	190	41	536	103		
	2007	3,890	41	1.1	203	46	376	114		
	2008	3,537	23	0.7	185	10	582	148		
	2009	3,527	17	0.5	155	5	365	138		
	2010	3,088	20	0.6	253	20	380	156		
	2011	3,027	21	0.7	184	14	362	158		
	2012	2,964	18	0.6	142	5	391	151		
	2013	2,983	16	0.5	113	7	417	162		
Boron	1999	1,752	2	0.1	27	0	219	4	Environmental standards	1mg/L or less
	2000	3,210	16	0.5	231	4	314	5		
	2001	3,408	14	0.4	141	20	738	9		
	2002	3,989	5	0.1	217	12	287	15		
	2003	3,819	9	0.2	157	12	297	20		
	2004	3,499	8	0.2	92	1	291	26		
	2005	3,342	5	0.1	145	9	396	32		
	2006	3,396	8	0.2	59	4	301	39		
	2007	3,289	6	0.2	71	1	199	35		
	2008	3,149	9	0.3	62	2	220	39		
	2009	3,068	7	0.2	48	0	203	45		
	2010	2,956	9	0.3	176	11	176	44		
	2011	2,926	7	0.2	101	11	162	41		
	2012	2,868	3	0.1	68	3	176	43		
	2013	2,891	9	0.3	67	6	181	42		
Vinyl chloride monomer	2009	179	0	0	25	0	23	8	Environmental standards	0.002mg/L or less
	2010	2,311	4	0.2	282	5	852	48		
	2011	2,764	7	0.3	295	13	1,189	57		
	2012	2,716	1	0.0	273	14	1,365	83		
	2013	2,679	5	0.2	244	1	1,381	92		
1,2-dichloroethylene	2009	138	0	0	107	0	97	8	Environmental standards	0.04mg/L or less
	2010	2,935	0	0	325	3	1,833	160		
	2011	3,133	3	0.0	321	5	1,846	162		
	2012	3,097	2	0.1	427	13	1,826	154		
	2013	3,043	2	0.1	376	4	1,808	148		
1,4-dioxane	2009	226	0	0	22	0	0	0	Environmental standards	0.05mg/L or less
	2010	2,456	0	0	52	0	116	0		
	2011	2,731	1	0.0	61	1	83	1		
	2012	2,672	1	0.0	26	2	92	2		
	2013	2,701	0	0	31	0	102	3		

Notice:

The exceeding number is the number of wells exceeding the standard measure at the time, and exceeding rate is the ratio of excess following a number of surveys.

The environmental Standards for Water Pollution of groundwater was set in fiscal year 1997, and the standards before 1997 had been evaluation standards or provisional guidelines.

Environmental standards related to ground water contamination were set in FY 1997. All other standards prior to FY 1997 were considered to be evaluation standards or tentative guidelines.

Nitrate nitrogen and nitrite nitrogen, fluorine, boron were added to the environmental standards in 1999.

Starting in FY 2009, Continuace surveyance was changed to Regular monitoring survey in the survey group.

Nitrate nitrogen and nitrite nitrogen, fluorine, boron were added to the environmental standard in 1999.

Source: "Results of the FY 2013 Water Quality Survey of underground," Environmental Management Bureau, MOE, the Government of Japan

5.17 Transition of number of confirmed marine pollution cases sea

(Unit : number)

Year	Type	Sea area	Coast of Hokkaido	Eastern coast of Honshu	Tokyo Bay	Ise Bay	Osaka Bay	Seto inland sea (excluding Osaka Bay)	Southern coast of Honshu	Coastal Kyushu	Japan sea coast	Southwest ern sea	Total
2007	Non-oil	Oil	53	31	55	9	11	62	16	32	16	17	302
		Hazardous	0	1	1	0	0	2	0	0	0	0	4
		Waste	13	13	3	32	3	4	2	23	3	1	97
		Others	4	4	5	2	1	4	1	1	2	0	24
		Subtotal	17	18	9	34	4	10	3	24	5	1	125
		Red tide	0	5	7	8	1	0	8	1	20	0	50
2008	Non-oil	Oil	70	54	71	51	16	72	27	57	41	18	477
		Hazardous	0	0	0	1	0	3	1	0	0	0	5
		Waste	20	11	1	39	4	5	24	11	11	0	126
		Others	4	1	3	4	1	5	0	0	2	0	20
		Subtotal	24	12	4	44	5	13	25	11	13	0	151
		Red tide	0	5	12	1	0	4	7	1	1	0	31
2009	Non-oil	Oil	79	65	64	69	24	80	62	44	41	27	555
		Hazardous	66	47	59	19	4	60	30	48	23	13	369
		Waste	0	0	0	0	0	2	1	0	0	0	3
		Others	26	16	2	23	3	2	9	7	15	1	104
		Subtotal	8	1	2	0	0	4	0	9	0	0	24
		Red tide	34	17	4	23	2	8	10	16	15	1	131
2010	Non-oil	Oil	0	0	6	4	0	1	0	1	2	0	14
		Hazardous	100	64	69	46	7	69	40	65	40	14	514
		Waste	39	46	32	10	10	66	23	24	30	20	300
		Others	0	0	0	1	0	4	0	0	1	0	6
		Subtotal	36	27	0	33	1	4	6	5	12	2	126
		Red tide	3	3	3	4	0	6	2	2	10	0	33
2011	Non-oil	Oil	39	30	6	38	1	14	8	7	23	2	168
		Hazardous	0	0	6	2	0	0	1	3	0	0	12
		Waste	78	76	41	50	11	80	32	34	53	22	477
		Others	17	23	37	12	16	56	22	25	27	21	256
		Subtotal	0	0	0	2	0	0	0	0	0	1	3
		Red tide	22	0	0	21	0	11	8	9	17	3	91
2012	Non-oil	Oil	3	1	1	0	1	4	0	3	12	0	25
		Hazardous	25	1	1	23	1	15	8	12	29	4	119
		Waste	0	2	5	1	0	1	2	4	1	0	16
		Others	42	26	43	36	17	72	32	41	57	25	391
		Subtotal	12	27	34	18	14	38	18	34	27	22	244
		Red tide	0	2	1	3	2	3	0	0	0	0	11
2013	Non-oil	Oil	29	16	0	23	2	6	4	3	32	1	116
		Hazardous	3	2	0	3	0	1	0	0	2	0	11
		Waste	32	20	1	29	4	10	4	3	34	1	138
		Others	0	0	3	6	0	5	2	0	2	0	18
		Subtotal	44	47	38	53	18	53	24	37	63	23	400
		Red tide	11	30	31	23	16	46	25	30	27	18	257
2013	Non-oil	Oil	0	0	1	0	1	0	0	0	1	0	3
		Hazardous	35	58	1	39	3	6	1	3	41	0	187
		Waste	1	3	1	1	0	0	1	1	0	0	8
		Others	36	61	3	40	4	6	2	4	42	0	198
		Subtotal	47	91	34	63	20	52	27	34	69	18	455
		Red tide	0	0	0	0	0	0	0	0	0	0	0

Note:

"Others" in the "Non-oil" column refer to factory effluent, blue tide and the like.

Confirmed oil in the Eastern coast of Honshu includes the continuous oil spill of 23 cases from "the Chilsong" which was stranded at Hitachi Harbor.

Source: Compiled from "Current situations of Oceanic pollution: 2007-2013" by Japan Coast Guard.

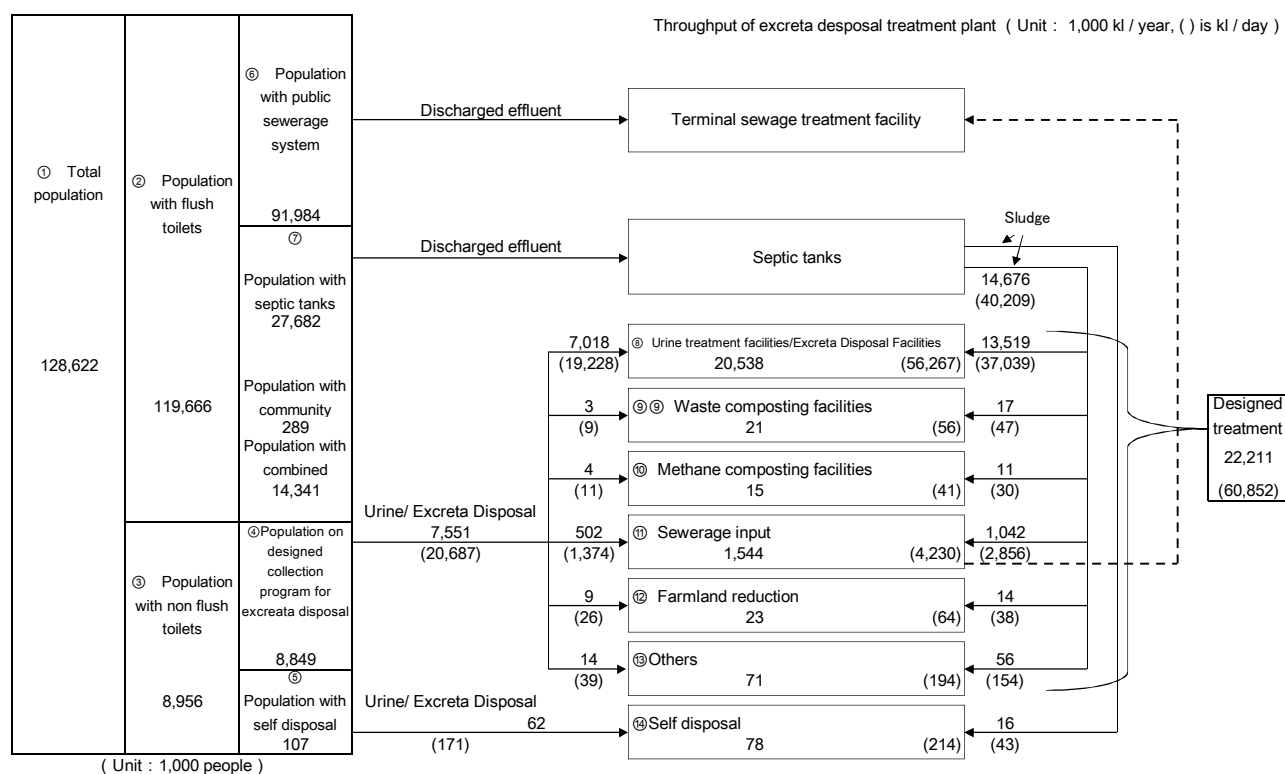
5.18 Transition of number of detained of marine environmental laws violations

(Unit : number)

Name of Act	Group	Violation	Number detained						
			2007	2008	2009	2010	2011	2012	2013
Prevention of Marine Pollution and Maritime Disaster acts.		Violation of provisions prohibiting discharge of oil from ships.	141	195	182	140	125	106	106
		Violation of provisions prohibiting discharge of hazardous liquids from ships.	6	1	4	3	0	2	2
		Violation of provisions prohibiting discharge of waste from ships.	34	6	33	33	25	43	43
		Violation of provisions prohibiting the disposal of disabled ship.	167	83	156	102	127	118	118
		Other violations	100	99	94	142	132	101	101
		Subtotal	448	384	469	420	409	370	370
Waste Management and Public Cleansing Act.		Violation of provisions prohibiting the disposal of waste.	115	190	156	161	114	135	135
Water Pollution Control Act.		Violation of provisions prohibiting discharge of drainage with unadoptable emission standard.	13	11	2	7	16	5	5
Port Regulations acts.		Violation of provisions prohibiting the disposal of waste and provisions ordering the mounting of equipment to prevent falling of cargos.	45	43	77	41	52	37	37
Other laws		Violation of Prefectural fisheries coordination regulation.	31	11	35	9	2	15	15
Total			652	639	739	638	593	562	562

Source: Compiled from "Current situations of Oceanic Pollution 3: 2007-2013" by Japan Coast Guard.

5.19 Urine treatment flow sheet (result in fiscal year 2012)



• the usage rate of flush toilet	= ②÷①	= 93.0 %
• the usage rate of non-flush toilet	= ③÷①	= 7.0 %
• Public sewerage rate	= ⑥÷①	= 71.5 %
• Septic tanks flush rate (includes community plant) (combined treatment system 11.2%)	= ⑦÷①	= 21.5 %
• Designed collection rate in population with non-flush toilets	= ④÷③	= 98.8 %
• Self disposal rate in population with non-flush toilets	= ⑤÷③	= 1.2 %
• Designed treatment volume (includes septic tanks sludge)	= ⑩ + ⑪ + ⑫ + ⑬ + ⑭	= 60,852 kl/day a
• Total amount of treatment (designed treatment volume+self disposal volume)	= ⑩ + ⑪ + ⑫ + ⑬ + ⑭ + ⑯	= 61,067 kl/day b
• Treatment rate by waste composting facility and sewerage input.	= (⑩ + ⑪)÷a	= 99.40 %
• Designed treatment volume of urine per person per day	= (a - 40,283)÷④	= 2.34 l/person-day
• Emission of urine per person per day	= (b - 40,283 - 17)÷④	= 2.33 l/person-day
• Designed treatment volume of septic tanks sludge per person per day	= 40,283÷⑦	= 1.45 l/person-day
• Emission of urine volume of septic tanks sludge per person per day	= (40,283 + 17)÷⑦	= 1.45 l/person-day

Source: "Waste & Recycling (FY2012)," Waste Management Division, Waste Management and Recycling Department, Minister's Secretariat, MOE, the Government of Japan

5.20 Transition of Population of flush and treatment volume of urine

1. Transition of population according to treatment type

(Unit : 1,000 people)

Group		FY 2001	2002	2003	2004	2005	2006
Total population		127,007	127,299	127,507	127,606	127,712	127,781
Population with flush toilet	Population with public sewerage	73,575	76,004	78,174	80,061	81,880	83,742
	Population with community plant		418	362	383	552	361
	Population with septic tanks	34,051	33,053	32,516	31,947	31,095	30,473
	Sole	22,215	21,038	20,035	19,163	18,303	17,187
	Combined	11,835	12,015	12,481	12,784	12,792	13,286
	Total	107,625	109,475	111,052	112,390	113,526	114,576
Population without flush toilet	(the usage rate of flush toilet including septic tank was 92%)	18,818	17,348	16,049	14,877	13,920	12,983
	Septic tanks flush rate	564	476	405	339	266	222
	Total	19,381	17,824	16,455	15,215	14,186	13,205
Flus	(%)	84.7	86.0	87.1	88.1	88.9	89.7
Rate without flushing toilet	(%)	15.3	14.0	12.9	11.9	11.1	10.3
Public sewerage flush rate	(%)	57.9	59.7	61.3	62.7	64.1	65.5
Septic tanks flush rate	(%)	26.8	26.3	25.8	25.3	24.8	24.1
Combined treatment	(%)	9.3	9.6	10.1	10.3	10.0	10.7

Note:

"Combined" of population septic tanks is the sum of population of combined septic tanks and population of Including community plant.

Population of septic tanks is included population of agricultural community effluent treatment facility.

2. Conditions of current urine treatment

Group		FY	FY 2001	2002	2003	2004	2005	2006
N u m b e r o f t o t a l t r e a t m e n t	Urine treatment facilities		27,697 (89.5)	26,406 (89.6)	26,187 (90.8)	25,013 (91.2)	24,191 (91.1)	23,953 (91.8)
	Drainage of urine		14,101	12,720	12,390	11,269	10,400	9,864
	Amount of septic tanks sludge		13,596	13,686	13,797	13,744	13,790	14,089
	Amount of septic tanks sludge		-	-	-	-	4	7
	Drainage of urine		-	-	-	-	(0.0)	(0.0)
	Amount of septic tanks sludge		-	-	-	-	3	3
	Amount of septic tanks sludge		-	-	-	-	1	3
	Methane composting facilities		-	-	-	-	1	7
	Drainage of urine		-	-	-	-	(0.0)	(0.0)
	Amount of septic tanks sludge		-	-	-	-	0	1
	Amount of septic tanks sludge		-	-	-	-	1	6
	Sewerage input		1,445 (4.7)	1,513 (5.1)	1,377 (4.8)	1,293 (4.7)	1,385 (5.2)	1,442 (5.5)
	Drainage of urine		746	753	642	575	608	649
	Amount of septic tanks sludge		699	759	734	718	777	793
	Farmland reduction		94 (0.3)	61 (0.2)	60 (0.2)	59 (0.2)	51 (0.2)	48 (0.2)
	Drainage of urine		42	33	34	33	28	25
	Amount of septic tanks sludge		52	28	27	26	23	23
	Sea dumping		1,230 (4.0)	1,082 (3.7)	842 (2.9)	748 (2.7)	623 (2.3)	393 (1.5)
	Drainage of urine		479	390	255	234	192	121
	Amount of septic tanks sludge		752	692	587	514	431	272
	Others		58 (0.2)	61 (0.2)	65 (0.2)	53 (0.2)	109 (0.4)	110 (0.4)
	Drainage of urine		26	34	28	19	30	34
	Amount of septic tanks sludge		32	27	37	34	79	76
	Subtotal		30,524 (98.7)	29,123 (98.8)	28,531 (99.0)	27,165 (99.1)	26,364 (99.3)	25,960 (99.4)
	Drainage of urine		15,394	13,929	13,349	12,130	11,262	10,698
	Amount of septic tanks sludge		15,130	15,193	15,182	15,035	15,102	15,262
	Self disposal volume		407 (1.3)	340 (1.2)	296 (1.0)	257 (0.9)	197 (0.7)	144 (0.6)
	Drainage of urine		368	316	280	243	170	138
	Amount of septic tanks sludge		40	23	16	14	27	7
	Total		30,932 (100.0)	29,462 (100.0)	28,827 (100.0)	27,422 (100.0)	26,561 (100.0)	26,105 (100.0)
	Drainage of urine		15,762	14,246	13,629	12,374	11,432	10,836
	Quantity of septic tanks sludge		15,170	15,216	15,198	15,049	15,128	15,269
Designed treatment volume of urine per person per day (l/person·day)			2.24	2.20	2.27	2.23	2.22	2.26
Emission of urine per person per day (l/person·day)			2.23	2.19	2.26	2.23	2.21	2.25
Designed treatment volume of septic tanks sludge per person per day (l/person·day)			1.22	1.24	1.26	1.27	1.31	1.36
Emission of sludge from septic tanks per day (l/person·day)			1.22	1.25	1.26	1.28	1.31	1.36

Note:

"Urine treatment facilities": It is a facility to treat urine by anaerobic digestion process, chemical processing, aerobic treatment, wet oxidation system etc.

"Amount of septic tanks sludge": It is a facility to make compost by collecting urine and septic tanks sludge.

"Methane composting facility": It is a facility for methane fermentation collected urine, septic tanks sludge and ejected biogas.

"Sewerage input": It is to pump or import to sewage treatment plants.

"Farmland reduction": It is to reduce collected urine or septic tanks sludge from agricultural land and to use it as fertilizer.

"Sea dumping": It is to dump collected urine or septic tanks sludge into the sea.

Data in parenthesis is the rate of percentage to total.

5.20 Transition of Population of flush and treatment volume of urine

1. Transition of population according to treatment type

(Unit : 1,000 people)

Group		FY 2007	2008	2009	2010	2011	2012
Total population		127,487	127,529	127,429	127,302	127,146	128,622
Population with flush toilet	Population with public sewerage	84,982	86,027	87,819	88,865	89,810	91,984
	Population with community plant	336	416	297	293	286	289
	Population with septic tanks	29,863	29,267	28,504	28,030	27,591	27,392
	Sole	15,924	15,413	14,712	13,948	13,316	13,052
	Combined	13,939	13,854	13,792	14,082	14,276	14,341
	Total	115,181	115,710	116,620	117,188	117,687	119,666
Population without flush toilet	the usage rate of flush toilet including septic tank was 92%	12,121	11,301	10,671	9,984	9,348	8,849
	Septic tanks flush rate	185	518	139	130	112	107
	Total	12,306	11,819	10,810	10,114	9,460	8,956
Flus	(%)	90.3	90.7	91.5	92.1	92.6	93.0
Rate without flushing toilet	(%)	9.7	9.3	8.5	7.9	7.4	7.0
Public sewerage flush rate	(%)	66.7	67.5	68.9	69.8	70.6	71.5
Septic tanks flush rate	(%)	23.7	22.9	22.4	22.0	21.7	21.3
Combined treatment	(%)	11.2	11.2	11.1	11.3	11.2	11.1

2 . conditions of current urine treatment

2. Conditions of current urine treatment			FY	FY 2007	2008	2009	2010	2011	2012
N u m b e r o f t o t a l t r e a t m e n t	N u m b e r o f t o t a l t r e a t m e n t		Urine treatment facilities	23,248	22,958	22,343	21,678	20,912	20,538
				(93.1)	(93.5)	(93.6)	(93.1)	(91.6)	(92.1)
			Drainage of urine	9,261	8,894	8,353	7,917	7,365	7,018
			Amount of septic tanks sludge	13,987	14,064	13,989	13,760	13,547	13,519
			Waste composting facilities	11	28	58	17	15	21
				(0.0)	(0.1)	(0.2)	(0.1)	(0.1)	(0.1)
			Drainage of urine	4	3	16	4	3	3
			Amount of septic tanks sludge	6	25	42	13	13	17
			Methane composting facilities	15	16	27	16	16	15
				(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
			Drainage of urine	5	5	5	4	4	4
			Amount of septic tanks sludge	10	11	23	12	12	11
			Sewerage input	1,476	1,347	1,265	1,346	1,654	1,544
				(5.9)	(5.5)	(5.3)	(5.8)	(7.2)	(6.9)
			Drainage of urine	581	519	455	462	587	502
			Amount of septic tanks sludge	894	828	810	884	1,068	1,042
			Farmland reduction	41	39	33	72	69	23
				(0.2)	(0.2)	(0.1)	(0.3)	(0.3)	(0.1)
			Drainage of urine	16	17	9	13	9	9
			Amount of septic tanks sludge	26	22	23	59	60	14
Sea dumping	-	-	-	-	-	-			
	-	-	-	-	-	-			
Drainage of urine	-	-	-	-	-	-			
Amount of septic tanks sludge	-	-	-	-	-	-			
Others	54	54	47	69	61	71			
	(0.2)	(0.2)	(0.2)	(0.3)	(0.3)	(0.3)			
Drainage of urine	20	18	16	16	17	14			
Amount of septic tanks sludge	35	36	30	53	44	56			
Subtotal	24,845	24,442	23,772	23,198	22,728	22,211			
	(99.5)	(99.5)	(99.6)	(99.6)	(99.6)	(99.6)			
Drainage of urine	9,887	9,455	8,855	8,417	7,984	7,551			
Amount of septic tanks sludge	14,959	14,987	14,917	14,781	14,744	14,660			
Self disposal volume	129	111	102	83	99	78			
	(0.5)	(0.5)	(0.4)	(0.4)	(0.4)	(0.4)			
Drainage of urine	123	104	91	76	93	62			
Amount of septic tanks sludge	6	6	11	7	6	16			
Total	24,974	24,553	23,874	23,280	22,827	22,289			
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)			
Drainage of urine	10,010	9,560	8,946	8,493	8,077	7,613			
Amount of septic tanks sludge	14,964	14,993	14,928	14,788	14,750	14,676			
Designed treatment volume of urine per person per day (l / person · day)				2.23	2.29	2.27	2.31	2.33	2.34
Emission of urine per person per day (l / person · day)				2.22	2.32	2.30	2.30	2.33	2.33
Designed treatment volume of septic tanks sludge per person per day (l / person · day)				1.35	1.38	1.42	1.43	1.45	1.45
Emission of sludge from septic tanks per person per day (l / person · day)				1.35	1.38	1.42	1.43	1.45	1.45

Source: "Waste Treatment in Japan (in each fiscal year version)," Waste Management Division, Waste and Recycling Department, Minister's Secretariat, MOE, the Government of Japan

5.21 Current situations of excreta disposal treatment facilities by prefectures (Performance in FY2012)

	Total Population (Thousand person)	Population of flush toilet use (Thousand person)							The population of non-flush toilet use				
		Public Sewerage System		Community Plants	Population of septic tank use		Total	The usage rate of flush toilet(%)	Population on designed disposal program	The coverage of population on designed disposal program (%)	Population on self disposal process		
			The usage rate of flush toilet(%)			The usage rate of flush toilet(%)						Integrated Septic Tanks	
Hokkaido	5,493	4,778	87.0	0	272	5.0	183	5,050	91.9	443	440	8.1	3
Aomori	1,384	672	48.6	0	493	35.6	193	1,166	84.2	218	214	15.8	4
Iwate	1,322	619	46.9	2	272	20.6	255	893	67.6	429	427	32.4	1
Miyagi	2,325	1,707	73.4	6	246	10.6	150	1,958	84.2	366	361	15.8	5
Akita	1,085	526	48.4	0	270	24.8	195	795	73.3	290	290	26.7	0
Yamagata	1,162	732	63.0	0	299	25.7	137	1,031	88.7	132	132	11.3	0
Fukushima	1,980	873	44.1	5	853	43.1	476	1,732	87.5	248	248	12.5	1
Ibaraki	2,994	1,603	53.6	12	1,100	36.7	572	2,716	90.7	278	278	9.3	0
Tochigi	2,018	1,165	57.7	1	716	35.5	382	1,882	93.2	137	137	6.8	0
Gunma	2,032	910	44.8	25	957	47.1	416	1,893	93.2	139	139	6.8	0
Saitama	7,272	5,408	74.4	9	1,710	23.5	798	7,127	98.0	146	145	2.0	1
Chiba	6,248	4,159	66.6	9	1,855	29.7	924	6,023	96.4	225	224	3.6	1
Tokyo	13,124	12,985	98.9	2	99	0.8	45	13,087	99.7	37	37	0.3	0
Kanagawa	9,090	8,570	94.3	0	473	5.2	148	9,043	99.5	47	47	0.5	0
Niigata	2,372	1,491	62.9	0	698	29.4	240	2,190	92.3	182	182	7.7	1
Toyama	1,099	822	74.9	5	222	20.2	114	1,049	95.4	50	50	3.9	0
Ishikawa	1,168	826	70.7	5	291	24.9	122	1,122	96.1	46	46	4.0	0
Fukui	814	559	68.7	0	212	26.0	95	771	94.7	43	42	5.3	1
Yamanashi	868	489	56.3	6	313	36.1	121	808	93.1	60	60	6.9	0
Nagano	2,165	1,636	75.6	7	308	14.2	220	1,951	90.1	214	214	9.9	1
Gifu	2,065	1,269	61.5	12	662	32.0	362	1,943	94.1	122	121	5.9	1
Shizuoka	3,828	2,056	53.7	16	1,638	42.8	609	3,710	96.9	119	117	3.1	2
Aichi	7,484	5,190	69.3	11	2,102	28.1	981	7,302	97.6	182	181	2.4	0
Mie	1,852	819	44.3	3	855	46.2	554	1,678	90.6	174	174	9.4	0
Shiga	1,419	1,129	79.5	0	210	14.8	151	1,339	94.3	81	78	5.7	2
Kyoto	2,643	2,315	87.6	1	174	6.6	101	2,490	94.2	153	145	5.8	8
Osaka	8,877	8,093	91.2	0	563	6.3	249	8,656	97.5	221	220	2.5	1
Hyogo	5,662	5,081	89.7	70	366	6.5	209	5,517	97.4	145	143	2.6	2
Nara	1,410	963	68.3	5	355	25.2	153	1,322	93.8	87	87	6.2	0
Wakayama	1,021	183	17.9	2	610	59.7	314	794	77.7	228	226	22.3	2
Tottori	591	342	57.9	1	191	32.2	66	534	90.2	58	56	9.8	1
Shimane	717	273	38.1	4	275	38.3	200	552	77.0	165	161	23.0	4
Okayama	1,951	1,071	54.9	0	611	31.3	372	1,682	86.2	269	265	13.8	4
Hiroshima	2,886	1,896	65.7	1	640	22.2	401	2,537	87.9	349	335	12.1	14
Yamaguchi	1,456	845	58.0	0	442	30.4	277	1,287	88.4	169	161	11.6	8
Tokushima	789	115	14.6	7	592	75.0	273	715	90.5	75	68	9.5	7
Kagawa	1,015	384	37.8	0	496	48.9	269	880	86.7	134	133	13.3	1
Ehime	1,448	655	45.2	6	612	42.3	294	1,273	87.9	175	173	12.1	2
Kochi	762	217	28.5	8	365	47.9	259	590	77.4	172	170	22.6	2
Fukuoka	5,109	3,788	74.1	21	679	13.3	511	4,488	87.8	622	620	12.2	2
Saga	857	391	45.6	1	234	27.4	191	626	73.1	231	230	26.9	1
Nagasaki	1,431	766	53.6	13	256	17.9	218	1,035	72.3	396	394	27.7	1
Kumamoto	1,832	1,080	59.0	1	504	27.5	292	1,585	86.5	246	243	13.5	3
Oita	1,206	479	39.7	4	564	46.8	266	1,046	86.8	159	142	13.2	17
Miyazaki	1,147	546	47.6	0	452	39.4	277	998	87.0	149	149	13.0	0
Kagoshima	1,711	650	38.0	9	790	46.2	510	1,448	84.6	263	262	15.4	0
Okinawa	1,437	858	59.7	0	495	34.4	199	1,353	94.2	84	84	5.8	0
Total	128,622	91,984	71.5	289	27,392	21.3	14,341	119,666	93.0	8,956	8,849	7.0	107

5.21 Current situations of excreta disposal treatment facilities by prefectures (Performance in FY2012)

	Total throughput of resulting products (Thousand KL/Year)									Throughput of self disposal process	Total
	Throughput of designed disposal program										
	Excreta Disposal Facilities	Waste Composting Facilities	Methane Composting Facilities	Sewerage Input	Farmland Reduction	Sea Dumping	Others	Sub Total			
Hokkaido	569	5	0	109	0	-	0	683	3	686	
Aomori	394	0	0	49	0	-	0	443	0	443	
Iwate	563	0	0	0	0	-	0	563	1	564	
Miyagi	468	0	0	0	0	-	0	468	5	473	
Akita	431	0	0	0	0	-	0	431	0	431	
Yamagata	222	0	0	0	0	-	0	222	0	222	
Fukushima	536	0	0	52	0	-	0	587	0	588	
Ibaraki	637	0	0	10	0	-	0	648	0	648	
Tochigi	349	0	0	0	0	-	0	349	0	349	
Gunma	468	7	0	0	0	-	9	484	0	484	
Saitama	813	0	0	0	0	-	0	813	5	818	
Chiba	820	0	0	11	0	-	0	831	1	832	
Tokyo	57	0	0	37	0	-	13	106	0	106	
Kanagawa	178	0	0	180	0	-	0	358	1	359	
Niigata	477	0	0	53	0	-	0	531	1	531	
Toyama	107	0	0	34	0	-	0	141	0	142	
Ishikawa	134	0	4	0	0	-	0	138	0	138	
Fukui	83	0	0	73	0	-	0	157	1	157	
Yamanashi	159	2	0	0	0	-	0	161	0	161	
Nagano	356	0	0	27	0	-	0	384	0	384	
Gifu	615	0	0	0	0	-	0	615	0	616	
Shizuoka	933	0	0	35	3	-	4	975	1	976	
Aichi	1,092	0	0	143	0	-	0	1,235	0	1,235	
Mie	639	0	0	10	0	-	0	649	0	649	
Shiga	208	0	0	4	0	-	0	212	2	214	
Kyoto	237	0	0	28	0	-	0	265	2	267	
Osaka	488	0	0	136	0	-	0	624	0	624	
Hyogo	276	0	0	80	0	-	0	357	7	363	
Nara	242	0	0	1	0	-	8	251	0	251	
Wakayama	520	0	0	0	0	-	0	520	1	521	
Tottori	125	0	0	1	0	-	0	126	1	127	
Shimane	275	0	0	1	0	-	0	276	3	279	
Okayama	619	0	0	29	0	-	8	656	2	659	
Hiroshima	602	0	0	84	0	-	0	686	9	695	
Yamaguchi	417	0	0	40	0	-	1	458	5	464	
Tokushima	275	0	0	0	0	-	0	275	6	282	
Kagawa	185	0	0	1	0	-	0	186	0	186	
Ehime	414	0	0	0	0	-	0	414	1	415	
Kochi	364	1	0	0	0	-	1	365	1	367	
Fukuoka	1,136	0	11	134	0	-	0	1,281	2	1,283	
Saga	426	2	0	0	0	-	0	428	1	429	
Nagasaki	601	0	0	3	0	-	0	604	2	606	
Kumamoto	468	2	0	146	0	-	16	632	2	634	
Oita	414	1	0	0	0	-	0	415	7	422	
Miyazaki	332	0	0	16	0	-	0	349	0	349	
Kagoshima	713	0	0	1	15	-	4	732	0	732	
Okinawa	102	0	0	13	4	-	7	127	0	127	
Total	20,538	21	15	1,544	23	-	71	22,211	78	22,289	

Source: "Waste & Recycling (FY2012)," Waste Management Division, Waste Management and Recycling Department, Minister's Secretariat, MOE, the Government of Japan

5.22 Transition of maintenance states of excreta disposal treatment facilities (by types, nationwide, construction bases)

(Unit : KL/Day)

	Anaerobic treatment		Aerobic treatment		Standard Denitrification treatment		High-loading denitrification treatment		Membrane Bioreactor treatment		Others		Total	
	Number of facilities	Processing capacity	Number of facilities	Processing capacity	Number of facilities	Processing capacity	Number of facilities	Processing capacity	Number of facilities	Processing capacity	Number of facilities	Processing capacity	Number of facilities	Processing capacity
FY1990	385	34,580	703	60,008	-	-	-	-	-	-	124	13,777	1,212	108,365
1991	355	30,681	346	33,353	245	26,048	138	9,672	-	-	175	18,053	1,259	117,807
1992	304	26,312	289	22,745	247	25,995	139	10,681	11	509	195	23,068	1,185	109,310
1993	289	24,021	300	22,306	260	27,816	139	10,674	14	653	191	21,558	1,193	107,028
1994	270	22,901	286	21,261	279	30,149	157	12,310	21	994	200	21,080	1,213	108,695
1995	234	19,869	265	19,716	281	30,157	175	13,817	28	1,616	200	20,028	1,183	105,203
1996	210	17,510	246	17,951	286	30,751	187	15,312	29	1,645	210	21,474	1,168	104,643
1997	183	15,585	240	17,215	294	31,251	202	17,525	35	2,042	207	21,422	1,161	105,039
1998	167	14,068	217	14,781	302	31,850	192	16,235	36	2,036	236	24,795	1,150	103,764
1999	142	12,277	194	12,730	300	31,815	195	16,331	40	2,314	245	25,159	1,116	100,625
2000	130	10,996	191	12,166	300	31,908	198	16,498	41	2,375	259	25,917	1,119	99,860
2001	121	9,892	181	11,070	307	32,245	195	16,177	41	2,597	279	27,551	1,124	99,532
2002	101	8,518	169	10,411	306	32,230	196	16,735	40	2,759	299	27,566	1,111	98,219
2003	96	8,090	160	10,005	307	32,375	197	17,177	38	4,401	303	28,716	1,101	100,764
2004	86	7,032	152	9,369	307	31,628	199	16,973	37	4,350	320	29,707	1,101	99,329
2005	76	6,476	136	8,465	288	29,655	203	17,493	38	3,055	317	30,277	1,058	95,420
2006	66	5,856	127	8,005	272	28,363	189	15,980	31	4,264	366	34,733	1,051	97,200
2007	59	4,801	126	7,892	273	28,102	186	15,784	27	3,861	370	33,115	1,041	93,555
2008	56	4,444	118	7,535	268	27,737	182	14,938	26	3,650	389	35,441	1,039	93,745
2009	52	4,144	108	6,961	269	27,748	189	16,285	24	3,573	389	34,654	1,031	93,364
2010	50	3,891	105	6,753	257	26,173	186	16,104	27	3,684	393	34,577	1,018	91,182
2011	44	3,265	94	6,200	251	25,694	184	15,778	27	3,684	400	34,622	1,000	89,243
2012	43	3,159	96	6,469	248	25,608	179	15,030	32	4,062	391	33,556	989	87,884

Note:

Facilities established by municipalities and administration associations include idle facilities and facilities started construction in the fiscal year, but not deserted facilities.

Standard Denitrification treatment and Standard Denitrification treatment have been included in Aerobic treatment prior to survey 1990.

Membrane Bioreactor treatment is included in others prior to survey 1991.

Source: "Waste & Recycling (Yearly report)," Waste Management Division, Waste Management and Recycling Department, Minister's Secretariat, MOE, the Government of Japan

5.23 Transition of number of installed septic tanks (Nationwide)

(Unit : piece)

	FY2001	2002	2003	2004	2005	2006
~tank for 20 people	7,770,134 (5,743,709)	7,757,582 (5,805,981)	7,683,252 (5,874,096)	7,659,463 (5,941,469)	7,676,160 (6,021,016)	7,688,392 (6,097,153)
21 ~ 100	886,232 (536,285)	857,437 (528,304)	832,765 (523,288)	818,145 (527,228)	808,594 (526,998)	793,545 (524,396)
101 ~ 500	142,721 (80,242)	140,867 (82,126)	136,935 (81,776)	134,724 (83,313)	130,645 (81,235)	127,481 (80,977)
Sub Total	8,799,087 (6,360,236)	8,755,886 (6,416,411)	8,652,952 (6,479,160)	8,612,332 (6,552,010)	8,615,399 (6,629,249)	8,609,418 (6,702,526)
501 ~ 1,000	9,144 (6,357)	8,726 (6,248)	8,745 (6,264)	8,633 (6,354)	8,369 (6,136)	8,298 (6,153)
1,001 ~ 2,000	4,748 (3,420)	4,638 (3,463)	4,557 (3,437)	4,477 (3,447)	4,463 (3,452)	4,441 (3,458)
2,001 ~ 3,000	1,487 (1,070)	1,421 (1,062)	1,397 (1,062)	1,383 (1,077)	1,376 (1,077)	1,384 (1,094)
3,001 ~ 4,000	432 (299)	404 (301)	407 (312)	399 (312)	407 (319)	412 (316)
4,001 ~ 5,000	240 (176)	241 (182)	242 (197)	245 (201)	230 (194)	221 (186)
5,001 ~	418 (246)	378 (241)	353 (220)	335 (217)	327 (221)	321 (222)
Sub Total	16,469 (11,568)	15,808 (11,497)	15,701 (11,492)	15,472 (11,608)	15,172 (11,399)	15,077 (11,429)
Total	8,815,556 (6,371,804)	8,771,694 (6,427,908)	8,668,653 (6,490,652)	8,627,804 (6,563,618)	8,630,571 (6,640,648)	8,624,495 (6,713,955)
Items	Solo processing type	7,053,354 (4,636,021)	6,818,584 (4,497,750)	6,513,810 (4,360,395)	6,299,840 (4,258,880)	6,131,836 (4,166,189)
	Integrated processing type	1,762,202 (1,735,783)	1,953,110 (1,930,158)	2,154,843 (2,130,257)	2,327,964 (2,304,738)	2,498,735 (2,474,459)

	FY2007	2008	2009	2010	2011	2012
~tank for 20 people	7,534,990 (6,066,922)	7,480,780 (6,083,458)	7,340,054 (6,098,795)	7,162,437 (6,025,052)	7,066,207 (6,004,392)	7,028,375 (6,014,594)
21 ~ 100	747,142 (510,199)	730,606 (506,074)	691,535 (495,735)	657,270 (480,207)	637,111 (473,461)	620,588 (465,127)
101 ~ 500	121,025 (79,123)	117,473 (78,958)	111,631 (77,733)	106,452 (75,982)	101,361 (73,629)	97,088 (71,416)
Sub Total	8,403,157 (6,656,244)	8,328,859 (6,668,490)	8,143,220 (6,672,263)	7,926,159 (6,581,241)	7,804,679 (6,551,482)	7,746,051 (6,551,137)
501 ~ 1,000	7,971 (5,996)	7,930 (6,108)	7,715 (6,076)	7,517 (5,988)	7,155 (5,776)	6,870 (5,615)
1,001 ~ 2,000	4,439 (3,499)	4,372 (3,499)	4,280 (3,484)	4,212 (3,465)	4,053 (3,374)	3,943 (3,313)
2,001 ~ 3,000	1,358 (1,082)	1,396 (1,112)	1,328 (1,085)	1,326 (1,092)	1,300 (1,084)	1,263 (1,066)
3,001 ~ 4,000	417 (329)	411 (326)	401 (317)	388 (311)	375 (301)	374 (305)
4,001 ~ 5,000	221 (186)	215 (182)	212 (182)	217 (186)	205 (175)	199 (171)
5,001 ~	321 (223)	312 (222)	315 (228)	296 (223)	291 (219)	286 (215)
Sub Total	14,727 (11,315)	14,636 (11,449)	14,251 (11,372)	13,956 (11,265)	13,379 (10,929)	12,935 (10,685)
Total	8,417,884 (6,667,559)	8,343,495 (6,679,939)	8,157,471 (6,683,635)	7,940,115 (6,592,506)	7,818,058 (6,562,411)	7,758,986 (6,561,822)
Items	Solo processing type	5,641,662 (3,916,080)	5,442,181 (3,803,133)	5,170,659 (3,723,893)	4,883,467 (3,559,629)	4,674,779 (3,441,912)
	Integrated processing type	2,776,222 (2,751,479)	2,901,314 (2,876,806)	2,986,812 (2,959,742)	3,056,648 (3,032,877)	3,143,279 (3,120,499)

Parenthesized numbers in lower sections refer to data subjected to new standard structures.

Source: "Governance survey results on septic tanks FY2013," Waste Management Division, Waste Management and Recycling Department, Minister's Secretariat, MOE, the Government of Japan

5.24 Current maintenance states of excreta disposal treatment facilities (according to facilities established by municipalities and administration associations) (FY2012)

	Anaerobic treatment		Aerobic treatment		Standard Denitrification treatment		High-loading denitrification treatment		Membrane Bioreactor treatment		Others		Total	
	Number of facilities	Processing capacity (kl/Day)	Number of facilities	Processing capacity (kl/Day)	Number of facilities	Processing capacity (kl/Day)	Number of facilities	Processing capacity (kl/Day)	Number of facilities	Processing capacity (kl/Day)	Number of facilities	Processing capacity (kl/Day)	Number of facilities	Processing capacity (kl/Day)
Hokkaido	14	1,006	9	576	1	60	8	245	1	43	30	1,926	63	3,856
Aomori	0	0	0	0	6	872	4	200	0	0	3	562	13	1,634
Iwate	1	105	1	80	4	463	5	672	0	0	5	636	16	1,956
Miyagi	0	0	0	0	6	687	5	536	0	0	6	705	17	1,928
Akita	0	0	2	133	5	772	7	500	0	0	5	467	19	1,872
Yamagata	0	0	0	0	5	660	1	180	0	0	4	282	10	1,122
Fukushima	3	440	3	316	6	495	3	252	0	0	7	603	22	2,106
Ibaraki	1	50	5	384	7	912	9	753	1	39	13	757	36	2,895
Tochigi	0	0	0	0	7	980	6	452	0	0	1	191	14	1,623
Gunma	0	0	5	253	2	174	11	775	1	46	6	573	25	1,821
Saitama	0	0	1	100	15	1,817	4	428	2	142	16	1,406	38	3,893
Chiba	1	200	2	270	9	899	9	1,044	4	451	9	1,071	34	3,935
Tokyo	0	0	1	23	1	140	1	4	3	2,055	9	254	15	2,476
Kanagawa	1	47	2	184	3	309	1	37	0	0	5	582	12	1,159
Niigata	1	20	2	50	10	747	1	20	0	0	13	1,201	27	2,038
Toyama	0	0	1	66	1	80	2	262	0	0	4	343	8	751
Ishikawa	2	155	1	120	3	263	1	80	0	0	6	485	13	1,103
Fukui	0	0	0	0	1	50	4	211	0	0	7	423	12	684
Yamanashi	2	90	3	204	5	230	1	85	1	40	2	151	14	800
Nagano	0	0	1	200	8	1,154	6	599	0	0	10	524	25	2,477
Gifu	1	60	2	106	8	606	6	287	1	35	9	970	27	2,064
Shizuoka	1	36	6	201	10	981	3	301	2	272	15	1,981	37	3,772
Aichi	1	60	5	600	7	1,187	5	527	0	0	13	1,918	31	4,292
Mie	0	0	3	43	5	733	2	340	2	48	7	1,027	19	2,191
Shiga	0	0	2	313	4	501	2	208	0	0	4	170	12	1,192
Kyoto	0	0	4	259	3	221	1	76	1	94	5	421	14	1,071
Osaka	0	0	3	428	3	225	5	819	0	0	10	1,169	21	2,641
Hyogo	0	0	3	132	7	526	3	122	1	44	11	1,153	25	1,977
Nara	1	76	1	3	1	50	4	178	1	6	7	643	15	956
Wakayama	1	2	1	450	7	664	1	37	1	131	3	338	14	1,622
Tottori	0	0	0	0	1	140	3	275	0	0	2	191	6	606
Shimane	0	0	1	40	2	117	4	218	1	125	4	356	12	856
Okayama	0	0	0	0	8	743	3	270	0	0	11	1,087	22	2,100
Hiroshima	4	360	5	138	5	542	4	304	0	0	16	930	34	2,274
Yamaguchi	0	0	0	0	5	597	3	93	0	0	10	694	18	1,384
Tokushima	0	0	3	210	6	400	2	45	1	35	4	291	16	981
Kagawa	0	0	1	30	2	257	4	509	1	2	3	130	11	927
Ehime	0	0	0	0	10	1,170	2	50	2	67	6	208	20	1,495
Kochi	1	47	2	40	7	809	3	139	0	0	7	181	20	1,216
Fukuoka	1	90	4	117	7	953	7	1,152	0	0	15	1,488	34	3,799
Saga	0	0	1	2	4	340	3	475	0	0	7	651	15	1,468
Nagasaki	0	0	1	22	8	702	9	611	0	0	12	688	30	2,023
Kumamoto	2	195	3	161	2	110	3	198	2	187	11	635	23	1,486
Oita	0	0	1	50	5	229	2	150	1	102	9	974	18	1,505
Miyazaki	0	0	0	0	6	375	3	262	0	0	11	593	20	1,230
Kagoshima	0	0	2	123	9	586	2	19	2	98	14	1,270	29	2,096
Okinawa	4	120	3	43	1	80	1	30	0	0	4	259	13	532
Total	43	3,159	96	6,469	248	25,608	179	15,030	32	4,062	391	33,556	989	87,884

Note: Data includes facilities started construction in FY2011 and idle facilities, but not deserted facilities.

Source: "Waste & Recycling (FY2012)," Waste Management Division, Waste Management and Recycling Department, Minister's Secretariat, MOE, the Government of Japan

5.25 Usage state of septic tanks and community plants according to prefectures (as of the end of FY2013)

	Coverage of population served by sewage treatment system	Coverage rate of septic tanks	Coverage rate of community plants
Hokkaido	94.4%	2.9%	-
Aomori	75.2%	9.2%	-
Iwate	76.7%	12.4%	0.1%
Miyagi	88.9%	6.4%	0.3%
Akita	83.7%	11.2%	-
Yamagata	89.4%	7.5%	-
Fukushima	-	-	-
Ibaraki	80.7%	15.4%	0.4%
Tochigi	82.7%	15.1%	0.0%
Gunma	76.3%	17.5%	1.3%
Saitama	89.5%	9.5%	0.0%
Chiba	85.2%	12.8%	0.1%
Tokyo	99.7%	0.2%	0.0%
Kanagawa	97.7%	1.4%	-
Niigata	84.7%	5.4%	-
Toyama	95.5%	4.0%	0.4%
Ishikawa	92.4%	4.4%	0.3%
Fukui	92.7%	5.0%	-
Yamanashi	79.7%	13.4%	0.8%
Nagano	96.8%	5.7%	0.1%
Gifu	89.8%	10.4%	0.2%
Shizuoka	76.9%	14.5%	0.5%
Aichi	87.6%	10.5%	0.1%
Mie	80.8%	26.0%	0.2%
Shiga	98.2%	3.1%	-
Kyoto	96.8%	2.2%	0.0%
Osaka	96.8%	2.1%	0.0%
Hyogo	98.5%	2.0%	1.3%
Nara	87.3%	9.3%	0.3%
Wakayama	57.4%	29.0%	-
Tottori	90.7%	5.5%	0.1%
Shimane	76.2%	14.7%	0.6%
Okayama	82.4%	16.1%	-
Hiroshima	85.0%	11.4%	0.4%
Yamaguchi	84.1%	16.3%	0.0%
Tokushima	54.1%	33.5%	1.0%
Kagawa	72.2%	26.7%	0.0%
Ehime	74.3%	20.1%	0.4%
Kochi	71.6%	33.0%	0.2%
Fukuoka	89.8%	9.4%	0.3%
Saga	78.8%	14.5%	0.1%
Nagasaki	77.2%	13.1%	0.4%
Kumamoto	83.7%	13.9%	0.0%
Oita	71.2%	20.3%	0.1%
Miyazaki	81.6%	20.8%	-
Kagoshima	75.2%	31.6%	0.3%
Okinawa	85.4%	11.5%	-
Total	88.9%	8.9%	0.2%
(The end of FY2013)	(88.1%)	(8.8%)	(0.2%)

Note: Due to the devastating damage of the Great East Japan Earthquake, results are calculated without data from Fukushima prefecture.

Source: "Coverage state of Septic tanks (as of the end of FY2013)," Office for promotion of Johkaso, Waste Management Division, Waste Management and Recycling Department, Minister's Secretariat, MOE, the Government of Japan

5.26 Coverage state of population served by waste disposal system by year

	Coverage rate of population served by waste disposal system (B/A)	Total population (A) (Thousand person)	Total population served by waste disposal system (B) (Thousand person)	Sewerage system (Thousand person)	Agricultural drainage facilities (Thousand person)	Integrated septic tank (Thousand person)	Community Plant (Thousand person)
FY1999	68.9%	126,071	86,893	75,477	2,301	8,719	396
2000	71.4%	126,285	90,182	78,031	2,589	9,139	423
2001	73.7%	126,478	93,260	80,317	2,896	9,646	402
2002	75.8%	126,688	95,990	82,570	3,106	9,932	382
2003	77.7%	126,824	98,536	84,584	3,280	10,297	375
2004	79.4%	126,869	100,793	86,365	3,439	10,618	371
2005	80.9%	127,055	102,815	88,021	3,521	10,926	347
2006	82.4%	127,053	104,680	89,610	3,607	11,142	322
2007	83.7%	127,066	106,347	91,106	3,697	11,214	330
2008	84.8%	127,076	107,741	92,412	3,741	11,273	314
2009	85.7%	127,058	108,899	93,600	3,785	11,236	278
※ 2010	86.9%	121,233	105,311	91,035	3,435	10,590	250
※ 2011	87.6%	123,350	108,104	93,548	3,502	10,794	263
※ 2012	88.1%	126,396	111,378	96,446	3,601	11,065	266
※ 2013	88.9%	126,186	112,160	97,136	3,564	11,208	251

Note:

Since the data is rounded, the outcome may not be consistent when added up.

Data for Total Population is drawn from population of Basic Resident Register.

Due to the devastating damage of the Great East Japan Earthquake, results are calculated without data from Iwate, Miyagi and Fukushima prefectures.

Due to the devastating damage of the Great East Japan Earthquake, results are calculated without data from Iwate and Fukushima prefectures.

Due to the devastating damage of the Great East Japan Earthquake, results are calculated without data from Fukushima prefecture.

Source: press release of "Coverage rate of population served by waste disposal system (September, 2014)," MOE, the Government of Japan.

5.27 Transition of expenses of urine treatment project

(Unit : Million yen / year)

		FY2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total population (Thousand people)		127,007	127,299	127,507	127,606	127,712	127,781	127,487	127,529	127,429	127,302	127,146	128,622
Target population	Septic tanks	34,051	33,471	32,879	32,330	31,646	30,834	30,199	29,683	28,801	28,323	27,877	27,682
	Total Population without flush toilet	19,381	17,824	16,455	15,215	14,186	13,205	12,306	11,819	10,810	10,114	9,460	8,956
	Total	53,432	51,295	49,333	47,545	45,832	44,039	42,505	41,502	39,611	38,437	37,337	36,638
Revenue	General revenue source	233,122	226,355	218,735	208,676	203,003	196,471	198,554	186,694	180,919	172,002	173,892	169,832
	Earmarked revenue sources												
	National treasury disbursement	5,582	4,434	3,824	5,181	8,321	6,869	4,870	4,542	4,167	5,860	4,398	4,265
	Prefectural disbursement	2,047	2,108	2,276	1,794	1,903	2,224	1,510	1,309	1,285	1,386	1,411	1,235
	Handling fee	27,180	25,495	23,400	24,690	25,445	36,782	34,436	32,538	31,601	29,946	29,225	28,598
	Local Bond	10,519	8,565	4,285	8,072	16,186	21,706	8,241	7,725	8,492	6,514	10,341	7,400
	Others	5,076	4,782	5,903	5,550	8,602	7,730	7,496	6,663	6,803	5,905	7,123	5,350
	Subtotal	50,404	45,383	39,688	45,286	60,456	75,311	56,553	52,776	52,347	49,612	52,498	46,848
Total		283,525	271,738	258,423	253,962	263,459	271,782	246,107	239,470	233,266	221,613	226,389	216,680
Expenditure (the sum of municipalities and cooperatives)	Expenses for excreta disposal treatment	343,555	335,231	314,519	310,648	313,596	271,782	246,107	238,737	231,594	221,613	226,332	216,634
	Construction and improvement costs												
	Expenses for travelling or the like.	-	-	-	-	-	4,373	1,252	683	591	688	267	219
	Intermediate processing facilities	54,136	53,219	42,522	46,640	57,569	31,090	13,164	15,157	19,192	16,992	22,147	16,557
	Final disposal site	3,216	3,687	2,499	2,929	4,996	2,547	884	96	169	367	690	357
	Others	3,726	4,527	6,763	5,480	3,636	2,948	2,457	1,191	1,054	904	1,327	1,617
	Inspection fee	730	551	634	432	1,918	287	297	274	454	396	342	396
	Subtotal	61,809	61,984	52,417	55,481	68,119	41,245	18,054	17,401	21,461	19,347	24,772	19,147
	(Reference) union financial contributions	7,212	7,644	7,764	6,525	7,677	3,473	1,899	2,377	3,779	4,119	5,387	2,979
	Labor cost	77,074	71,816	67,528	64,541	60,463	57,199	59,496	55,757	50,413	47,251	45,326	42,993
	Treatment costs	5,714	5,911	5,716	5,129	4,949	3,665	4,865	5,256	3,937	3,704	3,752	3,532
		81,441	80,766	75,088	73,745	71,164	70,420	65,496	66,837	63,317	61,808	61,073	60,936
		3,707	3,852	3,555	4,000	2,888	2,679	2,630	2,624	2,070	1,777	1,906	2,085
	Purchasing vehicles and related costs	1,165	804	515	704	463	451	374	415	491	437	343	249
	Expenses for commission	-	-	-	-	36,076	33,746	31,086	29,983	28,906	27,865	27,178	26,181
		-	-	-	-	30,240	32,105	33,571	33,657	35,041	35,824	38,062	38,071
		-	-	-	-	7,502	5,510	4,635	4,444	4,143	3,470	3,631	3,104
		-	-	-	-	8,713	4,547	4,342	3,835	4,601	3,868	3,719	3,623
		84,891	80,473	79,432	76,977	82,530	75,908	73,633	71,920	72,690	71,026	72,590	70,979
	Others	10,996	12,301	12,172	11,640	-	-	-	-	-	-	16,471	16,621
	Research expenses	-	-	-	-	704	103	63	67	169	227	99	93
	Subtotal	264,988	255,922	244,007	236,736	223,162	210,424	206,558	202,875	193,087	186,231	185,089	180,866
	(Reference) union financial contributions	104,662	103,433	98,838	93,326	81,268	77,326	75,124	73,951	72,664	67,887	65,849	66,250
	Others	16,758	17,325	18,094	18,431	22,315	20,112	21,495	18,461	17,046	16,035	16,471	16,621
Expenses of urine treatment project per person (Yen / person, year)		6,400	6,500	6,400	6,500	6,800	6,200	5,800	5,800	5,800	5,800	6,100	5,900

Note: Union financial contributions are the contribution to some union offices of the municipality and are not included in the totals because they are devoted to the expenses of the treatment projects.

Source: "Waste Treatment in Japan (in each fiscal year version)," Waste Management Division, Waste and Recycling Department, Minister's Secretariat, MOE, the Government of Japan

5.28 Production of major agrochemicals

Names of agrochemicals	Unit	FY2011 on agrochemical year	2012	2013
Insecticide				
Acephate granules	t	4,241	4,070	4,595
ethythiometon granules	t	2,074	2,412	371
Etofenprox dust formulation	t	2,245	1,859	1,518
Oxamyl granules	t	2,103	2,093	1,580
Cartap granules	t	1,941	1,418	1,472
Clothianidin dust formulation	t	1,166	987	1,084
Chlorpicrin fumigant	KL	8,081	7,379	7,035
Chlorpyrifos granules	t	1,110	947	868
Dinotefuran dust formulation	t	1,724	1,687	1,806
Methyl bromide fumigant	KL	740	730	506
Diazinon granules	t	5,645	5,351	6,437
Tefluthrin granules	t	1,787	2,097	2,308
Benfuracarb granules	t	627	1,274	1,540
Fosthiazate granules	t	6,810	7,445	6,263
Lubricant emulsifiable concentrate	KL	5,825	5,198	5,705
D-D agent	KL	9,996	6,253	7,231
DEP dust formulation	t	1,382	678	0.2
Disinfectant				
Lime sulfur	KL	5,140	5,267	4,598
Dazomet	t	3,416	3,359	2,938
Copper wettable powder	t	3,786	3,637	4,109
Pyroquilon granules	t	988	691	480
Fluazinam dust formulation	t	4,801	4,208	4,605
Flusulfamide dust formulation	t	3,499	3,383	2,938
Probenazole granules	t	1,783	1,516	1,500
Mancozeb wettable powder	t	2,336	2,388	2,825
Insect-fungicide				
Fipronil·probenazole granules	t	1,094	400	949
Permethrin·myclobutanil liquid formulation	KL	660	723	817
Herbicide				
Isouron·DBN·DCMU granules	t	9	-	-
Chlorate granules	t	2,148	2,290	1,990
Glyphosate-isopropylamine salt liquid formulation	KL	9,241	9,754	11,180
Glyphosate-potassium liquid formulation	KL	4,813	6,832	9,091
Glufosinat liquid formulation	KL	1,932	1,594	1,651
Diquat·paraquat liquid formulation	KL	1,801	1,932	1,760
Cyhalofop-Butyl·dimethametryn·pyrazosulfuron-ethyl·pretilachlor granules	t	803	663	434
Simetryn·molinate·MCPB granules	t	517	877	900
Trifluralin granules	t	2,276	2,222	2,081
Pretilachlor granules	t	1,293	1,065	1,188
Broccil granules	t	1,515	1,621	1,466
Bentazon granules	t	1,803	1,420	2,044
DBN granules	t	2,626	2,335	2,900
MCPP liquid formulation	KL	514	416	569

Note:

·「-」 refers to either missing data or a product no longer produced.

Agrochemical year starts October and finishes September in the following year.

Source: "Agrochemical handbook 2014," Japan Plant Protection Association

5.29 Transition of registered number of agrochemicals by year

Kinds of agrochemicals	FY2009 agrochemical year	2010	2011	2012	2013
Insecticide	1,197	1,203	1,168	1,137	1,093
Disinfectant	956	979	948	930	911
Insect-fungicide	505	522	512	503	512
Herbicide	1,392	1,491	1,486	1,439	1,491
Pesticide-fertilizer combination products	54	62	69	76	72
Rodenticides	32	31	31	31	29
Plant growth regulators	88	84	89	92	89
Insect-fungicide PGR	2	2	2	2	2
Others	135	142	145	148	143
Total	4,361	4,516	4,450	4,358	4,342

Note: Agrochemical year starts October and finishes September in the following year.

Source: "Agrochemical handbook 2014," Japan Plant Protection Association

5.30 Production of chemical fertilizer

(Unit : t)

Chemical fertilizer year	Ammonium sulfate	Calcium cyanamide	Urea	Ammonium nitrate	Ammonium chloride
2005	1,419,512	60,187	427,150	39,319	91,938
2006	1,455,571	55,422	449,579	35,532	84,667
2007	1,479,520	51,019	453,487	29,400	67,147
2008	1,208,438	49,466	403,417	30,400	77,744
2009	1,351,078	49,439	366,955	-	70,611
2010	1,320,726	42,969	412,670	-	74,293
2011	1,270,308	52,511	453,487	-	73,976
2012	1,224,963	47,913	358,338	-	79,284

Chemical fertilizer year	Calcium superphosphate	Double/triple superphosphate	Calcined phosphate	Fused phosphate	High analysis compound fertilizers
2005	186,831	19,223	79,804	68,410	1,034,520
2006	175,100	22,423	69,160	63,941	965,793
2007	185,479	30,243	71,183	70,738	939,907
2008	165,332	22,465	52,788	61,388	721,445
2009	137,534	7,839	45,962	48,724	718,235
2010	149,328	8,672	62,677	49,666	791,827
2011	139,312	8,819	55,295	46,654	790,627
2012	124,298	6,783	50,135	41,075	785,899

Note:

In regard to Ammonium nitrate, data is no longer taken after FY2009.

Chemical fertilizer year starts on July 1st and finishes on June 30th.

Source: "Pocket handbook of chemical fertilizer 2013/2014," Association of Agriculture and Forestry Statistics

5.31 Transition of numbers of incidents that exceed Environmental Quality Standards (EQS) for soil pollution

	Incidents that exceed EQS for soil pollution.	VOC (Volatile Organic Compounds) Type1 Exceeding	Heavy metals and the like Type2 Exceeding	Agrochemicals and the like Type3 Exceeding	Complex contamination
Prior to FY1993	32	-	32	-	-
1994	25	8	13	-	4
1995	37	16	19	-	2
1996	50	18	28	-	4
1997	48	13	29	-	6
1998	130	76	47	-	7
1999	130	67	51	-	12
2000	151	55	72	1	23
2001	210	42	124	2	42
2002	274 (0)	56 (0)	177 (0)	2 (0)	39 (0)
2003	366 (21)	56 (4)	257 (15)	2 (0)	51 (2)
2004	456 (43)	78 (12)	298 (28)	1 (0)	79 (3)
2005	673 (48)	125 (18)	451 (29)	6 (0)	91 (1)
2006	696 (77)	127 (24)	490 (46)	1 (0)	78 (7)
2007	728 (81)	110 (15)	542 (61)	1 (0)	75 (5)
2008	700 (71)	104 (13)	521 (55)	2 (0)	73 (3)
2009	575 (94)	89 (20)	423 (71)	3 (0)	60 (3)
2010	798 (275)	- (13)	- (207)	- (0)	- (13)
2011	943 (468)	- (34)	- (344)	- (0)	- (66)
2012	906 (487)	- (34)	- (371)	- (0)	- (59)
Total	7,928 (1,665)	- (187)	- (1,227)	- (0)	- (162)

Note:

"Incidents that exceed EQS for soil pollution" refer to number of incidents that exceed either the environment standard value or EQS for soil contamination.

Parenthesized data refers to confirmed number of incidents that exceed the standard value based on a survey according to law.

A survey not according to law was not conducted for number of incidents exceed the standard value; VOC, Heavy metals, Chemical fertilizer and complex contamination.

Source: "Results of the survey on the enforcement status of the Soil Contamination Countermeasures Act and Soil Contamination Investigations and Countermeasures in FY 2012," Environment Management Bureau, MOE, the Government of Japan

5.32 Number of soil contamination investigations and countermeasures taken by prefectures in FY2012

Prefectures (including ordinance-designated cities)	Number of cases						
	Number of survey results reports	Number of designated cases	VOC	Heavy metals and the like	Agrochemicals and the like	Complex contamination	Survey not conducted
Hokkaido area							
Hokkaido	49	24	3	14	0	3	4
Total	49	24	3	14	0	3	4
Tohoku area							
Aomori	16	6	0	4	0	0	2
Iwate	18	6	1	4	0	1	0
Miyagi	33	24	2	18	0	2	2
Akita	9	4	0	4	0	0	0
Yamagata	18	2	1	1	0	0	0
Fukushima	47	17	0	15	0	1	1
Total	141	59	4	46	0	4	5
Kanto area							
Ibaraki	50	23	1	18	0	4	0
Tochigi	36	22	5	10	0	7	0
Gunma	65	23	2	18	0	2	1
Saitama	211	107	17	78	0	11	1
Chiba	101	52	9	35	0	6	2
Tokyo	707	352	42	271	0	37	2
Kanagawa	364	202	28	137	0	28	9
Niigata	76	26	7	18	0	1	0
Yamanashi	35	19	4	12	0	3	0
Shizuoka	78	35	1	25	0	5	4
Total	1,723	861	116	622	0	104	19
Chubu area							
Toyama	12	6	3	3	0	0	0
Ishikawa	23	12	0	11	0	1	0
Fukui	21	7	1	5	0	0	1
Nagano	35	19	5	10	0	4	0
Gifu	38	17	4	13	0	0	0
Aichi	203	70	7	59	0	2	2
Mie	21	4	1	1	0	0	2
Total	353	135	21	102	0	7	5
Kinki area							
Shiga	37	8	0	7	0	1	0
Kyoto	63	30	1	24	0	4	1
Osaka	437	226	14	183	0	23	6
Hyogo	192	107	13	85	0	6	3
Nara	12	6	1	5	0	0	0
Wakayama	16	3	1	1	0	0	1
Total	757	380	30	305	0	34	11
Chugoku-shikoku area							
Tottori	8	2	0	2	0	0	0
Shimane	4	1	0	1	0	0	0
Okayama	22	9	1	8	0	0	0
Hiroshima	51	26	2	21	0	2	1
Yamaguchi	23	17	3	12	0	2	0
Tokushima	10	0	0	0	0	0	0
Kagawa	20	7	0	7	0	0	0
Ehime	13	2	0	1	0	1	0
Kochi	1	1	0	1	0	0	0
Total	152	65	6	53	0	5	1
Kyushu area							
Fukuoka	94	47	2	35	0	5	5
Saga	7	3	0	3	0	0	0
Nagasaki	20	15	2	13	0	0	0
Kumamoto	21	18	1	17	0	0	0
Oita	17	10	2	8	0	0	0
Miyazaki	8	4	0	4	0	0	0
Kagoshima	31	5	0	5	0	0	0
Okinawa	7	0	0	0	0	0	0
Total	205	102	7	85	0	5	5
Grand Total	3,380	1,626	187	1,227	0	162	50

Note

The data refers to number of surveys conducted in accord with Soil Contamination Countermeasures Act.

The data refers to cumulative total since Soil Contamination Countermeasures Act was enacted on February 15th, 2003 until the end of FY2012.

Source: "Results of the survey on the enforcement status of the Soil Contamination Countermeasures Act and Soil Contamination Investigations and Countermeasures" Environment Management Bureau, MOE, the Government of Japan

5.33 Progress status of countermeasures taken against farmland contamination

(As of the end of FY2013)

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(Upper row : Area, Lower row : Number of areas)

Note:

"Area with detected values above the standard levels" is the results of detailed investigation until fiscal year 2013.

When added up, the sum of the vertical field area and number of region does not match the total column, because of overlap in pollution.

When added up, the sum of the horizontal field regions does not consistent with the values in Total since there are partially removed areas, completed remedial programs. This applies to all other columns.

'Area with completed remedial program' among 'Area with formulated remedial plan' refers to the area where remedial plans supported by the government has been completed as well as the areas that have been changed their purposes.

Area completed a single project by prefecture' includes the area no longer contamination is detected as the area has been changed its use in purposes.

Source: 'Enforcement status of the Soil Contamination Countermeasures Act for farmland in FY 2013,' Environment Management Bureau, MOE, the Government of Japan

5.34 Area of designated areas and pollution prevention projects completed areas

	㊶Above the detection standard value	㊷Designated area	㊸Measures planning	㊹The prevention projects completed		㊺Area which require future measurement
	Total area	Total area	Total area	Area of the current fiscal year	Total area	Area of the current fiscal year
FY 1970						
1971		112				
1972		400	164	70	70	
1973		1,140	357	30	100	
1974		2,579	502	30	130	
1975	6,100	3,398	713	40	170	5,930
1976	6,200	4,110	887	460	630	5,570
1977	6,390	4,336	1,650	10	640	5,750
1978	6,440	4,459	1,896	340	980	5,460
1979	6,510	4,577	2,334	370	1,350	5,160
1980	6,530	4,674	2,836	250	1,600	4,930
1981	6,610	4,891	3,015	270	1,870	4,740
1982	6,700	5,390	3,233	250	2,120	4,580
1983	6,710	5,451	4,148	320	2,440	4,270
1984	6,910	5,616	4,197	250	2,690	4,220
1985	7,030	6,053	4,364	330	3,020	4,010
1986	7,030	6,053	4,660	280	3,300	3,730
1987	7,030	6,078	4,841	320	3,620	3,410
1988	7,050	6,122	4,865	340	3,960	3,090
1989	7,050	6,146	4,911	220	4,180	2,870
1990	7,050	6,146	4,938	180	4,360	2,690
1991	7,050	6,146	6,021	120	4,480	2,570
1992	7,140	6,214	6,021	120	4,800	2,540
1993	7,140	6,255	6,105	120	4,720	2,420
1994	7,140	6,258	6,170	200	4,920	2,220
1995	7,140	6,258	6,170	240	5,160	1,980
1996	7,140	6,262	6,173	140	5,300	1,840
1997	7,140	6,265	6,176	110	5,410	1,730
1998	7,152	6,266	6,178	160	5,570	1,582
1999	7,156	6,266	6,181	61	5,631	1,525
2000	7,166	6,266	6,181	187	5,818	1,348
2001	7,217	6,275	6,181	54	5,872	1,345
2002	7,224	6,275	6,181	182	6,054	1,170
2003	7,228	6,276	6,190	254	6,308	920
2004	7,327	6,376	6,236	49	6,357	970
2005	7,327	6,376	6,236	41	6,398	929
2006	7,483	6,577	6,306	162	6,560	923
2007	7,487	6,577	6,306	20	6,580	907
2008	7,487	6,577	6,492	20	6,600	887
2009	7,487	6,577	6,492	104	6,704	783
2010	7,575	6,577	6,492	23	6,727	848
2011	7,575	6,577	6,492	57	6,784	791
2012	7,592	6,577	6,492	125	6,909	683
2013	7,592	6,577	6,492	53	6,962	630

Note:

"Measures planning" column has been calculated at the year, which Minister of Environment approved the plans.

Area where countermeasures have been taken' includes the area where countermeasures are adopted only by prefectures. Also, it does not include in some completed area before fiscal year 1977.

area of the prevention projects completed and area which require future measurement from FY2005 to FY2012 were updated.

Source: 'Enforcement status of the Soil Contamination Countermeasures Act for farmland in FY 2012,' Environment Management Bureau, MOE, the Government of Japan

5.35 Usage conditions of the country's ground water

(Unit : Ten thousand m³ / year)

		Total amount of water usage	Surface water and the like	Ground water	Dependency on ground water (%)	Source
FY 1972	For industrial use	127.7	82.0	45.7	36	1972 Statistical Charts on Industry
	For city water	116.3	90.0	26.3	23	FY 1972 Statistics on water supply
	For agriculture	528	495.3	32.7	6.2	Refer to the Notes at the bottom.
1978	For industrial use	116.9	77.7	39.2	34	1977 Statistical Charts on Industry
	For city water	132.9	105.0	27.9	21	FY 1977 Statistics on water supply
	For agriculture	570	532.5	37.5	6.6	Refer to the Notes at the bottom.
1983	For industrial use	105.4	72.6	32.9	31	1982 Statistical Charts on Industry
	For city water	140.6	110.4	30.2	21	FY 1982 Statistics on water supply
	For agriculture	580	542.5	37.5	6.5	Refer to the Notes at the bottom.
1987	For industrial use	103.3	72.5	30.8	30	1987 Statistical Charts on Industry
	For city water	152.2	118.0	34.2	22	FY 1987 Statistics on water supply
	For agriculture	585	546.2	38.8	7	1990 Water supply in Japan
1993	For industrial use	107.0	76.5	30.5	29	1992 Statistical Charts on Industry
	For city water	167.4	131.0	36.4	22	FY 1992 Statistics on water supply
	For agriculture	586	547.2	38.8	7	1994 Water supply in Japan
1998	For industrial use	101.0	73.3	27.8	27	1997 Statistical Charts on Industry
	For city water	169.3	132.6	36.7	22	FY 1997 Statistics on water supply
	For agriculture	589.7	550.9	38.8	7	1999 Water supply in Japan
2003	For industrial use	92.4	68.4	24.0	26	2002 Statistical Charts on Industry
	For city water	165.0	130.4	34.6	21	FY 2002 Statistics on water supply
	For agriculture	568.0	535.0	33.0	6	2004 Water supply in Japan
2008	For industrial use	90.1	67.7	22.4	25	2007 Statistical Charts on Industry
	For city water	161.7	129.1	32.6	20	FY 2007 Conditions of the source of water supply
	For agriculture	547.0	514.0	33.0	6	2009 Water supply in Japan
2009	For industrial use	87.5	66.2	21.3	24	2008 Statistical Charts on Industry
	For city water	159.1	127.3	31.8	20	FY 2008 Conditions of the source of water supply
	For agriculture	546.0	513.0	33.0	6	2010 Water supply in Japan
2010	For industrial use	82.4	62.7	19.7	24	2009 Statistical Charts on Industry
	For city water	158.2	127.0	31.2	20	FY 2009 Conditions of the source of water supply
	For agriculture	546.0	517.3	28.7	5	2011 Water supply in Japan
2011	For industrial use	83.5	63.5	20.0	24	2010 Statistical Charts on Industry
	For city water	158.4	127.0	31.4	20	FY 2010 Conditions of the source of water supply
	For agriculture	544.0	515.3	28.7	5	2012 Water supply in Japan
2012	For industrial use (2011)	79.5	60.3	19.2	24	2011 Statistical Charts on Industry
	For city water (FY 2011)	157.3	126.5	30.8	20	FY 2011 Conditions of the source of water supply
	For agriculture (2008)	546.0	517.3	28.7	5	2013 Water supply in Japan
2013	For industrial use (2012)	81.0	61.4	19.6	24.2	2012 Statistical Charts on Industry
	For city water (FY 2012)	155.9	125.4	30.5	19.6	FY 2012 Conditions of the source of water supply
	For agriculture (2008)	546.0	517.3	28.7	5.3	2014 Water supply in Japan

Note:

Data for industrial use is calculated from by Ministry of Economy, Trade and Industry, based on 300 operated days.

Total quantity of water for industrial use refers to freshwater intake, and ground water refers to water from wells (water taken from shallow wells, deep wells and spring water.)

Data for city water prior to FY 2003 was calculated (water supply and wholesale supply were combined) based on the quantity of water intake from 'Statistics on water supply survey' provided from Ministry of Health, Labour and Welfare .

Ground water refers to water from wells (both shallow wells and deep wells.)

Source: Total quantity of water for agriculture and the quantity of ground water for agriculture for FY 1972 were provided by Ministry of Agriculture, Forestry and Fisheries.

Data of total quantity of water for agriculture in 1978 is an estimated data for water demand in 1983.

Data of total quantity of water for agriculture in 1983 is an estimated data for water demand in 1980.

5.36 Transition of nationwide ground subsidence

	Area subsided at 2 cm or more per year		Area subsided at 4 cm or more per year	
	Number of areas	Square kilometers (km ²)	Number of areas	Square kilometers (km ²)
FY 1978	28	1,946	13	404
1979	25	624	9	176
1980	23	467	8	100
1981	25	689	8	60
1982	22	616	8	45
1983	22	594	6	45
1984	31	814	12	161
1985	19	499	7	40
1986	18	396	6	7
1987	12	500	7	22
1988	17	617	5	63
1989	16	285	4	7
1990	18	360	5	14
1991	17	467	4	6
1992	19	525	6	25
1993	11	276	1	0
1994	21	902	6	113
1995	14	21	2	0
1996	13	258	4	22
1997	9	244	-	-
1998	9	250	-	-
1999	9	6	-	-
2000	7	6	-	-
2001	9	28	-	-
2002	8	461	-	-
2003	6	3	1	0
2004	9	176	2	0
2005	7	4	-	-
2006	5	17	1	1
2007	9	72	-	-
2008	3	1	2	0
2009	6	24	1	0
2010	6	6	-	-
2011	14	5,920	11	4,061
2012	7	2	-	-
2013	4	1	-	-

Note:

Some areas are not measured.

"-" shows that there is no data applicable to the number of areas nor square kilometers for subsidence areas.

"0" refers to the case that the data is less than 0.5km².

All data are rounded and shown at 1km² bases.

The data in FY 2011 includes ground subsidence cases that are considered to be affected by Great East Japan Earthquake.

Source: "General conditions of nationwide ground subsidence in FY 2013," Environment Management

Bureau, MOE, the Government of Japan

6.01 Transition of number of facilities with apparatus exhausting flue gas

(Unit : Number of Facilities)

	Apparatus exhausting flue gas							Total
	Boiler	Diesel engine	Waste incinerator	Metal furnace	Drying furnace	Melting furnace	Others	
FY1990	123,099	-	9,121	8,581	7,565	4,599	13,383	166,348
1991	127,536	12,185	9,321	8,555	7,634	4,649	12,980	182,860
1992	129,637	13,642	10,569	8,503	7,606	4,625	12,608	187,190
1993	131,314	17,170	10,809	8,415	7,570	4,631	13,525	193,434
1994	133,546	18,258	11,142	8,319	7,651	4,618	9,669	193,203
1995	136,094	18,939	11,556	8,266	7,742	4,677	14,392	201,666
1996	137,089	20,250	10,939	8,184	7,773	4,579	14,349	203,163
1997	138,803	21,223	10,924	8,367	7,813	4,658	14,657	206,445
1998	140,830	19,313	10,372	8,385	7,910	4,556	17,438	208,804
1999	141,047	25,541	10,116	8,300	7,760	4,778	16,575	214,117
2000	137,149	26,063	9,102	8,043	7,629	4,661	22,055	214,702
2001	137,191	26,684	8,861	7,761	7,536	4,622	22,165	214,820
2002	141,149	28,115	7,361	7,433	7,480	4,394	19,229	215,161
2003	140,150	29,901	6,912	7,431	7,563	4,300	17,900	214,157
2004	141,317	31,425	6,788	7,430	7,485	4,312	18,197	216,954
2005	142,070	32,722	6,584	7,438	7,430	4,270	18,188	218,702
2006	141,466	32,608	6,391	7,478	7,371	4,242	18,958	218,514
2007	140,865	32,851	6,304	7,434	7,352	4,285	19,297	218,388
2008	141,787	33,195	6,151	7,528	7,272	4,320	19,755	220,008
2009	140,132	33,633	5,985	7,597	7,185	4,264	19,899	218,695
2010	138,937	33,724	5,889	7,557	7,057	4,105	19,900	217,169
2011	137,659	35,226	5,763	7,547	6,983	4,089	20,534	217,801
2012	136,487	36,065	5,633	7,562	6,900	3,948	20,537	217,132
2013	136,154	36,965	5,461	7,445	6,889	3,853	20,788	217,555

Note: Prior to FY 1991, data is taken from number of facilities applicable to Air Pollution Control Law. From FY 1992 to FY 1999, data is taken from

number of facilities applicable to Air Pollution Control Law (including facilities related to Electricity Business Act and Gas Business Act.)

From FY 2000 up to now, data is taken from number of facilities applicable to Air Pollution Control Law (including facilities related to Electricity Business Act and Gas Business and Mine Safety Act.)

Source: 'Survey on the Enforcement Status of the Air Pollution Control Act,' Air Environment Division, Environment Management Bureau, MOE, the Government of Japan

6.02 Number of facilities with apparatus exhausting flue gas by prefectures

(Unit : Number of facilities)

	FY2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Hokkaido	16,309	16,475	16,362	16,516	16,545	16,439	16,440	16,410	16,389	16,245
Aomori	3,696	3,732	3,635	3,620	3,665	3,557	3,543	3,510	3,530	3,473
Iwate	3,154	3,182	3,166	3,090	3,203	3,168	3,147	3,214	3,189	3,252
Miyagi	4,345	4,458	4,331	4,368	4,334	4,310	4,281	4,265	4,294	4,321
Akita	2,499	2,555	2,573	2,604	2,579	2,608	2,590	2,585	2,642	2,667
Yamagata	2,952	2,976	2,864	2,873	2,814	2,765	2,754	2,756	2,715	2,746
Fukushima	4,561	4,683	4,674	4,721	4,716	4,669	4,637	4,628	4,673	4,740
Ibaraki	4,236	4,369	4,433	4,338	5,936	5,932	6,140	6,363	5,970	5,928
Tochigi	4,998	4,927	4,953	4,871	4,491	4,472	4,181	4,359	4,353	4,302
Gunma	4,228	3,995	3,789	3,785	3,781	3,844	3,840	3,970	3,988	3,987
Saitama	7,556	7,575	7,499	7,451	7,381	7,248	7,155	7,198	7,187	7,197
Chiba	7,250	7,342	7,488	7,224	7,219	7,220	7,130	7,281	7,182	7,220
Tokyo	14,436	14,441	14,784	14,324	14,398	14,425	14,106	14,256	14,159	14,387
Kanagawa	10,018	9,949	10,055	9,942	9,872	9,849	9,711	9,844	9,745	9,840
Niigata	5,377	5,474	5,403	5,498	5,500	5,465	5,518	5,494	5,650	5,711
Toyama	3,034	3,062	3,017	3,012	3,048	3,077	3,102	3,100	3,210	3,264
Ishikawa	2,803	2,849	2,845	2,814	2,793	2,782	2,752	2,715	2,669	2,691
Fukui	1,969	2,064	2,012	2,037	2,022	1,996	1,983	1,989	1,877	1,811
Yamanashi	2,217	2,229	2,177	2,132	2,121	2,113	2,107	2,157	2,119	2,098
Nagano	5,038	5,058	4,937	5,058	5,089	5,071	5,058	5,046	5,065	5,109
Gifu	3,993	4,096	4,028	4,084	4,097	4,077	4,065	4,282	4,337	4,306
Shizuoka	7,459	7,517	7,585	7,963	7,903	7,714	7,650	7,554	7,504	7,474
Aichi	14,436	14,634	14,541	14,678	14,653	14,622	14,279	14,176	14,063	14,034
Mie	4,525	4,626	4,759	4,550	4,608	4,595	4,590	4,564	4,525	4,486
Shiga	3,385	3,625	3,457	3,486	3,579	3,258	3,279	3,225	3,233	3,292
Kyoto	4,469	4,483	4,438	4,451	4,335	4,269	4,215	4,130	3,948	3,939
Osaka	13,086	13,219	13,441	13,310	13,439	13,452	13,279	13,218	13,161	13,193
Hyogo	9,120	9,382	9,486	9,618	9,723	9,647	9,499	9,517	9,517	9,424
Nara	1,821	1,697	1,676	1,691	1,702	1,718	1,719	1,722	1,713	1,732
Wakayama	1,709	1,726	1,712	1,724	1,740	1,726	1,736	1,669	1,665	1,701
Tottori	1,089	1,080	1,063	1,079	1,073	1,070	1,055	1,052	1,067	1,063
Shimane	1,329	1,344	1,514	1,566	1,565	1,523	1,594	1,641	1,640	1,668
Okayama	4,009	3,751	3,964	3,916	4,000	4,082	4,032	4,036	4,019	3,904
Hiroshima	4,890	4,866	4,850	4,829	4,783	4,773	4,735	4,689	4,657	4,647
Yamaguchi	3,318	3,304	3,351	3,347	3,338	3,317	3,323	3,296	3,273	3,307
Tokushima	1,546	1,567	1,461	1,489	1,493	1,497	1,503	1,521	1,512	1,515
Kagawa	2,189	2,203	2,170	2,144	2,135	2,003	2,026	1,956	2,036	1,999
Ehime	2,379	2,396	2,563	2,534	2,515	2,498	2,510	2,391	2,485	2,450
Kochi	1,110	1,097	1,097	1,123	1,097	1,115	1,128	1,138	1,157	1,165
Fukuoka	7,032	7,063	6,845	6,824	6,848	6,933	6,906	6,868	6,964	7,030
Saga	1,274	1,365	1,363	1,340	1,341	1,341	1,312	1,313	1,323	1,339
Nagasaki	1,793	1,796	1,821	1,808	1,880	1,882	1,876	1,911	1,891	1,921
Kumamoto	2,821	2,892	2,747	2,810	2,876	2,768	2,800	2,853	2,837	2,891
Oita	1,850	1,798	1,833	1,885	1,877	1,861	1,890	1,891	1,902	1,887
Miyazaki	1,587	1,642	1,671	1,688	1,698	1,680	1,692	1,711	1,724	1,741
Kagoshima	2,748	2,811	2,720	2,735	2,730	2,754	2,759	2,774	2,783	2,813
Okinawa	1,311	1,387	1,401	1,438	1,473	1,510	1,542	1,563	1,590	1,645
nationwide	216,954	218,702	218,514	218,388	220,008	218,695	217,169	217,801	217,132	217,555

Note: From FY 2000 up to now, data is taken from number of facilities applicable to Air Pollution Control Law (including facilities related to Electricity Business Act, Gas Business Act and Mine Safety Act.)

Source: 'Survey on the Enforcement Status of the Air Pollution Control Act,' Air Environment Division, Environment Management Bureau, MOE, the Government of Japan

6.03 Transition of number of dust discharging facilities (general dust/specified dust)

(Unit : Number of facilities)

	General dust discharging facilities						Specified dust discharging facilities								Total
	Conveyor	Crusher/ Grinding mill	Accumulation grounds	Sieve	Coke oven	Total	Grinder	Cutting machine	Mixer	Press	Cutting machine	Crusher/ Grinding mill	Others		
FY1989	28,540	8,242	8,330	4,495	103	49,710	582	532	412	220	269	167	327	2,509	
1990	29,054	8,412	8,351	4,586	97	50,500	622	571	428	279	274	171	324	2,669	
1991	30,828	8,706	8,532	4,770	107	52,943	627	560	406	268	260	159	313	2,593	
1992	31,839	8,930	8,641	4,972	111	54,493	638	534	364	250	225	145	301	2,457	
1993	32,345	9,151	8,770	5,075	107	55,448	602	520	352	256	221	142	253	2,346	
1994	33,244	9,379	8,945	5,223	109	56,900	574	505	324	248	218	139	244	2,252	
1995	33,872	9,569	9,032	5,328	108	57,909	555	495	311	249	216	131	229	2,186	
1996	34,430	9,763	9,209	5,476	107	58,985	551	490	296	233	207	143	221	2,141	
1997	34,818	9,782	9,269	5,533	100	59,502	558	467	303	237	194	136	224	2,119	
1998	35,419	9,905	9,516	5,661	106	60,607	549	431	280	232	164	134	216	2,006	
1999	34,973	9,962	9,539	5,676	99	60,249	507	414	262	223	157	133	203	1,899	
2000	36,234	10,306	9,852	5,884	93	62,369	315	375	207	205	136	117	201	1,556	
2001	36,847	10,465	10,217	6,009	95	63,633	199	340	157	164	107	99	170	1,236	
2002	37,400	10,651	10,261	6,110	92	64,514	174	303	143	151	99	90	177	1,137	
2003	37,885	10,726	10,464	6,267	95	65,437	119	250	123	137	78	72	150	929	
2004	37,666	10,746	10,728	6,321	95	65,556	68	145	66	103	46	33	94	555	
2005	37,536	10,764	10,770	6,439	101	65,610	4	16	2	61	0	0	11	94	
2006	37,823	10,758	10,946	6,506	101	66,134	0	5	0	1	0	0	0	6	
2007	38,521	10,611	10,988	6,378	96	66,594	0	0	0	0	0	0	0	0	
2008	38,935	10,596	11,126	6,528	97	67,282	0	0	0	0	0	0	0	0	
2009	39,346	11,268	10,659	6,644	85	68,002	0	0	0	0	0	0	0	0	
2010	39,296	10,476	11,383	6,614	86	67,855	0	0	0	0	0	0	0	0	
2011	39,536	10,353	11,408	6,582	85	67,964	0	0	0	0	0	0	0	0	
2012	40,290	10,382	11,607	6,691	78	69,048	0	0	0	0	0	0	0	0	
2013	40,512	10,366	11,694	6,674	95	69,341	0	0	0	0	0	0	0	0	

Note: Up to FY 1990, the number for 'General dust discharging facilities' refers to the number of facilities concerning to Air Pollution Control Law. From FY 1991 to FY1999, the number for 'General dust discharging facilities' refers to the number of facilities concerning to Air Pollution Control Law (including facilities concerning to Electricity Business Act and Gas Business Act.) Since FY 2000 up to present, the number for 'General dust discharging facilities' refers to the number of facilities concerning to Air Pollution Control Law (including facilities concerning to Electricity Business Act, Gas Business Act and Mine Safety Act.)

Source: 'Survey on the Enforcement Status of the Air Pollution Control Law,' Air Environment Division, Environment Management Bureau, MOE, the Government of Japan

6.04 Number of general dust discharging facilities by prefectures

(Unit : Number of facilities)

	FY2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Hokkaido	4,498	4,445	4,511	4,545	4,550	4,529	4,498	4,356	4,344	4,270
Aomori	1,249	1,274	1,438	1,557	1,577	1,687	1,685	1,694	1,699	1,675
Iwate	1,477	1,415	1,425	1,213	1,408	1,514	1,513	1,529	1,535	1,557
Miyagi	683	703	694	685	676	651	674	810	977	691
Akita	711	683	675	676	655	688	615	550	569	522
Yamagata	764	763	780	775	761	736	705	667	660	663
Fukushima	1,644	1,642	1,614	1,519	1,586	1,582	1,647	1,664	1,660	1,781
Ibaraki	2,574	2,593	2,643	2,687	2,537	2,465	2,378	2,401	2,435	2,449
Tochigi	1,487	1,481	1,523	1,534	1,624	2,543	2,508	2,520	2,517	2,526
Gunma	595	599	613	611	619	631	569	524	626	664
Saitama	1,324	1,351	1,323	1,348	1,347	1,369	1,435	1,452	1,461	1,481
Chiba	1,355	1,387	1,478	1,924	1,921	1,923	1,949	1,999	1,979	2,029
Tokyo	1,539	1,576	1,521	1,463	1,431	1,446	1,453	1,458	1,469	1,490
Kanagawa	1,957	1,971	1,948	1,947	1,946	1,938	1,946	1,975	1,971	1,981
Niigata	800	827	830	814	760	759	816	798	829	822
Toyama	1,070	1,088	1,086	1,086	1,120	1,141	1,151	1,154	1,160	1,164
Ishikawa	690	684	668	686	692	709	705	703	707	692
Fukui	605	618	627	604	563	543	541	513	476	456
Yamanashi	595	571	564	557	578	592	590	562	585	597
Nagano	1,451	1,438	1,467	1,425	1,439	1,422	1,353	1,373	1,380	1,388
Gifu	1,273	741	762	778	792	807	817	821	819	823
Shizuoka	1,041	927	950	930	919	921	894	968	948	1,004
Aichi	4,146	4,136	4,206	4,377	4,342	4,411	4,470	4,522	4,625	4,533
Mie	1,541	1,548	1,568	1,572	1,588	1,613	1,686	1,716	1,734	1,745
Shiga	551	572	598	442	519	500	489	482	485	492
Kyoto	504	523	547	550	575	585	596	582	588	607
Osaka	1,487	1,500	1,240	1,261	1,284	1,235	1,239	1,199	1,406	1,403
Hyogo	4,764	5,138	5,136	5,099	5,200	5,223	5,204	5,119	5,249	5,117
Nara	193	209	209	209	225	229	231	295	298	304
Wakayama	1,465	1,473	1,414	1,486	1,554	1,479	1,427	1,472	1,475	1,501
Tottori	201	209	216	236	263	264	269	264	422	386
Shimane	598	610	631	634	632	640	588	582	608	613
Okayama	2,319	2,290	2,337	2,403	2,444	2,446	2,487	2,482	2,493	2,597
Hiroshima	2,476	2,507	2,530	2,452	2,501	2,485	2,394	2,438	2,397	2,970
Yamaguchi	1,649	1,675	1,723	1,633	1,716	1,761	1,769	1,733	1,773	1,786
Tokushima	624	688	730	740	746	743	728	738	743	742
Kagawa	941	924	929	1,001	1,007	958	963	966	946	941
Ehime	1,077	1,048	1,174	1,189	1,178	1,182	1,109	1,151	1,119	1,085
Kochi	487	498	502	538	538	536	808	784	780	746
Fukuoka	3,921	3,925	3,883	3,893	3,867	3,937	3,673	3,666	3,654	3,686
Saga	521	510	526	526	513	515	491	496	494	487
Nagasaki	976	1,035	1,039	1,011	1,009	832	988	931	1,047	982
Kumamoto	878	893	907	943	1,009	771	792	791	805	796
Oita	2,591	2,677	2,689	2,749	2,736	2,753	2,725	2,750	2,727	2,758
Miyazaki	762	734	729	737	747	706	678	691	706	663
Kagoshima	1,181	1,173	1,186	1,194	1,220	1,216	1,216	1,224	1,215	1,192
Okinawa	321	338	345	355	368	386	393	399	453	484
nationwide	65,556	65,610	66,134	66,594	67,282	68,002	67,855	67,964	69,048	69,341

Note: The data after FY 2000 refers to the number of facilities concerning to Air Pollution Control Law (including Electricity Business Act, Gas Business Act and Mine Safety Act.)

Source: 'Survey on the Enforcement Status of the Air Pollution Control Law,' Air Environment Division, Environment Management Bureau, MOE, the Government of Japan

6.05 Conditions of air pollutant emission (Stationary sources)

(Unit : t)

	So _x emission	No _x emission	Soot and dust emission
FY 1978	1,315,637	870,924	-
1979	1,248,037	843,572	-
1980	1,157,837	818,667	-
1981	1,040,954	763,220	-
1982	956,666	717,469	-
1983	917,960	720,648	132,999
1984	853,700	721,802	-
1985	795,457	699,428	-
1986	684,497	661,622	100,550
1987	597,480	685,550	97,817
1988	580,757	703,905	93,796
1989	676,863	777,230	107,094
1990	614,866	778,977	96,945
1991	624,154	812,473	90,922
1992	694,689	832,655	102,989
1993	642,966	788,235	99,186
1994	676,351	819,860	108,230
1995	708,135	877,662	101,763
1996	659,743	855,787	94,606
1999	629,206	837,260	75,086
2002	595,506	869,113	60,738
2005	566,773	890,188	57,976
2008	505,590	731,094	47,660
2011	410,979	696,404	36,529

Note:

The highlighted data for FY 1987 and FY 1988, data for FY 1990, FY 1991, FY 1993 and FY 1994 are taken from the result of sample survey.

There were no surveys conducted for FY 1997, FY 1998, FY 2000, FY 2001, FY 2003, FY 2004, FY 2006, FY 2007, FY 2009 and FY2010.

Source: 'Survey on the Enforcement Status of the Air Pollution Control Law,' Air Environment Division, Environment Management Bureau, MOE, the Government of Japan

6.06 Sulfur oxide emissions (breakdown according to different facilities)(Unit : km³ N / Year)

	Apparatus exhausting flue gas							Total
	Boiler 01	Diesel engine 30	Waste incinerator 13	Metal furnace 06	Drying furnace 11	Melting furnace 05	Others	
FY 1992	171,472	11,590	13,917	3,026	4,129	2,639	36,368	243,141
1993	150,188	10,305	14,574	2,913	3,693	2,450	40,915	225,038
1994	157,992	12,225	15,433	3,041	3,354	2,293	42,385	236,723
1995	165,252	13,146	18,987	3,059	3,585	2,048	41,770	247,847
1996	160,402	13,008	12,513	2,844	4,519	1,894	35,730	230,910
1999	145,848	12,509	13,397	2,050	5,341	1,511	39,567	220,223
2002	136,744	15,076	8,162	1,970	3,035	3,208	40,232	208,427
2005	130,696	14,159	10,963	2,095	3,358	2,306	34,793	198,370
2008	120,700	12,864	5,509	1,413	2,888	2,356	31,226	176,956
2011	100,786	7,906	4,163	1,594	1,984	664	26,746	143,843

Note:

Highlighted data was taken from sample survey result in FY 1994.

There were no surveys conducted for FY1997, FY1998, FY 2000, FY 2001, FY 2003 and FY 2004.

Source: 'Survey on the Enforcement Status of the Air Pollution Control Law,' Air Environment Division, Environment Management Bureau, MOE, the Government of Japan

6.07 Nitrogen oxide emissions (breakdown according to different facilities)

(Unit : km³ N / Year)

	Apparatus exhausting flue gas							Total
	Boiler 01	Diesel engine 30	Waste incinerator 13	Metal furnace 06	Drying furnace 11	Melting furnace 05	Others	
FY 1992	178,664	46,517	27,388	6,616	4,738	1,446	140,097	405,466
1993	162,873	42,550	27,306	6,227	3,923	1,266	139,691	383,836
1994	170,399	50,249	28,358	6,629	3,605	1,101	138,895	399,236
1995	171,148	56,881	33,630	6,418	4,359	1,289	153,658	427,383
1996	176,218	55,494	30,488	6,499	4,631	1,191	142,210	416,731
1999	171,696	59,823	33,321	6,312	5,805	1,573	129,179	407,709
2002	179,687	78,613	29,522	6,747	5,236	3,473	119,942	423,220
2005	177,218	80,612	29,842	6,556	5,168	3,342	130,745	433,483
2008	158,760	36,984	25,373	5,878	3,825	3,323	121,868	356,011
2011	158,112	32,379	22,552	6,491	3,567	1,960	114,057	339,118

Note:

Highlighted data was taken from sample survey result in FY 1994.

There were no surveys conducted for FY1997, FY1998, FY 2000, FY 2001, FY 2003 and FY 2004.

Source: 'Survey on the Enforcement Status of the Air Pollution Control Law,' Air Environment Division, Environment Management Bureau, MOE, the Government of Japan

6.08 Dust and soot emissions (breakdown according to different facilities)

(Unit : t / Year)

	Apparatus exhausting flue gas							Total
	Boiler 01	Diesel engine 30	Waste incinerator 13	Metal furnace 06	Drying furnace 11	Melting furnace 05	Others	
FY 1992	45,202	11,578	18,281	1,201	6,233	1,568	18,925	102,988
1993	42,229	11,078	17,612	1,180	5,545	1,752	19,790	99,186
1994	49,040	13,340	17,640	1,582	5,279	1,833	19,606	108,320
1995	42,314	11,934	19,597	1,153	4,399	912	21,454	101,763
1996	39,692	9,607	17,398	882	4,795	935	21,297	94,606
1999	30,101	2,747	16,119	838	4,174	987	20,120	75,086
2002	28,313	5,121	6,141	833	4,471	1,352	14,507	60,738
2005	26,368	3,079	4,842	844	5,144	1,558	16,141	57,976
2008	21,235	1,718	3,391	731	3,913	1,232	15,440	47,660
2011	16,181	1,365	2,621	911	2,694	993	11,764	36,529

Note:

Highlighted data was taken from sample survey result in FY 1994.

There were no surveys conducted for FY1997, FY1998, FY 2000, FY 2001, FY 2003 and FY 2004.

Source: 'Survey on the Enforcement Status of the Air Pollution Control Law' by Air Environment Division, Environment Management Bureau, MOE, the Government of Japan

6.09 Transition of number of cars owned

End of fiscal year	(A) # of cars owned (C)+(D)+(E)	(B) # of inspected vehicles (C)+(D)	(C) # of registered vehicle			Breakdown of registered vehicles					
			Business use total [ratio]	Private use total [ratio]	Total	Trucks					Total
						Business use total	Private use total				
1980	38,992,023	31,694,907	1,008,272 [3%]	30,241,660 [97%]	31,249,932	586,126 (629)	8,096,852 (12,922)				8,682,978
1985	48,240,555	36,178,795	1,149,933 [3%]	34,178,247 [97%]	35,328,180	703,594 (216)	7,602,424 (3,667)				8,306,018
1990	60,498,850	43,730,305	1,409,087 [3%]	41,321,364 [97%]	42,730,451	907,931 (136)	7,926,610 (1,929)				8,834,541
1993	66,278,836	48,130,439	1,499,131 [3%]	45,503,491 [97%]	47,002,622	974,513 (118)	7,904,406 (1,465)				8,878,919
1994	68,103,696	49,485,297	1,544,750 [3%]	46,763,318 [97%]	48,308,068	1,011,410 (114)	7,867,542 (1,393)				8,878,952
1995	70,106,536	50,936,863	1,589,809 [3%]	48,138,041 [97%]	49,727,850	1,047,272 (112)	7,810,558 (1,336)				8,857,830
1996	71,775,647	52,191,692	1,632,037 [3%]	49,334,880 [97%]	50,966,917	1,078,098 (112)	7,740,808 (1,275)				8,818,906
1997	72,856,583	52,980,674	1,660,534 [3%]	50,076,863 [97%]	51,737,397	1,094,365 (112)	7,598,844 (1,232)				8,693,209
1998	73,688,389	53,390,661	1,660,872 [3%]	50,460,557 [97%]	52,121,429	1,087,740 (111)	7,388,555 (1,182)				8,476,295
1999	74,582,612	53,552,803	1,672,921 [3%]	50,591,483 [97%]	52,264,404	1,091,259 (111)	7,174,875 (1,142)				8,266,134
2000	75,524,973	53,769,633	1,698,361 [3%]	50,762,855 [97%]	52,461,216	1,105,336 (99)	7,000,950 (1,117)				8,106,286
2001	76,270,813	53,757,576	1,706,272 [3%]	50,716,950 [97%]	52,423,222	1,101,591 (99)	6,805,282 (1,074)				7,906,873
2002	76,892,517	53,626,388	1,711,672 [3%]	50,682,517 [97%]	52,274,189	1,095,317 (98)	6,570,625 (1,050)				7,885,842
2003	77,390,245	53,314,815	1,725,027 [3%]	50,219,457 [97%]	51,944,484	1,097,103 (98)	6,317,232 (1,012)				7,414,335
2004	78,278,880	53,328,755	1,756,559 [3%]	50,174,804 [97%]	51,931,363	1,114,859 (98)	6,165,316 (992)				7,280,175
2005	78,992,060	53,185,519	1,778,369 [3%]	49,979,001 [97%]	51,757,370	1,125,963 (98)	6,033,733 (985)				7,159,696
2006	79,236,095	52,527,928	1,790,317 [4%]	49,284,718 [96%]	51,075,035	1,131,923 (98)	5,882,335 (976)				7,014,258
2007	79,080,762	51,640,443	1,795,399 [4%]	48,366,320 [96%]	50,161,719	1,134,930 (99)	5,748,760 (972)				6,883,690
2008	78,800,542	50,629,754	1,768,074 [4%]	47,356,376 [96%]	49,124,450	1,110,918 (100)	5,456,584 (962)				6,567,502
2009	78,693,495	50,045,805	1,734,643 [4%]	46,786,986 [96%]	48,521,629	1,082,614 (100)	5,279,820 (960)				6,362,434
2010	78,660,773	49,610,327	1,715,809 [4%]	46,359,337 [96%]	48,075,146	1,075,968 (100)	5,138,879 (949)				6,214,847
2011	79,112,584	49,543,611	1,711,587 [4%]	46,289,168 [96%]	48,000,755	1,074,412 (101)	5,061,501 (938)				6,135,913
2012	79,625,203	49,371,229	1,711,199 [4%]	46,093,689 [96%]	47,804,888	1,073,190 (101)	4,994,948 (935)				6,068,138
2013	80,272,571	49,197,590	1,721,239 [4%]	45,881,016 [96%]	47,602,255	1,080,442 (47)	4,960,643 (757)				6,041,085
Relative change from last year (%)	100.8	99.6	100.6	99.5	99.6	100.7	99.3				99.6

Note: Parenthesized numbers refer to three-wheelers and are included in each total.

6.09 Transition of number of cars owned

End of fiscal year	Breakdown of registered vehicles									
	Trucks									
	Standard-sized car			Compact car			Trailers			
	Business use	Private use	Total	Business use	Private use	Total	Business use	Private use	Total	
1980	450,755	1,051,653	1,502,408	86,622 (629)	7,036,635 (12,922)	7,123,257	48,749	8,564	57,313	
1985	550,059	1,123,089	1,673,148	93,823 (216)	6,473,179 (3,667)	6,567,002	59,712	6,156	65,868	
1990	731,920	1,474,161	2,206,081	93,737 (136)	6,445,958 (1,929)	6,539,695	82,274	6,491	88,765	
1993	792,052	1,640,224	2,432,276	89,354 (118)	6,257,273 (1,465)	6,346,627	93,107	6,909	100,016	
1994	821,914	1,697,138	2,519,052	87,354 (114)	6,161,944 (1,393)	6,249,298	102,142	8,460	110,602	
1995	849,427	1,734,729	2,584,156	85,973 (112)	6,066,652 (1,336)	6,152,625	111,872	9,177	121,049	
1996	877,390	1,764,876	2,642,266	84,760 (112)	5,966,628 (1,275)	6,051,388	115,948	9,304	125,252	
1997	891,734	1,763,933	2,655,667	83,617 (112)	5,825,481 (1,232)	5,909,098	119,014	9,430	128,444	
1998	886,331	1,739,844	2,626,175	81,479 (111)	5,639,082 (1,182)	5,720,561	119,930	9,629	129,559	
1999	889,604	1,704,931	2,594,535	79,883 (111)	5,460,470 (1,142)	5,540,353	121,772	9,474	131,246	
2000	901,104	1,680,488	2,581,592	79,496 (99)	5,311,156 (1,117)	5,390,652	124,736	9,306	134,042	
2001	897,530	1,656,668	2,554,198	78,183 (99)	5,139,380 (1,074)	5,217,563	125,878	9,234	135,112	
2002	891,407	1,621,103	2,512,510	78,680 (98)	4,940,538 (1,050)	5,017,216	127,230	8,986	136,216	
2003	892,082	1,579,219	2,471,301	75,553 (98)	4,729,227 (1,012)	4,804,780	129,468	8,786	138,254	
2004	904,389	1,567,205	2,471,594	76,016 (98)	4,589,205 (992)	4,665,221	134,454	8,906	143,360	
2005	909,871	1,558,569	2,468,440	76,877 (98)	4,465,748 (985)	4,542,625	139,215	9,416	148,631	
2006	912,142	1,551,465	2,463,607	77,085 (98)	4,321,351 (976)	4,398,436	142,696	9,519	152,215	
2007	911,457	1,533,807	2,445,264	77,896 (99)	4,205,417 (972)	4,283,313	146,181	9,536	155,717	
2008	887,345	1,472,858	2,360,203	77,626 (100)	3,974,423 (962)	4,052,049	145,947	9,303	155,250	
2009	863,399	1,440,170	2,303,569	76,432 (100)	3,830,428 (960)	3,906,860	142,783	9,222	152,005	
2010	856,599	1,415,352	2,271,951	75,646 (100)	3,714,240 (949)	3,789,886	143,723	9,287	153,010	
2011	854,516	1,408,991	2,263,507	74,811 (101)	3,642,980 (938)	3,717,791	145,085	9,530	154,615	
2012	852,748	1,409,844	2,262,592	74,381 (101)	3,575,280 (935)	3,649,661	146,061	9,824	155,885	
2013	859,534	1,418,602	2,278,136	73,376 (47)	3,531,802 (757)	3,605,178	147,532	10,239	157,771	
Relative change from last year (%)	100.8	100.6	100.7	98.6	98.8	98.8	101.0	104.2	101.2	

Note: Parenthesized numbers refer to three-wheelers and are included in each total.

6.09 Transition of number of cars owned

The end of fiscal year.	Breakdown of registered vehicles								
	Buses								
	Business use total	Private use total	Total	Standard-size car			Compact car		
				Business use	Private use	Total	Business use	Private use	Total
1980	88,468	140,961	229,429	84,919	21,736	106,655	3,549	119,225	122,774
1985	90,100	140,683	230,783	84,660	24,420	109,080	5,440	116,263	121,703
1990	94,830	151,014	245,844	86,966	28,137	115,103	7,864	122,877	130,741
1993	96,200	150,919	247,119	87,064	29,425	116,489	9,136	121,494	130,630
1994	95,762	148,849	244,611	86,269	29,304	115,573	9,493	119,545	129,038
1995	95,216	147,689	242,907	85,236	29,160	114,396	9,982	118,529	128,511
1996	94,975	146,869	241,844	84,387	29,042	113,429	10,588	117,827	128,415
1997	95,681	144,185	239,866	83,873	28,667	112,540	11,808	115,518	127,326
1998	95,934	141,212	237,146	82,970	28,214	111,184	12,964	112,998	125,962
1999	96,350	139,375	235,725	82,341	27,929	110,270	14,009	111,446	125,455
2000	98,548	137,002	235,550	82,827	27,458	110,285	15,721	109,544	125,265
2001	100,534	133,710	234,244	83,469	26,757	110,226	17,065	106,953	124,018
2002	101,801	131,379	233,180	83,998	28,210	110,208	17,803	105,189	122,972
2003	103,093	128,891	231,984	84,485	25,634	110,119	18,608	103,257	121,865
2004	104,898	127,102	232,000	85,167	25,105	110,272	19,731	101,997	121,728
2005	105,770	125,926	231,696	85,120	24,722	109,842	20,650	101,204	121,854
2006	106,974	124,784	231,758	85,522	24,402	109,924	21,452	100,382	121,834
2007	107,771	123,210	230,981	85,774	24,006	109,780	21,997	99,204	121,201
2008	108,103	121,701	229,804	85,771	23,668	109,439	22,332	98,033	120,365
2009	107,876	120,419	228,295	85,242	23,285	108,527	22,634	97,134	119,768
2010	108,228	118,611	226,839	85,146	22,704	107,850	23,082	95,907	118,989
2011	108,544	117,726	226,270	85,232	22,466	107,698	23,312	95,260	118,572
2012	109,036	117,011	226,047	85,368	22,168	107,536	23,668	94,843	118,511
2013	110,208	116,334	226,542	86,334	21,890	108,224	23,874	94,444	118,318
Relative change from last year (%)	101.1	99.4	100.2	101.1	98.7	100.6	100.9	99.6	99.8

6.09 Transition of number of cars owned

End of fiscal year	Breakdown of registered vehicles								
	Passenger car								
				Standard car			Compact car		
	Business use total	Private use total	Total	Business use	Private use	Total	Business use	Private use	Total
1980	250,594	(-) 21,292,906	(8) 21,543,500	1,639	478,204	479,843	248,955	(-) 20,814,702	(8) 21,063,657
1985	252,641	(-) 25,594,937	(21) 25,847,578	2,322	712,394	714,716	250,319	(-) 24,882,543	(21) 25,132,862
1990	259,589	(-) 32,176,908	(43) 32,436,497	7,364	1,926,169	1,933,533	252,225	(-) 30,250,739	(43) 30,502,964
1993	258,786	(-) 36,250,056	(88) 36,508,842	15,278	5,237,128	5,252,406	243,508	(-) 31,012,928	(88) 31,256,436
1994	256,875	(-) 37,497,646	(152) 37,754,521	17,332	6,697,684	6,715,016	239,543	(-) 30,799,962	(152) 31,039,505
1995	255,984	(-) 38,846,724	(234) 39,102,708	20,008	8,283,402	8,303,410	235,976	(-) 30,563,322	(234) 30,799,298
1996	256,403	(-) 40,220,165	(373) 40,476,568	23,029	9,949,956	9,972,985	233,374	(-) 30,270,209	(373) 30,503,583
1997	258,475	(-) 41,024,518	(492) 41,282,993	22,978	11,279,648	11,302,626	232,497	(-) 29,744,870	(492) 29,977,367
1998	257,780	(-) 41,525,096	(607) 41,782,876	27,494	12,299,442	12,326,936	230,286	(-) 29,225,654	(607) 29,455,940
1999	257,088	(-) 41,798,617	(710) 42,055,705	29,440	13,204,291	13,233,731	227,648	(-) 28,594,326	(710) 28,821,974
2000	256,343	(-) 42,108,726	(701) 42,365,069	31,046	14,132,311	14,163,357	225,297	(-) 27,976,415	(701) 28,201,712
2001	259,033	(-) 42,268,699	(688) 42,527,732	32,691	14,905,895	14,938,586	226,342	(-) 27,362,804	(688) 27,589,146
2002	263,282	(-) 42,391,647	(660) 42,654,929	34,804	15,398,886	15,433,690	228,478	(-) 28,992,761	(660) 27,221,239
2003	267,141	(-) 42,357,065	(639) 42,624,206	36,423	15,916,537	15,953,960	230,718	(-) 26,440,528	(639) 26,671,246
2004	270,703	(-) 42,505,475	(625) 42,776,178	38,413	16,357,803	16,396,216	232,290	(-) 26,147,672	(625) 26,379,962
2005	273,181	(-) 42,474,099	(599) 42,747,280	40,182	16,596,514	16,636,696	232,999	(-) 25,877,585	(599) 26,110,584
2006	273,740	(-) 41,955,669	(570) 42,229,409	42,061	16,671,316	16,713,377	231,679	(-) 25,284,353	(570) 25,516,032
2007	273,529	(-) 41,195,460	(542) 41,468,989	43,585	16,714,242	16,757,827	229,944	(-) 24,481,218	(542) 24,711,162
2008	271,327	(-) 40,527,918	(535) 40,799,245	45,050	16,613,720	16,658,770	226,277	(-) 23,914,198	(535) 24,140,475
2009	265,431	(-) 40,153,489	(535) 40,418,920	46,399	16,652,554	16,698,953	219,032	(-) 23,500,935	(535) 23,719,967
2010	249,934	(-) 39,885,198	(540) 40,135,132	47,850	16,790,700	16,838,550	202,084	(-) 23,094,498	(540) 23,296,582
2011	244,643	(-) 39,898,798	(537) 40,143,441	49,179	17,048,886	17,098,065	195,464	(-) 22,849,912	(537) 23,045,376
2012	241,431	(-) 39,767,919	(541) 40,009,350	50,989	17,246,034	17,297,023	190,442	(-) 22,521,885	(541) 22,712,327
2013	238,891	(-) 39,582,152	(540) 39,821,043	52,961	17,533,167	17,586,128	185,930	(-) 22,048,985	(540) 22,234,915
Relative change from last year (%)	98.9	99.5	99.5	103.9	101.7	101.7	97.6	97.9	97.9

Note: Parenthesized numbers refer to three-wheelers and are included in each total.

6.09 Transition of number of cars owned

End of fiscal year	Breakdown of registered vehicles									
	Specific use vehicles									
				Standard-sizes car			Compact car			
	Business use total	Private use total	Total	Business use	Private use	Total	Business use	Private use	Total	
1980	83,084 (1)	710,941 (1,742)	794,025	75,259	309,933	385,192	4,027 (1)	115,411 (1,742)	119,438	
1985	103,598 (-)	840,203 (681)	943,801	95,723	373,113	468,836	4,544 (-)	129,227 (681)	133,771	
1990	146,737 (-)	1,066,832 (579)	1,213,569	136,266	494,476	630,742	7,038 (-)	152,982 (579)	160,020	
1993	169,632 (-)	1,198,110 (560)	1,367,742	157,465	579,068	736,533	8,609 (-)	158,482 (560)	167,091	
1994	180,703 (-)	1,249,281 (562)	1,429,984	168,003	615,206	783,209	9,090 (-)	160,083 (562)	169,173	
1995	191,335 (-)	1,333,070 (565)	1,524,405	177,770	680,712	858,482	9,847 (-)	164,583 (565)	174,430	
1996	202,561 (-)	1,227,038 (534)	1,429,599	188,293	748,349	936,642	10,473 (-)	172,512 (534)	182,985	
1997	212,013 (-)	1,309,316 (511)	1,521,329	197,235	815,033	1,012,268	10,976 (-)	183,119 (511)	194,095	
1998	219,418 (-)	1,405,694 (546)	1,625,112	204,305	893,508	1,097,813	11,411 (-)	197,261 (546)	208,672	
1999	228,224 (-)	1,478,616 (529)	1,706,840	212,742	956,470	1,169,212	11,832 (-)	204,992 (529)	216,824	
2000	238,134 (-)	1,516,177 (493)	1,754,311	222,151	992,452	1,214,603	12,412 (-)	204,147 (493)	216,559	
2001	245,114 (-)	1,509,259 (456)	1,754,373	229,060	991,997	1,221,057	12,557 (-)	196,226 (456)	208,783	
2002	251,272 (-)	1,468,888 (444)	1,720,138	236,244	963,932	1,199,176	12,617 (-)	184,198 (444)	196,816	
2003	257,690 (-)	1,416,269 (415)	1,673,959	241,477	921,766	1,163,243	12,866 (-)	173,689 (415)	186,555	
2004	266,099 (-)	1,376,911 (392)	1,643,010	249,654	890,007	1,139,661	13,163 (-)	165,388 (392)	178,551	
2005	273,455 (-)	1,345,243 (382)	1,618,698	256,861	863,195	1,120,056	13,382 (-)	159,798 (382)	173,180	
2006	277,680 (-)	1,321,930 (369)	1,599,610	260,898	843,235	1,104,133	13,576 (-)	154,946 (369)	168,522	
2007	279,169 (-)	1,298,890 (357)	1,578,059	262,415	824,181	1,086,596	13,559 (-)	151,310 (357)	164,869	
2008	277,726 (-)	1,250,173 (285)	1,527,899	261,046	786,024	1,047,070	13,509 (-)	141,663 (285)	155,172	
2009	278,722 (-)	1,233,258 (273)	1,511,980	262,065	772,381	1,034,446	13,528 (-)	140,301 (273)	153,829	
2010	281,679 (-)	1,216,649 (261)	1,498,328	264,923	760,067	1,024,990	13,661 (-)	137,025 (261)	150,686	
2011	283,988 (-)	1,211,143 (11,307)	1,495,131	267,221	755,467	1,022,688	13,743 (-)	135,140 (11,307)	148,883	
2012	287,542 (-)	1,213,811 (11,924)	1,501,353	270,636	756,436	1,027,072	13,944 (-)	133,881 (11,924)	147,825	
2013	291,698 (-)	1,221,887 (12,669)	1,513,585	274,887	760,308	1,035,195	13,897 (-)	133,050 (12,669)	146,947	
Relative change from last year (%)	101.4	100.7	100.8	101.6	100.5	100.8	99.7	99.4	99.4	

Note: Parenthesized numbers refer to three-wheelers and are included in each total.

6.09 Transition of number of cars owned

(Unit : vehicle)

Unit : vehicle

End of fiscal year	Breakdown of registered vehicles			(D) Small two-wheeler	(E) Light motor vehicle				
	Specific use vehicles				Total	Four- wheeler	Four-wheel truck	Three- wheeler	Two- wheeler
	Large-sized special motor vehicle								
	Business use	Private use	Total						
1980	3,798	285,597	289,395	444,975	7,297,116	2,102,619	4,618,894	1,332	574,271
1985	3,331	337,863	341,194	850,615	12,061,760	1,942,616	8,944,444	1,233	1,173,467
1990	3,433	419,374	422,807	999,854	16,768,545	2,715,334	12,310,428	1,235	1,741,548
1993	3,558	460,560	464,118	1,127,817	18,148,397	4,551,769	11,772,117	1,295	1,823,216
1994	3,610	473,992	477,602	1,177,229	18,618,399	5,201,818	11,591,832	1,303	1,823,446
1995	3,718	487,775	491,493	1,209,013	19,169,673	5,965,822	11,375,868	1,353	1,826,630
1996	3,795	306,177	309,972	1,224,775	19,583,955	6,738,258	11,037,077	1,363	1,807,257
1997	3,802	311,164	314,966	1,243,277	19,875,909	7,401,213	10,707,664	1,362	1,765,670
1998	3,702	314,925	318,627	1,269,232	20,297,728	8,185,273	10,383,719	1,336	1,727,400
1999	3,650	317,154	320,804	1,288,399	21,029,809	9,166,424	10,157,522	1,341	1,704,522
2000	3,571	319,578	323,149	1,308,417	21,755,340	10,084,285	9,957,111	1,347	1,712,597
2001	3,497	321,036	324,533	1,334,354	22,513,237	10,959,561	9,817,964	1,317	1,734,395
2002	3,411	320,736	324,147	1,362,199	23,288,129	11,816,447	9,675,844	1,293	1,772,545
2003	3,347	320,814	324,161	1,370,331	24,075,430	12,663,918	9,599,623	1,295	1,810,594
2004	3,282	321,516	324,798	1,397,392	24,950,125	13,512,078	9,579,425	1,183	1,857,439
2005	3,212	322,250	325,462	1,428,149	25,806,541	14,350,390	9,546,557	1,192	1,908,402
2006	3,206	323,749	326,955	1,452,893	26,708,149	15,280,951	9,475,481	1,205	1,950,512
2007	3,195	323,399	326,594	1,478,724	27,439,715	16,082,259	9,379,408	1,219	1,976,829
2008	3,171	322,486	325,657	1,505,304	28,170,788	16,883,230	9,290,018	1,229	1,996,311
2009	3,129	320,576	323,705	1,524,176	28,647,690	17,483,915	9,169,591	1,245	1,992,939
2010	3,095	319,557	322,652	1,535,181	29,050,446	18,004,339	8,921,550	1,244	1,975,623
2011	3,024	320,536	323,560	1,542,856	29,568,973	18,585,902	8,871,671	1,237	1,959,845
2012	2,962	323,494	326,456	1,566,341	30,253,974	19,347,873	8,782,302	1,226	1,969,187
2013	2,914	328,529	331,443	1,595,335	31,074,981	20,230,295	8,706,948	1,233	1,980,411
Relative change from last year (%)	98.4	101.6	101.5	101.9	102.7	104.6	99.1	100.6	100.6

Note: Starting 2010, total number of Light motor vehicle does not include the number of Specific use vehicles; consequently, breakdown totals do not consist with totals.

Source: Compiled from 'Statistical Report on Motor Vehicle Transport' by Information Policy Division, Policy Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Government of Japan

6.09 Transition of number of cars owned

Transition of numbers of motorized bicycles and small-sized special motor vehicles;

(Unit : vehicle)

As of April 1st each year	Motorized bicycle					Small-sized special motor vehicles		
	Class 1	Class 2	Total	Relative change from last year (%)	Index	Total	Relative change from last year (%)	Index
1988	14,421,823	1,601,055	16,022,878	98	146	2,437,867	101	102
1989	14,033,811	1,574,741	15,608,552	97	142	2,414,449	99	101
1990	13,539,269	1,517,228	15,056,497	96	137	2,406,252	100	100
1991	13,048,137	1,505,665	14,553,802	97	133	2,398,937	100	100
1992	12,520,835	1,480,476	14,001,311	96	128	2,380,556	99	99
1993	11,998,940	1,461,782	13,460,722	96	123	2,367,290	99	99
1994	11,521,894	1,435,990	12,957,884	96	118	2,342,641	99	98
1995	11,165,390	1,421,031	12,586,421	97	115	2,313,477	99	96
1996	10,835,934	1,390,327	12,226,261	97	111	2,292,441	99	96
1997	10,487,574	1,366,558	11,854,132	97	108	2,470,423	108	103
1998	10,181,449	1,346,116	11,527,565	97	105	2,454,691	99	102
1999	9,919,874	1,341,347	11,261,221	98	103	2,426,401	99	101
2000	9,636,487	1,337,395	10,973,882	97	100	2,399,487	99	100
2001	9,354,554	1,344,330	10,698,884	97	97	2,355,443	98	98
2002	9,136,832	1,334,792	10,471,624	98	95	2,330,893	99	97
2003	8,915,037	1,329,410	10,244,447	98	95	2,309,590	99	96
2004	8,739,686	1,341,088	10,080,774	98	92	2,284,223	99	95
2005	8,566,613	1,353,732	9,920,345	98	90	2,255,513	99	94
2006	8,372,001	1,378,714	9,750,715	98	89	2,240,149	99	93
2007	8,178,879	1,397,085	9,575,964	98	87	2,219,142	99	92
2008	7,963,604	1,429,738	9,393,342	98	86	2,197,386	99	92
2009	7,770,458	1,479,588	9,250,046	98	84	2,171,929	99	91
2010	7,530,672	1,511,440	9,042,112	96	82	2,153,890	99	90
2011	7,238,628	1,540,667	8,779,295	97	80	2,127,238	99	89
2012	6,985,633	1,582,925	8,568,558	98	78	2,114,115	99	88
2013	6,750,431	1,626,094	8,376,525	98	76	2,106,128	99	87

Note: Class 1 Motorized bicycles refer to ones with engine size of 50 cc and below;

Class type 2 refer to the ones greater than Class type 1, with engine size of 125 cc and below.

Vehicles described in this chart are to be submitted to the mayor of municipality.

Values from the year 2000 are set 100 for the index.

Source: 'Investigation on municipal taxation,' Local Tax Bureau, Ministry of Internal Affairs and Communications, the Government of Japan

6.10 Total gross traffic/Traffic volume by prefectures and number of vehicles owned

	Total gross traffic/Traffic volume (FY 2012)						Number of automobiles (at the end of FY 2012)			
	Freight tonnage carried (Thousand tons)			Passenger transportation volume			Trucks	Buses	Passenger cars	Total
	Business use	Personal use	Total	Buses	Passenger cars	Total				
nationwide	2,988,697	1,086,330	4,075,027	4,437,253	1,639,553	6,076,806	6,068,138	226,047	40,009,350	47,804,888
Hokkaido	241,163	28,876	270,039	198,391	114,224	312,615	392,339	13,663	1,948,209	2,483,666
Aomori	41,281	22,081	63,362	32,814	12,909	45,723	84,886	3,940	420,033	537,492
Iwate	39,760	20,548	60,308	30,906	13,246	44,152	83,638	3,711	431,003	540,825
Miyagi	81,101	30,929	112,030	41,700	25,313	67,013	137,025	5,007	823,624	995,846
Akita	25,420	14,527	39,947	20,871	11,169	32,040	53,827	2,506	363,403	439,980
Yamagata	28,202	16,990	45,192	21,279	12,821	34,100	65,504	2,555	417,182	505,827
Fukushima	63,388	29,540	92,928	43,216	23,577	66,793	124,067	5,189	767,152	927,083
Ibaraki	77,430	42,965	120,395	218,082	63,213	281,295	220,743	6,945	1,333,507	1,604,757
Tochigi	40,437	26,455	66,892	145,231	42,930	188,161	130,783	4,625	905,636	1,088,524
Gunma	43,047	26,428	69,502	125,228	42,381	167,609	131,757	3,988	894,049	1,057,778
Saitama	132,143	56,819	188,962	305,503	107,426	412,929	299,097	9,729	2,266,216	2,643,871
Chiba	103,243	56,779	160,022	334,739	95,206	429,945	281,498	10,660	2,008,434	2,368,946
Tokyo	167,813	75,429	243,242	471,585	128,065	599,650	395,112	15,018	2,701,602	3,200,347
Kanagawa	123,330	54,456	177,786	353,485	116,223	469,708	280,071	11,257	2,451,801	2,813,629
Niigata	60,761	30,327	91,088	44,498	15,866	60,364	142,014	6,399	801,606	991,148
Toyama	32,609	13,613	46,222	14,742	8,687	23,429	66,346	2,120	438,923	525,507
Ishikawa	31,791	12,909	44,700	19,061	8,928	27,989	64,005	2,741	451,600	534,269
Fukui	21,996	9,947	31,943	26,037	5,802	31,839	45,883	1,937	308,815	370,312
Yamanashi	12,324	10,605	22,929	66,382	15,999	82,381	47,101	2,114	337,516	400,670
Nagano	41,574	26,235	67,809	40,062	16,355	56,417	122,151	5,761	826,299	985,848
Gifu	49,577	28,270	77,847	63,903	15,481	79,384	134,422	4,754	824,021	992,752
Shizuoka	105,982	44,353	150,335	88,918	25,848	114,766	226,085	6,615	1,375,816	1,651,235
Aichi	231,438	77,625	309,063	132,805	54,289	187,094	412,960	9,880	2,889,678	3,388,821
Mie	58,678	19,804	78,482	46,227	13,255	59,482	100,405	3,439	705,519	833,627
Shiga	27,293	10,170	37,463	75,456	24,666	100,122	61,190	2,694	466,742	546,185
Kyoto	49,163	14,639	63,802	130,074	35,441	165,515	91,030	4,644	670,623	790,148
Osaka	221,705	44,717	266,422	264,657	106,311	370,968	316,686	9,449	2,011,620	2,403,928
Hyogo	119,894	30,239	150,133	214,941	83,189	298,130	192,755	7,674	1,574,124	1,827,292
Nara	23,096	7,989	31,085	61,199	21,797	82,996	48,942	2,185	412,454	475,667
Wakayama	22,196	7,746	29,942	47,867	15,011	62,878	45,844	1,709	284,044	344,831
Tottori	13,968	3,825	17,793	17,249	6,639	23,888	25,197	1,281	183,646	218,488
Shimane	15,963	4,838	20,801	23,336	7,780	31,116	31,327	1,733	215,216	258,741
Okayama	66,099	13,611	79,710	40,988	23,396	64,384	99,070	3,044	647,184	775,966
Hiroshima	81,693	16,981	98,674	69,763	31,048	100,811	122,264	5,181	858,824	1,020,575
Yamaguchi	39,238	9,189	48,427	24,888	16,973	51,861	65,443	2,591	469,492	554,897
Tokushima	17,836	7,391	25,227	9,384	8,267	17,651	42,207	1,646	259,136	313,431
Kagawa	30,414	8,717	39,131	9,543	10,427	19,970	52,682	1,674	326,845	394,504
Ehime	40,822	11,502	52,324	12,963	12,596	25,559	68,948	2,274	394,858	484,487
Kochi	16,174	6,122	22,296	7,930	6,518	14,448	33,166	1,391	204,307	249,893
Fukuoka	142,624	35,437	178,061	164,646	87,486	252,132	247,767	10,016	1,579,892	1,891,352
Saga	25,961	7,114	33,075	34,455	14,387	48,842	48,219	2,096	259,814	321,326
Nagasaki	22,413	8,247	30,660	69,474	19,108	88,582	49,226	4,243	345,059	415,014
Kumamoto	38,211	15,732	53,943	63,238	31,218	94,456	100,095	3,847	563,764	691,087
Oita	25,949	9,322	35,271	42,197	21,295	63,492	59,776	2,567	384,550	461,645
Miyazaki	28,147	10,112	38,259	35,161	19,609	54,770	63,947	2,139	354,122	437,107
Kagoshima	45,175	15,466	60,641	69,156	27,508	96,664	94,660	4,207	496,744	625,481
Okinawa	20,173	10,715	30,888	52,750	19,668	72,418	65,978	3,209	355,186	440,083

Note:

Freight tonnage carried is estimated from total gross traffic according to District Transport Bureaus according to Annual Report of Road Transport Statistics by ratio of total gross traffic according to District Transport Bureaus (the end of each year) on condition that it includes traffic volume of special motor vehicles but excludes traffic volume of light motor vehicles.

Passenger transportation volume is estimated from total gross traffic according to District Transport Bureaus according to Annual Report of Road Transport Statistics by ratio of total gross traffic according to District Transport Bureaus (the end of each year) on condition that it excludes traffic volumes of freight vehicles and of light motor vehicles.

Inconsistency between the number of automobiles and the sum of the numbers of trucks, buses, and passenger cars are due to the number of specific use vehicles.

Source: "Transportation censuses," Information Policy Division, Policy Bureau, Ministry of Land, Infrastructure, Transport and Tourism, the Government of Japan

6.11 Transition of freight transportation

(Index : FY2005 (Mean) = 100)

	Freight tonnage carried (Thousand tons)										Total
	Motor freight	Index	Freight train	Index	J R	Index	Freighter	Index	Airfreight	Index	
FY 1950	309,000	...	131,748	222.3	120,193	308.0	49,282	9.5	-	-	490,030
1955	569,000	...	185,354	312.7	152,182	390.0	69,254	13.3	2	0.2	823,610
1960	1,156,291	...	229,856	438.0	186,953	507.1	138,849	32.6	9	0.8	1,525,005
1965	2,193,195	...	243,524	464.1	191,060	518.3	179,645	42.2	33	3.0	2,616,397
1970	4,626,069	...	250,360	477.1	193,106	523.8	376,647	88.4	116	10.7	5,253,192
1975	4,392,859	...	180,616	344.2	137,879	374.0	452,054	106.1	192	17.7	5,025,721
1980	5,317,950	...	162,827	310.3	117,896	319.8	500,258	117.4	329	30.4	5,981,364
1981	5,230,784	...	147,890	249.5	106,778	273.6	479,097	92.1	369	36.4	5,858,140
1982	5,171,623	...	132,356	223.3	93,885	240.6	437,584	84.1	401	39.5	5,741,954
1983	5,123,371	...	117,815	224.5	82,375	223.5	438,038	102.8	443	40.9	5,679,667
1984	5,114,657	...	103,801	197.8	71,503	194.0	450,278	105.7	497	45.9	5,669,233
1985	5,048,048	...	96,285	183.5	65,497	177.7	452,385	106.2	538	49.7	5,597,256
1986	4,969,101	...	87,242	166.3	59,072	160.2	440,677	103.4	602	55.6	5,497,622
1987	5,204,257	104.9	82,189	156.6	55,294	150.9	462,546	108.5	698	64.5	5,749,690
1988	5,578,451	112.3	82,338	156.9	55,695	151.1	493,000	115.7	761	70.3	6,154,550
1989	5,888,248	118.6	82,827	157.8	55,782	151.3	538,029	126.3	827	76.4	6,509,931
1990	6,113,565	123.1	86,619	165.1	58,400	158.4	575,199	135.0	874	80.8	6,776,257
1991	6,260,811	126.1	85,697	163.3	57,390	155.7	571,891	134.2	874	80.8	6,919,273
1992	6,101,706	122.9	82,402	157.0	55,633	150.9	540,410	126.8	854	78.9	6,725,372
1993	5,821,537	117.2	79,259	151.0	53,178	144.3	528,841	124.1	859	79.4	6,430,496
1994	5,810,374	...	78,948	150.5	52,753	143.1	555,764	130.4	910	84.1	6,445,996
1995	6,016,571	121.2	76,932	146.6	51,456	139.6	548,542	128.7	960	88.7	6,643,005
1996	6,177,265	124.4	73,558	140.2	49,185	133.4	546,909	128.3	1,002	92.6	6,798,734
1997	6,065,384	122.1	69,228	131.9	47,286	128.3	541,437	127.1	1,014	93.7	6,677,063
1998	5,819,881	117.2	60,369	115.0	40,604	110.1	516,647	121.2	1,015	93.8	6,397,912
1999	5,863,259	118.1	58,685	111.8	39,154	106.2	522,602	122.6	1,061	98.1	6,445,607
2000	5,773,619	116.3	59,274	113.0	39,620	107.5	537,021	126.0	1,103	101.9	6,371,017
2001	5,578,227	112.3	58,668	111.8	39,026	105.9	520,067	122.0	1,015	93.8	6,157,977
2002	5,339,487	107.5	56,592	107.8	38,197	103.6	497,251	116.7	1,001	92.5	5,894,331
2003	5,234,076	105.4	53,602	102.2	37,552	101.9	445,544	104.6	1,033	95.5	5,734,255
2004	5,075,877	102.2	52,219	99.5	36,789	99.8	440,252	103.3	1,065	98.4	5,569,413
2005	4,965,874	100.0	52,473	100.0	36,864	100.0	426,145	100.0	1,082	100.0	5,445,574
2006	4,961,325 (4,837,022)	99.9 (97.5)	51,872	98.9	36,371	98.7	416,644	97.8	1,099	101.6	5,430,940 (5,343,008)
2007	4,932,539 (4,811,884)	99.3 (97.6)	50,850	96.9	35,958	97.5	409,694	96.1	1,145	105.8	5,394,228 (5,309,531)
2008	4,718,318 (4,600,752)	95.0 (97.5)	46,225	88.1	32,850	89.1	378,705	88.9	1,074	99.3	5,144,322 (5,059,606)
2009	4,454,028 (4,339,538)	91.5 (97.4)	43,251	82.4	30,849	83.7	332,175	75.6	1,027	94.9	4,830,481 (4,746,840)
2010	4,480,195	...	43,647	83.2	30,790	83.5	366,734	86.1	1,004	92.8	4,891,580
2011	4,496,954	...	39,886	76.0	...	...	360,983	84.7	960	88.7	4,898,783
2012	4,365,927	87.9	44,101	84.0	...	...	365,992	85.8	977	90.2	4,776,997

Note:

In FY 1987, number of cars started to incorporate the number of light motor vehicles. Consequently, data prior to FY 1986 do not contain the same type of data as of the data after FY 1987.

Number of cars in FY 1994 does not include number of cars in Hyogo prefecture between January and March in 1995.

Column for Index of cars in FY 1994 was left out since it does not include data from Hyogo prefecture.

Starting in FY 2010, methodology of survey as well as data processing was changed in Monthly Statistical Report on Motor Vehicle Transport. Consequently, data prior to FY 2009 does not contain the same type of data as of the data after 2010. Mini trucks for transporting private business matters are excluded from the survey. For your reference, parenthesized numbers refer to data without number of minicars.

Number of cars in FY 2010 as well as in FY 2011 does not include March and April data in 2011 from Hokkaido District Transport Bureau and Tohoku District due to the occurrence of the Great East Japan Earthquake. Automobile index for FY 2010 and FY 2011 have been left out because data from Hokkaido District Transport Bureau and Tohoku District Transport Bureau is not available.

Only charged freight is calculated for freight data. In Monthly Statistical Report on Railway, JR data became unavailable in FY 2011, thus the data is no longer calculated in total.

Monthly transport volume for freighter and mean volume in FY 2003 do not include personal use.

Transport volume for airfreight (regular service) include overweight baggage and postal matters.

Index is based on FY 2005.

6.11 Transition of freight transportation

(Index : FY 2005 (Mean) = 100)

(Index : FY 2005 (Mean) = 100)											
	Freight tonnage carried (Million tons)										Total
	Motor freight	Freight train		J R		Freighter		Airfreight			
		Index	Index	Index	Index	Index	Index				
FY 1950	5,400		31,246	141.2	30,715	140.5	25,500	10.6	-	-	62,146
1955	9,500		42,695	192.9	42,005	192.2	29,022	12.0	1	0.1	81,218
1960	20,801		53,916	236.3	52,993	234.5	63,579	30.1	6	0.6	138,302
1965	48,392		56,678	248.4	55,788	246.8	80,635	38.1	21	2.0	185,726
1970	135,916		63,031	276.3	62,043	274.5	151,243	71.5	74	6.9	350,264
1975	129,701		47,058	206.3	46,288	204.8	183,579	86.8	152	14.1	360,490
1980	178,901		37,428	164.1	36,688	162.3	222,173	105.0	290	27.0	438,792
1981	181,309		33,806	152.7	33,116	151.5	211,763	87.6	327	30.4	427,205
1982	187,719		30,596	138.2	29,961	137.1	198,052	82.0	360	33.5	416,727
1983	193,527		27,373	120.0	26,812	118.6	200,748	94.9	400	37.2	422,048
1984	200,813		22,998	100.8	22,485	99.5	210,107	99.3	446	41.5	434,364
1985	205,941		21,919	96.1	21,410	94.7	205,818	97.3	482	44.8	434,160
1986	216,115		20,446	89.6	19,974	88.4	197,953	93.6	545	50.7	435,059
1987	226,425	67.6	20,474	89.7	20,026	88.6	201,366	95.2	634	59.0	448,919
1988	246,088	73.5	23,478	102.9	23,031	101.9	212,628	100.5	683	63.5	482,877
1989	262,857	78.5	25,136	110.2	24,675	109.2	220,063	104.0	753	70.0	508,809
1990	274,244	81.9	27,196	119.2	26,728	118.3	244,546	115.6	799	74.3	546,785
1991	283,776	84.7	27,157	119.0	26,698	118.1	248,203	117.3	812	75.5	559,948
1992	281,599	84.1	26,668	116.9	26,241	116.1	248,002	117.2	804	74.8	557,073
1993	275,885	82.4	25,433	111.5	25,027	110.7	233,526	110.4	817	76.0	535,661
1994	280,587		24,493	107.4	24,077	106.5	238,540	112.7	871	81.0	544,491
1995	294,648	88.0	25,101	110.0	24,702	109.3	238,330	112.6	924	86.0	559,002
1996	305,510	91.2	24,968	109.4	24,061	108.8	241,756	114.3	962	89.5	573,196
1997	306,263	91.4	24,618	107.9	24,301	107.5	237,018	112.0	981	91.3	568,880
1998	300,670	89.8	22,920	100.5	22,643	100.2	226,980	107.3	985	91.6	551,555
1999	307,149	91.7	22,541	98.8	22,272	98.5	229,432	108.4	1,039	96.7	560,161
2000	313,118	93.5	22,136	97.0	21,855	96.7	241,671	114.2	1,075	100.0	578,000
2001	313,072	93.5	22,193	97.3	21,907	96.9	244,451	115.5	994	92.5	580,710
2002	312,028	93.1	22,131	97.0	21,860	96.7	235,582	111.3	991	92.2	570,732
2003	321,862	96.1	22,794	99.9	22,565	99.8	218,190	103.1	1,027	95.5	563,873
2004	327,632	97.8	22,476	98.5	22,264	98.5	218,833	103.4	1,058	98.4	569,999
2005	334,979 (333,524)	100.0 (102.2)	22,813	100.0	22,601	100.0	211,576	100.0	1,075	100.0	570,443 (568,988)
2006	346,534 (345,035)	103.4 (99.6)	23,192	101.7	22,985	101.7	207,849	98.2	1,094	101.8	578,669 (577,170)
2007	354,800 (353,320)	105.9 (99.6)	23,334	102.3	23,140	102.4	202,962	95.9	1,145	106.5	582,241 (580,761)
2008	346,420 (344,939)	103.4 (99.6)	22,256	97.6	22,081	97.7	187,859	88.8	1,078	100.3	557,613 (556,132)
2009	334,667 (333,181)	99.9 (99.6)	20,562	90.5	20,404	90.3	167,315	79.1	1,043	97.0	523,587 (522,100)
2010	243,150		20,398	89.4	20,228	89.5	179,898	85.0	1,032	96.0	444,478
2011	231,061		19,998	87.7	...	...	174,900	82.7	992	92.3	426,951
2012	209,956	62.6	20,471	89.7	...	...	177,791	84.0	1,017	94.6	409,235

Source: Compiled from "Statistical Report on Motor Vehicle Transport" by Information Policy Division, Policy Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Government of Japan

6.12 Transition of passenger transportation volume

(Index: FY 2005 (mean)=100)

Year	Passenger transportation volume (unit: thousand)										Total
	Automobile	Index	Railway	Index	J R	Index	Passenger ship	Index	Air	Index	
FY 1950	1,515,000	...	8,391,932	38.8	3,095,194	35.7	97,348	88.4	-	-	10,044,280
1955	4,261,000	...	9,780,980	45.2	3,849,219	44.4	73,920	87.1	361	0.4	14,116,261
1960	7,900,743	...	12,290,380	56.0	5,123,901	59.0	98,887	95.8	1,260	1.3	20,291,270
1965	14,863,470	...	15,798,168	71.9	6,721,827	77.4	126,007	122.1	5,194	5.5	30,792,839
1970	24,032,433	...	16,384,034	74.6	6,534,477	75.3	173,744	168.4	15,460	16.4	40,605,671
1975	28,411,450	...	17,587,925	80.1	7,048,013	81.2	169,864	164.6	25,467	27.0	46,194,706
1980	33,515,233	...	18,004,962	82.0	6,824,817	78.6	159,751	154.8	40,427	42.8	51,720,373
1981	33,345,267	...	18,218,155	84.2	6,793,030	78.3	160,443	145.7	42,101	45.3	51,765,966
1982	33,510,893	...	18,269,106	84.4	6,742,418	77.8	156,218	141.9	40,486	43.6	51,976,703
1983	33,808,770	...	18,537,677	84.4	6,796,759	78.3	153,340	148.6	40,838	43.2	52,540,625
1984	34,029,706	...	18,753,086	85.4	6,883,837	79.3	154,793	150.0	44,718	47.3	52,982,303
1985	34,678,904	...	18,989,703	86.9	6,941,358	81.0	153,477	148.8	43,777	46.3	53,865,861
1986	34,942,850	...	19,414,040	88.8	7,103,955	82.9	154,127	149.4	46,367	49.1	54,557,384
1987	49,164,738	74.6	19,971,994	90.9	7,356,358	84.7	165,000	159.9	50,046	53.0	69,351,778
1988	52,217,608	79.2	20,742,139	94.4	7,761,346	89.4	157,400	152.6	52,945	56.0	73,170,092
1989	55,828,655	84.7	21,210,767	96.6	7,979,882	91.9	160,200	155.3	60,120	63.6	77,259,742
1990	55,767,427	84.6	21,938,609	99.9	8,357,583	96.3	162,600	157.6	65,252	69.1	77,933,888
1991	57,555,953	87.3	22,559,810	102.7	8,675,929	99.9	162,000	157.0	68,687	72.7	80,346,450
1992	58,841,075	89.2	22,694,082	103.3	8,817,783	101.6	157,855	153.0	69,687	73.8	81,762,699
1993	59,284,686	89.9	22,759,159	103.6	8,906,301	102.6	157,250	152.4	69,584	73.6	82,270,679
1994	59,934,869	...	22,597,951	...	8,883,699	...	150,866	146.2	74,547	78.9	82,758,233
1995	61,271,653	92.9	22,630,439	103.0	8,982,284	103.4	148,828	144.2	78,101	82.7	84,129,021
1996	61,542,541	93.3	22,593,304	102.9	8,997,037	103.6	148,107	143.5	82,131	86.9	84,366,083
1997	62,199,844	94.3	22,244,430	101.3	8,858,611	102.0	144,897	140.4	85,555	90.5	84,674,726
1998	61,838,894	93.8	22,013,765	100.2	8,764,494	100.9	127,665	123.7	87,910	93.0	84,068,334
1999	62,046,830	94.1	21,750,275	99.0	8,717,512	100.4	120,091	116.4	91,588	96.9	84,008,784
2000	62,841,306	95.3	21,846,751	98.6	8,670,971	99.9	110,128	106.7	92,873	98.3	84,691,058
2001	64,590,143	97.9	21,720,088	98.9	8,650,246	99.6	111,869	107.5	94,579	100.1	86,516,679
2002	65,480,675	99.3	21,561,067	98.2	8,685,455	99.9	108,846	105.5	96,662	102.3	87,247,250
2003	65,933,252	100.0	21,757,564	99.1	8,641,879	99.5	107,288	104.0	95,487	101.1	87,893,591
2004	65,990,529	100.1	21,686,454	98.7	8,618,243	99.3	100,872	97.8	93,739	99.2	87,871,594
2005	65,946,689	100.0	21,953,959	100.0	8,683,080	100.0	103,175	100.0	94,490	100.0	88,098,313
2006	65,943,252	100.0	22,243,472	101.3	8,778,178	101.1	99,168	96.1	96,971	102.6	88,382,863
2007	66,908,896	101.5	22,840,797	104.0	8,988,040	103.5	100,800	97.7	94,849	100.4	89,945,342
2008	66,774,143	101.3	22,976,100	104.6	8,984,425	103.5	99,032	92.0	90,662	95.9	89,939,937
2009	66,599,647	101.0	22,724,442	103.5	8,840,672	101.8	92,173	89.3	83,872	88.8	89,500,134
2010	6,241,395	...	22,669,009	103.2	8,818,311	101.6	85,047	82.4	82,211	87.0	29,077,662
2011	6,073,486	...	22,632,357	103.0	8,837,406	101.8	84,065	81.4	79,052	83.7	28,868,960
2012	6,076,806	...	23,041,856	104.9	8,962,809	103.2	87,134	84.4	85,996	91.0	29,291,792

Data started to include minicars in FY 1987, thus the data does not contain same kind of data as of prior to FY 1986.

Data for automobile in FY 1994 does not include data from Hyogo prefecture between Jan. and Mar. in FY 1995. Also, data for automobile between Jan. and Feb. in 1995 does not include data from Hyogo prefecture.

Index of automobile in FY 1994 is left out because the data does not include data from Hyogo prefecture.

Starting in FY 2010, methodology of survey as well as data processing was changed in Monthly Statistical Report on Motor Vehicle Transport.

Consequently, data prior to FY 2009 does contain the same type of data as of the data after 2010. Mini trucks for transporting private business matters are excluded from the survey. For your reference, parenthesized numbers refer to data without number of minicars.

Data from Automobile in FY 2010 as well as in FY 2011 does not include March and April data in 2011 from Hokkaido District Transport Bureau and Tohoku District (except buses for business use) due to the occurrence of the Great East Japan Earthquake. Automobile index for FY 2010 and FY 2011 have been left out because data from Hokkaido District Transport Bureau and Tohoku District Transport Bureau is not available.

As for railway data, there is some overlapping data for transported volume of passengers among JR operating companies after FY

1987. Consequently, data prior to and after FY 1987 do not contain sequential data.

As for transportation volume for passenger ship, data includes only regular service up to FY 1972, and both regular and irregular services are included after FY 1973. For your information, up to FY 1969, transportation volume passenger kilometer was calculated roughly by multiplying number of transportation volume by 27 kilometers (an average transport kilometers per person.)

Domestic Air includes only regular flights.

Index is based on FY 2005.

6.12 Transition of passenger transportation volume

(Index: FY 2005 (mean)=100)

Year	Passenger transportation volume kilometer (unit: million passenger-kilometer)										Total
	Automobile	Index	Railway	Index	J R	Index	Passenger ship	Index	Air	Index	
FY 1950	9,000	...	105,468	27.4	69,004	28.7	2,628	61.1	-	-	117,096
1955	27,500	...	136,112	35.4	91,239	37.9	1,996	46.4	225	0.3	165,833
1960	55,531	...	184,340	47.1	126,983	51.6	2,670	66.3	737	0.9	243,278
1965	120,756	...	255,484	65.3	174,014	70.7	3,402	84.5	2,952	3.5	382,594
1970	284,229	...	288,815	73.8	189,726	77.1	4,814	119.6	9,319	11.2	587,177
1975	360,868	...	323,800	82.8	215,289	87.5	6,895	171.3	19,148	23.0	710,711
1980	431,669	...	314,542	80.4	193,143	78.5	6,132	152.3	29,688	35.7	782,031
1981	437,078	...	316,205	82.3	192,115	79.8	6,044	140.4	31,032	38.9	790,359
1982	452,055	...	316,347	82.3	190,767	79.3	5,859	136.1	30,106	37.8	804,367
1983	464,165	...	321,452	82.2	192,906	78.4	5,722	142.2	30,627	36.8	821,966
1984	468,695	...	324,135	82.9	194,180	78.9	5,780	143.6	33,499	40.3	832,109
1985	489,260	...	330,101	84.4	197,463	80.3	5,752	142.9	33,119	39.8	858,232
1986	499,844	...	334,741	85.5	198,289	80.6	5,684	141.2	35,324	42.4	875,593
1987	718,478	77.0	344,729	88.1	204,677	83.2	6,242	155.1	38,535	46.3	1,107,984
1988	782,033	83.8	361,796	92.5	217,589	88.5	5,711	141.9	41,102	49.4	1,190,642
1989	845,123	90.6	368,818	94.3	222,671	90.5	5,962	148.1	47,141	56.6	1,267,044
1990	853,060	91.4	387,478	99.0	237,657	96.6	6,275	155.9	51,623	62.0	1,298,436
1991	869,337	93.2	400,083	102.3	247,031	100.4	6,195	153.9	55,349	66.5	1,330,964
1992	888,279	95.2	402,258	102.8	249,606	101.5	6,097	151.5	56,680	68.1	1,353,314
1993	889,873	95.4	402,727	102.9	250,016	101.6	6,061	150.6	57,118	68.6	1,355,779
1994	896,751	...	396,332	101.3	244,378	99.3	5,946	147.7	61,289	73.6	1,360,318
1995	917,419	98.3	400,056	102.3	248,998	101.2	5,637	140.0	65,012	78.1	1,388,124
1996	931,721	99.9	402,156	102.8	251,724	102.3	5,634	140.0	69,049	83.0	1,408,560
1997	944,972	101.3	395,239	101.0	247,652	100.7	5,351	132.9	73,243	88.0	1,418,805
1998	954,807	102.3	388,938	99.4	242,810	98.7	4,620	114.8	75,888	91.3	1,424,353
1999	955,563	102.4	385,101	98.4	240,795	97.9	4,479	111.3	79,348	95.3	1,424,491
2000	951,253	102.0	384,441	98.3	240,659	97.8	4,304	106.9	79,698	95.8	1,419,696
2001	954,292	102.3	385,421	98.5	241,133	98.0	4,006	99.5	81,459	97.9	1,425,178
2002	955,413	102.4	382,236	97.7	239,243	97.3	3,893	96.7	83,949	100.9	1,425,491
2003	954,186	102.3	384,958	98.4	241,160	98.0	4,024	100.0	83,311	100.1	1,426,479
2004	947,563	101.6	385,163	98.4	241,977	98.4	3,869	96.1	81,786	98.3	1,418,381
2005	933,006	100.0	391,228	100.0	245,996	100.0	4,025	100.0	83,220	100.0	1,411,479
	(84,266)	(101.3)									(562,739)
2006	917,938	98.4	395,908	101.2	249,029	101.2	3,783	94.0	85,746	103.0	1,403,375
	(84,075)	(99.8)									(569,512)
2007	936,049	98.5	405,544	103.7	255,210	103.7	3,834	95.3	84,327	101.3	1,429,754
	(83,082)	(98.8)									(576,787)
2008	905,907	97.1	404,585	103.4	253,556	103.1	3,510	87.0	80,931	97.2	1,394,933
	(83,831)	(100.9)									(572,857)
2009	898,721	96.3	393,765	100.7	244,247	99.3	3,073	76.3	75,203	90.4	1,370,762
	(81,360)	(97.1)									(553,401)
2010	77,677	...	393,466	100.6	244,593	99.4	3,004	74.6	73,750	88.6	547,897
2011	73,916	...	395,067	101.0	246,937	100.4	3,047	75.7	71,165	85.5	543,195
2012	75,668	...	404,396	103.3	253,788	103.1	3,092	76.8	77,917	93.6	561,073

Source: Compiled from "Summary of Transportation Statistics" by Information Policy Division, Policy Bureau,
Ministry of Land, Infrastructure, Transport and Tourism, Government of Japan

6.13 Transition of transport sharing ratio by transportation

1 . freight

	Tonnage				Ton-kilometer			
	Automobile	Railway	Coastal shipping	Domestic airline	Automobile	Railway	Coastal shipping	Domestic airline
FY 1955	69.1	22.5	8.4	0.0	11.7	52.6	35.7	0.0
1960	75.8	15.1	9.1	0.0	15.0	39.0	46.0	0.0
1965	83.8	9.3	6.9	0.0	26.1	30.5	43.4	0.0
1970	88.1	4.8	7.2	0.0	38.8	18.0	43.2	0.0
1975	87.4	3.6	9.0	0.0	36.0	13.1	50.9	0.0
1980	89.0	2.7	8.4	0.0	40.8	8.5	50.6	0.1
1985	90.2	1.7	8.1	0.0	47.5	4.9	47.5	0.1
1986	90.4	1.6	8.0	0.0	49.7	4.6	45.5	0.1
1987	90.5	1.4	8.0	0.0	50.4	4.6	44.9	0.1
1988	90.6	1.3	8.0	0.0	51.0	4.9	44.0	0.1
1989	90.5	1.3	8.3	0.0	51.7	4.9	43.3	0.1
1990	90.2	1.3	8.5	0.0	50.2	5.0	44.7	0.1
1991	90.5	1.2	8.3	0.0	50.7	4.9	44.3	0.1
1992	90.7	1.2	8.0	0.0	50.5	4.8	44.5	0.1
1993	90.5	1.2	8.2	0.0	51.5	4.7	43.6	0.2
1994	90.1	1.2	8.6	0.0	51.5	4.5	43.8	0.2
1995	90.6	1.2	8.3	0.0	52.7	4.5	42.6	0.2
1996	90.9	1.1	8.0	0.0	53.3	4.4	42.1	0.2
1997	90.8	1.0	8.1	0.0	53.8	4.3	41.7	0.2
1998	91.0	0.9	8.1	0.0	54.5	4.2	41.2	0.2
1999	91.0	0.9	8.1	0.0	54.8	4.0	41.0	0.2
2000	90.6	0.9	8.4	0.0	54.2	3.8	41.8	0.2
2001	90.6	1.0	8.4	0.0	53.9	3.8	42.1	0.2
2002	90.6	1.0	8.4	0.0	54.7	3.9	41.3	0.2
2003	91.3	0.9	7.8	0.0	57.1	4.0	38.7	0.2
2004	91.1	0.9	7.9	0.0	57.5	3.9	38.4	0.2
2005	91.2	1.0	7.8	0.0	58.7	4.0	37.1	0.2
	(91.0)	(1.0)	(8.0)	(0.0)	(58.6)	(4.0)	(37.2)	(0.2)
2006	91.4	1.0	7.7	0.0	59.9	4.0	35.9	0.2
	(91.2)	(1.0)	(7.9)	(0.0)	(59.8)	(4.0)	(36.0)	(0.2)
2007	91.4	0.9	7.6	0.0	60.9	4.0	34.9	0.2
	(91.2)	(1.0)	(7.8)	(0.0)	(60.8)	(1.0)	(34.9)	(0.2)
2008	91.7	0.9	7.4	0.0	62.1	4.0	33.7	0.2
	(91.5)	(0.9)	(7.5)	(0.0)	(62.0)	(4.0)	(33.8)	(0.2)
2009	92.2	0.9	7.0	0.0	63.9	3.9	32.0	0.2
	(92.0)	(0.9)	(7.0)	(0.0)	(63.8)	(3.9)	(32.0)	(0.2)
2010	91.8	0.9	7.3	0.0	54.9	4.6	40.3	0.2
2011	91.8	0.8	7.4	0.0	54.1	4.7	41.0	0.2
2012	91.4	0.9	7.7	0.0	51.3	5.0	43.4	0.3

Share rate was calculated from table 6.11 previously presented.

Starting in FY 1987, minicars and cargo trucks for transporting private business matters were included in automobile, thus, the data prior to and after FY 1987 does not contain sequential data.

Starting in FY 2010, cargo trucks for transporting private business matters were excluded in automobile, thus, the data prior to and after FY 2010 does not contain sequential data. For your reference, data corresponding to data based on FY 2010 is parenthesized.

Due to rounding up/down fractions, total may not be consistent.

6.13 Transition of transport sharing ratio by transportation

2 . Passengers

	Tonnage				Ton-kilometer			
	Automobile	Railway	Coastal shipping	Domestic airline	Automobile	Railway	Coastal shipping	Domestic airline
FY 1955	30.2	69.3	0.5	0.0	16.6	82.1	1.2	0.1
1960	38.9	60.6	0.5	0.0	22.8	75.8	1.1	0.3
1965	48.3	51.3	0.4	0.0	31.6	66.8	0.9	0.8
1970	59.2	40.3	0.4	0.0	48.4	49.2	0.8	1.6
1975	61.5	38.1	0.4	0.1	50.8	45.6	1.0	2.7
1980	64.8	34.8	0.3	0.1	55.2	40.2	0.8	3.8
1985	64.4	35.3	0.3	0.1	57.0	38.5	0.7	3.9
1986	64.0	35.6	0.3	0.1	57.1	38.2	0.6	4.0
1987	70.9	28.8	0.2	0.1	64.8	31.1	0.6	3.5
1988	71.4	28.3	0.2	0.1	65.7	30.4	0.5	3.5
1989	72.3	27.5	0.2	0.1	66.7	29.1	0.5	3.7
1990	71.6	28.1	0.2	0.1	65.7	29.8	0.5	4.0
1991	71.6	28.0	0.2	0.1	65.3	30.1	0.5	4.1
1992	72.0	27.8	0.2	0.1	65.6	29.7	0.5	4.2
1993	72.1	27.7	0.2	0.1	65.6	29.7	0.4	4.2
1994	72.4	27.3	0.2	0.1	65.9	29.1	0.4	4.5
1995	72.8	26.9	0.2	0.1	66.1	28.8	0.4	4.7
1996	72.9	26.8	0.2	0.1	66.1	28.6	0.4	4.9
1997	73.5	26.2	0.2	0.1	66.6	27.8	0.4	5.2
1998	73.6	26.2	0.2	0.1	67.0	27.3	0.3	5.3
1999	73.9	25.9	0.1	0.1	67.1	27.0	0.3	5.6
2000	74.2	25.6	0.1	0.1	67.0	27.1	0.3	5.6
2001	74.7	25.1	0.1	0.1	67.0	27.0	0.3	5.7
2002	75.1	24.7	0.1	0.1	67.0	26.8	0.3	5.9
2003	75.0	24.8	0.1	0.1	66.9	27.0	0.3	5.8
2004	75.1	24.7	0.1	0.1	66.8	27.2	0.3	5.8
2005	(74.9) (23.4)	(24.9) (75.9)	(0.1) (0.4)	(0.1) (0.3)	(66.1) (15.0)	(27.7) (69.5)	(0.3) (0.7)	(5.9) (14.8)
2006	(74.6) (23.1)	(25.2) (76.2)	(0.1) (0.3)	(0.1) (0.3)	(65.4) (14.8)	(28.2) (69.5)	(0.3) (0.7)	(6.1) (15.1)
2007	(74.4) (22.5)	(25.4) (76.8)	(0.1) (0.3)	(0.1) (0.3)	(65.0) (14.4)	(28.7) (70.3)	(0.3) (0.7)	(6.0) (14.6)
2008	(74.2) (22.3)	(25.5) (77.1)	(0.1) (0.3)	(0.1) (0.3)	(64.9) (14.6)	(29.0) (70.6)	(0.3) (0.6)	(5.8) (14.1)
2009	(74.4) (21.9)	(25.4) (77.5)	(0.1) (0.3)	(0.1) (0.3)	(65.6) (14.7)	(28.7) (71.2)	(0.2) (0.6)	(5.5) (13.6)
2010	21.5	78.0	0.3	0.3	14.2	71.8	0.5	13.5
2011	21.0	78.4	0.3	0.3	13.6	72.7	0.6	13.1
2012	20.7	78.7	0.3	0.3	13.4	72.1	0.6	13.9

Share rate was calculated from table 6.12 previously presented.

Starting in FY 1987, minicars and cargo trucks for transporting private business matters were included in automobile, thus, the data prior to and after FY 1987 does not contain sequential data.

Starting in FY 2010, cargo trucks for transporting private business matters were excluded in automobile, thus, the data prior to and after FY 2010 does not contain sequential data. For your reference, data corresponding to data based on FY 2010 is parenthesized.

Due to rounding up/down fractions, total may not be consistent.

As for passenger transport share rate, the data for passenger ship is not available (as of the end of Feb., 2013.) Thus, the rate is roughly calculated

Source: Compiled from "Transportation censuses" by Information Policy Division, Policy Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Government of Japan

6.14 Status of development and coverage rate of national highways by prefecture (as of April 1st, 2013)

(Unit: km, %)

	National highways				Prefectural and municipal roads				National highways - prefectural and municipal roads			
	Actual	Maintenance	Improvement	Pavement	Actual	Maintenance	Improvement	Pavement	Actual	Maintenance	Improvement	Pavement
Hokkaido	6,714.2	92.6	100.0	99.7	11,783.3	89.2	92.7	41.4	18,497.5	90.4	95.3	62.5
Aomori	1,429.8	76.2	88.3	85.8	2,474.8	63.6	67.7	60.6	3,904.6	68.2	75.2	69.8
Iwate	1,788.5	84.4	97.1	92.7	2,930.8	70.5	74.4	50.0	4,719.3	75.8	83.0	66.2
Miyagi	1,193.7	58.6	94.2	96.7	2,291.7	70.6	80.0	85.1	3,485.4	66.5	84.8	89.1
Akita	1,359.3	79.5	95.7	95.4	2,421.1	69.1	72.5	57.7	3,780.4	72.8	80.8	71.2
Yamagata	1,132.9	69.8	93.5	90.8	2,502.8	75.6	81.1	64.9	3,635.7	73.8	85.0	73.0
Fukushima	1,983.0	67.3	86.6	80.5	4,103.1	57.0	63.2	53.3	6,086.1	60.4	70.8	62.2
Ibaraki	1,146.3	61.4	96.4	97.3	3,419.4	57.8	69.4	66.8	4,565.7	58.7	76.2	74.4
Tochigi	915.0	54.9	92.0	98.6	2,837.6	56.2	69.9	81.1	3,752.6	55.9	75.3	85.4
Gunma	957.2	56.8	87.5	92.9	2,486.7	59.9	73.3	78.5	3,443.9	59.0	77.3	82.5
Saitama	893.9	35.1	95.2	97.3	2,492.8	54.6	84.6	88.2	3,386.7	49.5	87.4	90.6
Chiba	1,208.9	48.0	94.7	99.0	2,596.3	53.6	73.4	88.2	3,805.2	51.8	80.1	91.7
Tokyo	1,327.2	65.5	98.6	100.0	2,337.0	54.9	84.6	95.5	2,681.2	56.2	86.4	96.1
Kanagawa	685.4	27.9	99.0	99.8	1,483.2	34.3	80.9	90.9	2,168.7	32.3	86.6	93.7
Niigata	1,990.7	58.6	88.3	86.3	4,664.8	57.0	65.5	60.0	6,655.5	57.5	72.3	67.9
Toyama	519.2	64.6	93.4	96.4	2,154.2	67.7	78.9	87.5	2,673.4	67.1	81.7	89.3
Ishikawa	615.1	76.5	95.3	96.6	1,921.6	63.5	72.3	76.1	2,536.8	66.6	77.9	81.1
Fukui	792.9	74.5	86.7	86.9	1,557.8	58.4	64.8	59.4	2,350.7	63.8	72.2	68.7
Yamanashi	622.6	61.0	90.4	92.5	1,431.9	49.1	59.7	61.1	2,054.5	52.7	69.0	70.6
Nagano	1,702.9	61.3	88.0	84.5	3,881.4	52.6	60.1	46.5	5,584.3	55.3	68.6	58.1
Gifu	1,597.6	69.4	84.9	91.1	3,087.6	43.8	60.3	74.6	4,685.2	52.5	68.7	80.2
Shizuoka	1,247.8	40.1	92.0	92.9	3,222.1	47.5	69.9	70.4	4,469.9	45.4	76.1	76.7
Aichi	1,327.2	56.9	96.1	95.9	4,229.2	54.6	76.0	81.2	5,556.5	55.1	80.8	84.7
Mie	1,186.9	66.3	88.8	86.3	2,654.8	50.7	61.5	55.4	3,814.7	55.5	69.9	65.0
Shiga	671.2	56.6	93.0	95.4	1,842.5	51.1	65.6	73.0	2,513.7	52.6	72.9	79.0
Kyoto	925.6	61.4	90.0	95.6	2,195.7	36.0	55.7	65.3	3,121.3	43.5	66.2	74.3
Osaka	665.8	37.2	93.8	100.0	1,780.4	48.8	83.3	99.2	2,446.2	45.7	86.1	99.4
Hyogo	1,501.2	66.7	95.2	96.4	4,391.7	52.4	68.3	75.3	5,892.8	56.1	75.1	80.7
Nara	839.3	50.7	72.1	83.9	1,300.9	34.6	45.4	54.1	2,140.2	40.9	55.9	65.8
Wakayama	1,021.2	61.7	76.0	79.7	1,878.0	38.8	45.1	59.0	2,899.2	46.9	55.9	66.3
Tottori	576.6	74.6	98.3	97.4	1,644.8	74.1	77.9	75.5	2,221.4	74.2	83.2	81.2
Shimane	939.4	70.4	92.2	93.5	2,514.1	49.5	56.8	59.2	3,453.4	55.2	66.5	68.5
Okayama	1,015.3	67.1	96.9	94.7	3,569.2	46.9	58.8	52.6	4,584.5	51.4	67.2	61.9
Hiroshima	1,503.5	64.6	93.3	94.8	3,680.5	53.1	66.6	72.9	5,184.0	56.4	74.3	79.3
Yamaguchi	1,114.0	69.3	92.8	93.3	2,790.7	44.6	52.8	50.4	3,904.7	51.6	64.2	62.7
Tokushima	721.1	53.4	72.8	78.7	1,767.8	29.5	43.6	48.4	2,489.0	36.4	52.1	57.2
Kagawa	370.7	67.1	98.3	99.0	1,559.6	65.9	75.1	76.6	1,930.3	66.1	79.6	80.9
Ehime	1,084.2	71.1	88.7	84.9	2,884.4	44.9	51.3	41.5	3,968.6	52.0	61.5	53.4
Kochi	1,056.4	74.0	84.4	84.8	2,096.3	33.2	39.2	38.5	3,152.7	46.9	54.3	54.0
Fukuoka	1,185.3	45.4	95.3	92.1	3,502.9	53.2	75.1	56.5	4,688.3	51.2	80.2	65.5
Saga	614.8	56.3	96.5	97.0	1,261.3	51.0	66.4	71.0	1,876.1	52.7	76.3	79.5
Nagasaki	982.0	58.4	91.0	90.5	1,670.9	56.7	60.7	55.8	2,652.9	57.3	71.9	68.7
Kumamoto	1,252.8	64.9	95.1	94.5	2,946.3	49.4	61.0	54.6	4,199.1	54.1	71.2	66.5
Oita	1,067.6	72.9	94.5	93.2	2,536.0	62.4	68.0	59.6	3,603.6	65.5	75.8	69.6
Miyazaki	1,176.3	67.1	82.2	78.6	2,021.7	52.6	59.4	58.8	3,197.9	57.9	67.8	66.1
Kagoshima	1,291.2	78.6	96.2	94.7	3,512.5	68.6	72.6	63.0	4,803.7	71.3	78.9	71.5
Okinawa	501.2	72.8	98.9	97.8	1,060.9	77.5	90.3	89.5	1,562.1	76.0	93.1	92.2
nationwide	55,432.2	66.9	92.3	92.5	129,374.9	57.6	69.3	63.8	184,807.1	60.4	76.2	72.4

Note:

- Maintenance rate is rough estimate and is calculated based on Road Traffic census in FY 2010.
- As for the Improvement rate, it was calculated by using the data from improved extension.
- As for improvement rate, data for Prefectural and municipal roads and above are taken from road width of 5.5 meters and above.
- Pavement rate does not include pavement done by simplified method. Parenthesized data include pavement done by simplified method.
- Ordinance-designated cities are included.
- Due to influence of Great East Japan Earthquake, for Iwate and Miyagi prefectures, part of the data for Municipal roads include data as of April 1st, 2010.

6.14 Status of development and coverage rate of national highways by prefecture (as of April 1st, 2013)

(Unit : km, %)

	Municipal roads			Total			
	Actual	Maintenance	Pavement	Actual	Maintenance	Improvement	Pavement
Hokkaido	71,024.7	67.0	14.3	89,522.2	71.8	72.8	24.3
Aomori	15,873.5	58.3	23.0	19,778.1	60.2	61.6	32.3
Iwate	28,277.3	58.8	9.3	32,996.7	61.3	62.3	17.5
Miyagi	21,277.4	67.4	20.7	24,762.8	67.3	69.8	30.4
Akita	19,892.7	66.3	8.5	23,673.2	67.4	68.7	18.5
Yamagata	12,853.7	66.8	12.1	16,489.4	68.3	70.8	25.5
Fukushima	32,630.0	57.2	10.5	38,716.1	57.7	59.4	18.6
Ibaraki	51,386.4	37.6	8.1	55,952.1	39.4	40.8	13.5
Tochigi	21,322.8	68.2	12.5	25,075.3	66.3	69.2	23.4
Gunma	31,368.2	47.7	10.3	34,812.1	48.8	50.6	17.5
Saitama	43,443.5	51.2	11.4	46,830.2	51.1	53.8	17.2
Chiba	36,472.6	58.5	18.5	40,277.8	57.8	60.5	25.4
Tokyo	21,434.4	71.3	60.1	24,115.6	69.7	73.0	64.1
Kanagawa	23,250.9	66.1	53.3	25,419.5	63.2	67.8	56.7
Niigata	30,502.3	61.6	10.4	37,157.8	60.8	63.5	20.7
Toyama	11,051.8	76.6	28.8	13,725.2	74.8	77.6	40.6
Ishikawa	10,534.5	74.1	17.3	13,071.3	72.7	74.9	29.7
Fukui	8,387.3	71.5	25.1	10,737.9	69.8	71.6	34.6
Yamanashi	9,007.7	60.3	17.6	11,062.2	58.9	61.9	27.5
Nagano	42,052.2	48.3	7.8	47,636.5	49.1	50.7	13.7
Gifu	25,721.7	55.0	10.2	30,406.9	54.6	57.1	21.0
Shizuoka	32,075.2	57.7	20.3	36,545.1	56.2	60.0	27.2
Aichi	44,351.3	64.4	26.9	49,907.8	63.4	66.2	33.4
Mie	21,193.2	49.1	17.3	25,034.9	50.1	52.3	24.7
Shiga	9,769.5	57.2	18.2	12,283.2	56.2	60.4	30.6
Kyoto	12,321.6	54.5	32.4	15,442.9	52.3	56.8	40.8
Osaka	16,799.4	76.0	71.0	19,245.7	72.1	77.3	74.6
Hyogo	30,186.6	59.2	30.5	36,079.4	58.7	61.8	38.7
Nara	10,487.0	45.4	22.8	12,627.2	44.6	47.2	30.1
Wakayama	10,581.3	42.5	47.4	13,480.5	43.4	45.4	51.5
Tottori	6,550.3	65.2	17.5	8,771.6	67.5	69.8	33.6
Shimane	14,642.6	54.0	8.9	18,096.0	54.2	56.3	20.3
Okayama	27,264.8	44.6	11.3	31,849.3	45.6	47.8	18.6
Hiroshima	23,444.2	57.2	35.0	28,628.2	57.1	60.3	43.0
Yamaguchi	12,425.8	59.0	27.4	16,330.5	57.2	60.2	35.8
Tokushima	12,526.2	44.6	14.9	15,015.2	43.3	45.8	21.9
Kagawa	8,255.9	61.0	15.7	10,186.2	62.0	64.5	28.1
Ehime	14,086.7	50.0	12.8	18,055.3	50.4	52.5	21.7
Kochi	10,761.3	44.0	11.8	13,914.0	44.7	46.4	21.3
Fukuoka	32,594.7	64.1	10.2	37,283.0	62.5	66.1	17.2
Saga	8,939.1	69.6	14.2	10,815.2	66.7	70.8	25.6
Nagasaki	15,317.0	47.4	29.7	17,969.9	48.9	51.0	35.4
Kumamoto	21,560.8	55.6	17.5	25,759.9	55.3	58.1	25.5
Oita	14,573.0	60.5	26.7	18,176.6	61.5	63.6	35.2
Miyazaki	16,750.2	52.7	14.5	19,948.1	53.5	55.1	22.8
Kagoshima	22,264.0	68.7	11.0	27,067.7	69.1	70.5	21.7
Okinawa	6,475.1	63.7	39.7	8,037.2	66.1	69.4	49.9
nationwide	1,023,962.4	57.9	19.2	1,208,769.4	58.3	60.7	27.3

Source: "Annual Report the Japanese Roads 2014" by Planning Division, Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Government of Japan.

6.14 Status of development and coverage rate of national highways by prefecture (as of April 1st, 2013)

	Area	Population	Extended national highways and Prefectural and municipal roads	Extended road per 1 km ²	Extended road per one thousand	Road area	Road rate	Paved extension	Number of vehicles owned	Paved extension per vehicle	Paved extension per vehicle
	(A) (km ²)	(B) (Thousand people)	(C) (km)	(C/A) (m)	(C/B) (km)	(D) (km ²)	(D/A) (%)	(E) (km)	(F) (Thousand)	(E/F) (m)	(E/F) (m)
Hokkaido	83,457	5,431	18,497	221.6	3.41	730.28	0.88	11,569.1	3,517	3.3	1069.2
Aomori	9,645	1,335	3,905	404.8	2.92	128.63	1.33	2,727.2	969	2.8	344.3
Iwate	15,279	1,295	4,719	308.9	3.64	199.32	1.30	3,123.6	973	3.2	303.1
Miyagi	6,862	2,328	3,485	507.9	1.50	164.69	2.40	3,104.5	1,568	2.0	792.0
Akita	11,636	1,050	3,780	324.9	3.60	145.39	1.25	2,693.1	796	3.4	235.3
Yamagata	6,652	1,141	3,636	546.6	3.19	119.60	1.80	2,653.5	901	2.9	305.9
Fukushima	13,783	1,946	6,086	441.6	3.13	227.25	1.65	3,783.3	1,541	2.5	627.7
Ibaraki	6,096	2,931	4,566	749.0	1.56	284.77	4.67	3,398.4	2,428	1.4	1734.7
Tochigi	6,408	1,986	3,753	585.6	1.89	163.64	2.55	3,203.1	1,606	2.0	805.2
Gunma	6,362	1,984	3,444	541.3	1.74	183.10	2.88	2,841.0	1,686	1.7	1000.6
Saitama	3,768	7,222	3,387	898.8	0.47	257.31	6.83	3,067.3	3,774	0.8	4643.5
Chiba	5,082	6,192	3,805	748.8	0.61	240.40	4.73	3,487.7	3,376	1.0	3267.9
Tokyo	2,104	13,300	2,681	1274.3	0.20	175.63	8.35	2,575.4	3,919	0.7	5963.6
Kanagawa	2,416	9,079	2,169	897.6	0.24	167.84	6.95	2,032.0	3,648	0.6	6549.2
Niigata	10,364	2,330	6,655	642.2	2.86	241.76	2.33	4,516.8	1,766	2.6	690.5
Toyama	2,046	1,076	2,673	1306.6	2.48	99.86	4.88	2,386.2	865	2.8	313.6
Ishikawa	4,186	1,159	2,537	606.0	2.19	95.17	2.27	2,056.4	861	2.4	360.5
Fukui	4,190	795	2,351	561.0	2.96	74.03	1.77	1,614.4	637	2.5	251.3
Yamanashi	4,201	847	2,055	489.1	2.43	64.99	1.55	1,450.7	708	2.0	345.5
Nagano	13,105	2,122	5,584	426.1	2.63	237.06	1.81	3,243.5	1,799	1.8	997.8
Gifu	9,768	2,051	4,685	479.6	2.28	180.88	1.85	3,758.5	1,612	2.3	691.4
Shizuoka	7,255	3,723	4,470	616.1	1.20	225.91	3.11	3,429.1	2,705	1.3	2133.8
Aichi	5,116	7,443	5,556	1086.1	0.75	332.67	6.50	4,706.9	4,835	1.0	4966.6
Mie	5,762	1,833	3,842	666.7	2.10	140.94	2.45	2,495.5	1,431	1.7	820.6
Shiga	3,767	1,416	2,514	667.3	1.78	85.22	2.26	1,985.6	961	2.1	465.1
Kyoto	4,613	2,617	3,121	676.6	1.19	96.12	2.08	2,318.3	1,260	1.8	684.8
Osaka	1,901	8,849	2,446	1286.8	0.28	152.63	8.03	2,431.4	3,456	0.7	4912.4
Hyogo	8,396	5,558	5,893	701.9	1.06	229.89	2.74	4,753.2	2,812	1.7	1663.6
Nara	3,691	1,383	2,140	579.8	1.55	67.78	1.84	1,407.3	794	1.8	448.0
Wakayama	4,726	979	2,899	613.5	2.96	69.41	1.47	1,921.9	714	2.7	265.3
Tottori	3,507	578	2,221	633.4	3.84	58.04	1.65	1,803.8	448	4.0	111.3
Shimane	6,708	702	3,453	514.8	4.92	99.60	1.48	2,367.0	534	4.4	120.5
Okayama	7,010	1,930	4,585	654.0	2.38	166.66	2.38	2,839.4	1,450	2.0	740.5
Hiroshima	8,480	2,840	5,184	611.3	1.83	177.63	2.09	4,109.4	1,777	2.3	768.4
Yamaguchi	6,114	1,420	3,905	638.6	2.75	110.01	1.80	2,447.4	1,029	2.4	432.6
Tokushima	4,147	770	2,489	600.2	3.23	74.86	1.81	1,422.6	594	2.4	248.0
Kagawa	1,862	985	1,930	1036.7	1.96	65.71	3.53	1,562.2	741	2.1	351.5
Ehime	5,679	1,405	3,969	698.8	2.82	105.31	1.85	2,117.3	966	2.2	440.7
Kochi	7,105	745	3,153	443.7	4.23	75.49	1.06	1,701.8	535	3.2	168.2
Fukuoka	4,847	5,090	4,688	967.3	0.92	238.51	4.92	3,069.2	3,105	1.0	3141.2
Saga	2,440	840	1,876	768.9	2.23	70.85	2.90	1,491.9	638	2.3	272.8
Nagasaki	4,106	1,397	2,653	646.1	1.90	100.98	2.46	1,822.1	887	2.1	431.8
Kumamoto	7,268	1,801	4,199	577.8	2.33	154.00	2.12	2,793.5	1,297	2.2	602.2
Oita	5,100	1,178	3,604	706.6	3.06	116.11	2.28	2,507.6	874	2.9	304.6
Miyazaki	6,795	1,120	3,198	470.6	2.86	120.62	1.78	2,113.1	889	2.4	374.0
Kagoshima	9,045	1,680	4,804	531.1	2.86	175.67	1.94	3,435.2	1,279	2.7	476.2
Okinawa	2,277	1,415	1,562	686.0	1.10	64.54	2.83	1,439.7	973	1.5	657.6
nationwide	377,962	127,298	184,807	489.0	1.45	75,556.78	2.00	133,777.8	75,934	1.8	43101.1

Note:

Area comes from 「Statistical reports on the land area by prefectures and municipalities in Japan (as of October 1st, 2013)」 by Geospatial Information

Authority of Japan, Government of Japan

Population comes from "Statistical Handbook of Japan" by Statistic Bureau (as of October 1st, 2013)

Number of vehicles owned comes from Japan Statistical Yearbook (as of the end of FY 2013).

Due to rounding up/down of the fraction less than unit, totals and ground total may not be consistent.

Road area refers to the area including Express Highways, National Highways, prefectural and municipal roads.

Paved extension excludes pavement applied with simplified paving method.

Area does not contain the municipal area where the borderlines are not clearly identified.

Number of vehicles owned does not include number of trailers, small two wheelers, and two mini-cyclers

Source: Compiled from "Annual Report the Japanese Roads 2014" by Planning Division, Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Government of Japan.

6.15 Traffic Volume of National Expressways, Urban Expressways and Public Highways

Traffic volume of national expressways and urban expressways

(Unit: car / day)

	National Expressways			Urban Expressways	
	Tomei Expressway	Meishin Expressway	Chuo Expressway	Metropolitan Expressway	Hanshin Expressway
FY 1968	12,001	17,622	9,614	212,132	131,177
1969	21,300	24,578	10,205	323,168	177,278
1970	28,053	31,757	11,331	367,632	254,200
1971	32,282	32,135	12,833	454,574	294,579
1972	39,516	36,966	13,704	496,770	341,744
1973	44,840	41,179	16,295	526,595	368,226
1974	44,858	41,505	17,194	517,780	383,731
1975	41,636	37,700	16,618	523,642	401,236
1976	44,766	40,095	21,058	555,655	423,866
1977	48,062	43,226	24,117	596,833	444,836
1978	53,046	43,937	28,093	688,390	479,025
1979	51,349	47,379	* 20,707	704,472	492,013
1980	52,225	48,595	* 21,080	734,664	529,680
1981	54,243	49,479	* 22,866	770,508	585,587
1982	54,211	49,137	* 23,276	778,353	623,524
1983	54,945	50,119	* 25,406	765,082	654,082
1984	58,101	53,468	* 27,998	798,564	679,862
1985	60,102	54,751	* 29,331	835,796	697,000
1986	61,084	56,732	* 30,499	857,507	720,300
1987	64,817	60,087	* 32,902	928,378	743,143
1988	68,093	63,520	* 36,040	1,001,926	768,506
1989	70,790	66,518	* 39,135	1,044,538	771,921
1990	73,269	69,522	* 42,114	1,108,131	805,458
1991	74,785	70,084	* 41,704	1,129,474	821,166
1992	74,571	69,826	* 42,449	1,131,062	828,248
1993	74,419	69,217	* 41,531	1,114,010	833,610
1994	76,203	67,918	* 42,616	1,122,810	830,195
1995	76,839	66,422	* 42,510	1,152,295	708,576
1996	79,052	70,788	* 43,020	1,164,167	864,169
1997	77,710	71,365	* 42,148	1,147,210	940,151
1998	76,562	70,962	* 40,971	1,155,504	951,599
1999	76,366	72,146	* 41,063	1,158,974	920,291
2000	77,637	73,110	* 40,708	1,152,336	919,885
2001	77,065	72,669	* 40,231	1,147,468	905,613
2002	76,657	71,810	* 39,466	1,118,534	888,631
2003	76,356	70,458	* 39,321	1,117,653	893,842
2004	76,895	71,368	* 39,290	1,115,716	904,619
2005	78,646	73,198	* 39,834	1,142,913	910,933
2006	79,029	73,582	* 40,234	1,149,245	912,849
2007	78,484	73,002	* 41,527	1,147,000	899,853
2008	75,162	64,735	* 40,892	1,114,678	870,970
2009	79,286	67,259	* 43,254	1,119,739	861,408
2010	80,543	66,987	* 45,555	1,113,870	876,062
2011	79,872	65,882	* 44,227	956,459	727,952
2012	63,828	65,335	* 42,460	949,430	723,970

Note:

Data for Urban Expressways refers to average traffic volume per day.

Data for Chuo Expressway refers to average traffic volume of Fujiyoshida line.

* refers to average traffic volume between Hachioji and Kawaguchiko.

Source: Compiled from Annual Report of Road Statistics 2014 by Ministry of Land, Infrastructure, Transport and Tourism

6.15 Traffic Volume of National Expressways, Urban Expressways and Public Highways

Traffic volume of public highways										(Unit: car / 12 hours)
Types of road/Route name	FY1980	1983	1985	1988	1990	1994	1997	1999	2005	2010
National highway (direct control)	10,065	10,462	10,573	11,566	12,097	12,768	13,275	13,404	13,237	12,197
National highway (non-direct control)	4,538	4,573	4,681	5,237	5,576	5,708	6,158	6,227	6,308	6,261
National highway total	7,183	7,082	7,200	7,956	8,375	8,452	8,929	9,028	9,049	8,651
Major regional roads	3,658	3,679	3,747	4,122	4,360	4,613	4,906	5,008	5,101	4,944
Prefectural road	2,003	2,142	2,187	2,426	2,588	2,690	2,862	2,918	2,934	2,839
Prefectural road total	2,568	2,757	2,809	3,100	3,290	3,586	3,793	3,869	3,919	3,793
TOTAL	3,675	3,938	4,004	4,419	4,670	5,073	5,329	5,415	5,463	5,267
Route1 From Tokyo to Osaka	20,011	20,741	21,104	21,914	22,013	22,673	23,272	23,161	22,840	22,912
Route 2 From Osaka to Kitakyushu	19,492	20,241	20,629	22,058	22,835	24,286	25,329	24,757	24,896	23,780
Route 3 From Kitakyushu to Kagoshima	15,229	15,836	16,067	17,381	17,987	18,917	19,463	19,193	18,430	18,439
Route 4 From Tokyo to Aomori	13,586	13,596	14,087	15,036	15,628	16,940	17,533	18,436	19,167	18,526
Route 5 From Hakodate to Sapporo	8,215	8,329	8,598	9,119	10,016	10,618	11,614	11,409	11,005	9,440

note)

Average traffic volume in 12 hours daytime (7-19) according to Road traffic census (yearly published.)

Traffic volume exclude road closed sections.

Source: Road Bureau's web: "http://www.mlit.go.jp/road/ir/ir-data/data_shu.html", Ministry of Land, Infrastructure, and Tourism

6.16 Changes in Kilometers Traveling (one million kilo)

	Kilometers travelling	Index
FY 1971	243,479	100.0
1972	259,593	106.6
1973	276,194	113.4
1974	266,485	109.4
1975	286,345	117.6
1976	309,698	127.2
1977	342,326	140.6
1978	361,261	148.4
1979	381,951	156.9
1980	389,052	159.8
1981	394,658	162.1
1982	403,101	165.6
1983	408,928	168.0
1984	415,743	170.8
1985	428,442	176.0
1986	441,613	181.4
1987	457,858	188.0
1988	478,289	196.4
1989	501,187	205.8
1990	527,964	216.8
1991	551,110	226.3
1992	566,275	232.6
1993	568,500	233.5
1994	576,132	236.6
1995	596,363	244.9
1996	610,183	250.6
1997	615,099	252.6
1998	613,951	252.2
1999	626,286	257.2
2000	630,755	259.1
2001	639,818	262.8
2002	634,395	260.6
2003	628,769	258.2
2004	610,336	250.7
2005	592,489	243.3
2006	580,483	238.4
2007	573,806	236.7
2008	552,230	226.8
2009	546,041	224.3
2010	484,435	199.0
2011	493,631	202.7
2012	503,953	207.0

Note:

As for the Index, 1971=100.

Mini cars are excluded.

Due to the influence of the Great East Japan Earthquake, data for 2011 does not include March and April data

from Hokkaido Unyukyoku and Tohoku Unyukyoku (Department of Transportations).

Source: Compiled from "Transportation censuses" by Information Policy Division, Policy Bureau, Ministry of Land, Infrastructure, Transport and Tourism. Government of Japan

6.17 Transition of Passenger cars (private use/business use) increasing in size (and weight)

	gross vehicle weight (per car)					Average of gross vehicle weight (kg)
	~ 500kg	501 ~ 1,000kg	1,001 ~ 1,500kg	1,501kg ~	Others	
FY 1980	372	13,451,676	7,919,402	168,797	3,227	942
1981	250	13,651,100	8,685,598	171,044	6,798	951
1982	195	13,965,109	9,236,698	172,558	14,579	955
1983	192	14,290,444	9,785,987	176,015	30,011	959
1984	186	14,544,529	10,228,196	201,178	53,152	963
1985	190	14,694,986	10,823,540	237,340	91,522	970
1986	206	14,697,022	11,552,703	275,137	162,623	978
1987	227	14,587,549	12,565,780	367,624	303,553	992
1988	234	14,225,016	13,784,422	474,482	491,385	1,009
1989	262	13,779,443	15,557,300	769,172	775,403	1,034
1990	298	13,007,294	17,137,377	1,223,034	1,068,494	1,063
1991	344	12,237,883	18,465,559	1,909,013	1,337,780	1,093
1992	415	11,369,719	19,679,441	2,578,309	1,606,583	1,122
1993	494	10,729,736	20,762,032	5,016,568	12	1,175
1994	606	10,027,588	21,848,312	5,878,003	12	1,200
1995	725	9,441,373	22,860,727	6,799,871	12	1,222
1996	866	8,888,483	23,838,118	7,749,091	10	1,243
1997	1,007	8,418,558	24,331,530	8,531,890	8	1,259
1998	1,156	8,059,068	24,636,863	9,085,781	8	1,271
1999	1,266	7,764,673	24,617,132	9,672,626	8	1,282
2000	1,311	7,414,303	24,708,250	10,241,194	11	1,293
2001	1,336	7,167,928	24,634,074	10,724,383	11	1,302
2002	1,348	7,012,555	24,641,880	10,999,132	14	1,307
2003	1,346	6,714,955	24,655,319	11,252,572	14	1,314
2004	1,333	6,532,323	24,738,036	11,504,471	15	1,319
2005	1,311	6,251,768	24,671,870	11,822,316	15	1,327
2006	1,268	5,894,155	24,325,087	12,008,884	15	1,334
2007	1,234	5,603,280	23,758,721	12,105,739	15	1,340
2008	1,222	5,372,240	23,306,249	12,119,512	22	1,345
2009	1,211	5,164,218	23,073,771	12,179,693	27	1,349
2010	1,220	5,005,002	22,844,577	11,315,981	23	1,331
2011	1,239	4,881,363	22,849,536	12,411,281	0	1,344
2012	1,247	4,656,070	22,862,631	12,489,379	0	1,348
2013	1,221	4,398,732	22,776,234	12,644,830	0	1,354

Note: Mini vans and station wagons weighing more than 1501 kg were categorized under "others" prior to 1992. After 1993, they were classified according to the weight.

Source: Compiled from "Number of registered vehicles classified by weight" (as of the end of March 2011) (as of the end of March 2012) (as of the end of March 2013) (as of the end of March 2014) by Automobile Inspection & Registration Information Association

6.18 Transition of number of registered environmentally friendly vehicles

(unit: per car)

	Electric	Natural gas	Hybrid	Fuel efficient and low-emission vehicle	Total
FY 1990	1,037	21	0	-	1,058
1991	1,285	49	8	-	1,342
1992	1,541	123	38	-	1,702
1993	1,946	243	72	-	2,261
1994	2,300	421	128	-	2,849
1995	2,500	759	176	-	3,435
1996	2,600	1,211	228	-	4,039
1997	2,500	2,093	3,728	-	8,321
1998	2,400	3,640	22,528	-	28,568
1999	2,600	5,252	37,719	-	45,571
2000	3,830	7,811	50,282	569,170	61,923
2001	4,725	12,012	75,216	2,081,379	2,173,332
2002	5,600	16,561	91,200	4,472,323	4,585,684
2003	7,677 (4,658)	20,638	132,516	6,962,491	7,123,322
2004	8,468 (5,357)	24,263	196,770	9,466,721	9,696,222
2005	9,928 (6,999)	27,605	256,644	11,916,351	12,210,528
2006	9,421 (6,848)	31,462	343,626	14,032,865	14,417,374
2007	9,358 (6,911)	34,203	429,274	16,018,282	16,491,117
2008	8,850 (6,250)	37,117	536,473	17,649,597	18,232,037
2009	8,473 (4,652)	38,861	983,831	19,522,602	20,553,767
2010	16,503 (5,777)	40,429	1,418,400	21,052,298	22,527,630
2011	28,097 (4,326)	41,463	2,029,009	22,332,998	24,431,567
2012	62,686 (3,741)	42,590	2,852,105	6,300,818	9,258,199
2013	54,757	43,601	3,813,387	7,736,760	11,648,505

Note:

The aggregation is done at each end of the fiscal year.

The upper column in Total after FY 2000 refers to total value excluding low efficient and low-emission vehicle.

The lower column in Total refers to total value of every type of car.

Electric before FY 2012 includes two wheelers. () refers to the number of two wheelers.

(The number of two wheelers is not available prior to FY 2002.)

The registered number of cars in FY 2012 and FY 2013 under Low efficient and low-emission vehicles are calculated only for those who achieved the 2015 fuel efficiency standard.

Source: Compiled from

Electric: Next Generation Vehicle Promotion Center

Natural Gas: The Japan Gas Association

Hybrid: Next Generation Vehicle Association (up to until FY 2006, Japan Automobile Research Institute.)

Fuel efficient and low-emission vehicle: Ministry of Land, Infrastructure, Transport and Tourism.

(Collecting data for Fuel efficient and low-emission vehicles began FY 2000. The data does not include minicars.)

6.19 Transition of facility numbers for providing fuel to environmentally friendly cars

Natural gas (quick charging)

(Unit: piece)

FY 1994	24
1995	34
1996	47
1997	62
1998	82
1999	107
2000	138
2001	181
2002	224
2003	270
2004	288
2005	311
2006	324
2007	327
2008	344
2009	342
2010	333
2011	321
2012	314
2013	300

Electric (quick charging)

(Unit: place)

Nov. 2009	95
Apr. 2010	193
Oct.	276
Apr. 2011	629
Oct.	763
Apr. 2012	1,154
Oct.	1,344
Apr. 2013	1,677
Oct.	1,759
Apr. 2014	1,882
Oct.	2,129
Apr. 2015	3,087

Source: CHAdeMO Association

Note: The aggregation of data for Natural gas (quick charging) is done in the end of FY.

Source: Compiled from materials by The Japan Gas Association

6.20 Transition of yearly average of CO₂ concentrate (General Environment Air Monitoring Stations/Motor Vehicle Exhaust Monitoring Stations)

	General Environment Air Monitoring Station		Motor Vehicle Exhaust Monitoring Station	
	Yearly average (ppm)	Number of stations	Yearly average (ppm)	Number of stations
FY1974	0.017	1,125	0.022	24
1975	0.015	1,236	0.021	34
1976	0.014	1,353	0.020	33
1977	0.013	1,414	0.021	40
1978	0.011	1,456	0.018	42
1979	0.010	1,532	0.017	41
1980	0.009	1,571	0.014	43
1981	0.008	1,585	0.012	41
1982	0.007	1,603	0.012	46
1983	0.007	1,612	0.011	52
1984	0.007	1,623	0.011	51
1985	0.006	1,609	0.010	49
1986	0.006	1,608	0.010	49
1987	0.006	1,603	0.011	53
1988	0.006	1,601	0.012	58
1989	0.006	1,599	0.012	65
1990	0.006	1,602	0.012	69
1991	0.006	1,607	0.011	70
1992	0.005	1,614	0.009	78
1993	0.005	1,601	0.007	82
1994	0.005	1,604	0.008	91
1995	0.005	1,608	0.008	94
1996	0.005	1,612	0.008	101
1997	0.005	1,595	0.006	104
1998	0.004	1,579	0.006	103
1999	0.004	1,551	0.005	101
2000	0.005	1,501	0.006	96
2001	0.005	1,489	0.006	95
2002	0.004	1,468	0.005	97
2003	0.004	1,395	0.004	92
2004	0.004	1,361	0.004	89
2005	0.004	1,319	0.004	85
2006	0.003	1,265	0.004	86
2007	0.003	1,236	0.003	82
2008	0.003	1,171	0.003	72
2009	0.003	1,129	0.003	68
2010	0.003	1,114	0.003	68
2011	0.002	1,066	0.003	61
2012	0.002	1,022	0.002	59
2013	0.002	1,011	0.002	58

Note: The relevant data expresses changes of simple mean over time at valid stations.

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, Ministry of the Environment, Government of Japan

6.21 Transition of environmental standards achieved

(General Environment Air Monitoring Stations/Motor Vehicle Exhaust Monitoring Stations)

	General Environment Air Monitoring Station			Motor Vehicle Exhaust Monitoring Station		
	Number of monitoring stations recording levels that met criteria	Number of valid monitoring stations	Achievement rate (%)	Number of monitoring stations recording levels that met criteria	Number of valid monitoring stations	Achievement rate (%)
FY1978	1,366	1,456	93.8	30	42	71.4
1979	1,485	1,532	96.9	35	41	85.4
1980	1,546	1,571	98.4	41	43	95.3
1981	1,569	1,585	99.0	40	42	95.2
1982	1,596	1,603	99.6	44	46	95.7
1983	1,603	1,612	99.4	52	52	100.0
1984	1,614	1,623	99.4	50	51	98.0
1985	1,603	1,609	99.6	49	49	100.0
1986	1,600	1,608	99.5	48	49	98.0
1987	1,596	1,603	99.6	52	53	98.1
1988	1,596	1,601	99.7	57	58	98.3
1989	1,591	1,599	99.5	62	64	96.9
1990	1,598	1,602	99.8	65	68	95.6
1991	1,601	1,607	99.6	69	70	98.6
1992	1,608	1,614	99.6	77	78	98.7
1993	1,598	1,601	99.8	82	82	100.0
1994	1,600	1,604	99.8	91	91	100.0
1995	1,603	1,608	99.7	94	94	100.0
1996	1,610	1,612	99.9	101	101	100.0
1997	1,590	1,595	99.7	104	104	100.0
1998	1,575	1,579	99.7	103	103	100.0
1999	1,547	1,551	99.7	101	101	100.0
2000	1,415	1,501	94.3	90	96	93.8
2001	1,483	1,489	99.6	95	95	100.0
2002	1,465	1,468	99.8	96	97	99.0
2003	1,391	1,395	99.7	92	92	100.0
2004	1,359	1,361	99.9	89	89	100.0
2005	1,315	1,319	99.7	85	85	100.0
2006	1,263	1,265	99.8	86	86	100.0
2007	1,234	1,236	99.8	82	82	100.0
2008	1,169	1,171	99.8	72	72	100.0
2009	1,125	1,129	99.6	68	68	100.0
2010	1,111	1,114	99.7	68	68	100.0
2011	1,062	1,066	99.6	61	61	100.0
2012	1,019	1,022	99.7	59	59	100.0
2013	1,008	1,011	99.7	58	58	100.0

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, Ministry of the Environment, Government of Japan

6.22 Transition of yearly mean of Carbon dioxide and Carbon Monoxide concentrate (General Environment Air Monitoring Stations/Motor Vehicle Exhaust Monitoring Stations)

	General Environment Air Monitoring Station				Motor Vehicle Exhaust Monitoring Station			
	Nitrogen dioxide		Nitrogen monoxide		Nitrogen dioxide		Nitrogen monoxide	
	Yearly average (ppm)	Number of monitoring stations	Yearly average (ppm)	Number of monitoring stations	Yearly average (ppm)	Number of monitoring stations	Yearly average (ppm)	Number of monitoring stations
FY1976	0.020	797	0.013	782	0.038	177	0.064	172
1977	0.019	891	0.012	886	0.037	195	0.059	195
1978	0.017	981	0.014	971	0.033	205	0.075	206
1979	0.016	1,080	0.012	1,075	0.033	213	0.070	213
1980	0.016	1,169	0.012	1,168	0.033	232	0.068	234
1981	0.015	1,215	0.012	1,210	0.032	246	0.068	246
1982	0.015	1,245	0.011	1,243	0.032	260	0.064	262
1983	0.015	1,283	0.010	1,280	0.031	274	0.060	274
1984	0.015	1,302	0.011	1,300	0.031	282	0.058	283
1985	0.014	1,309	0.011	1,306	0.030	281	0.057	280
1986	0.015	1,321	0.011	1,319	0.031	282	0.059	283
1987	0.016	1,324	0.012	1,323	0.032	289	0.060	289
1988	0.016	1,337	0.012	1,337	0.032	299	0.058	299
1989	0.016	1,357	0.012	1,356	0.032	307	0.057	307
1990	0.016	1,367	0.011	1,365	0.032	315	0.055	315
1991	0.017	1,378	0.013	1,378	0.033	325	0.056	325
1992	0.016	1,406	0.011	1,404	0.032	336	0.052	336
1993	0.017	1,420	0.012	1,419	0.032	346	0.052	346
1994	0.017	1,439	0.011	1,438	0.032	359	0.050	359
1995	0.017	1,453	0.011	1,453	0.032	369	0.050	369
1996	0.017	1,460	0.012	1,460	0.033	373	0.051	373
1997	0.017	1,457	0.012	1,457	0.032	385	0.049	385
1998	0.017	1,466	0.011	1,466	0.031	392	0.048	392
1999	0.016	1,460	0.010	1,460	0.030	394	0.045	394
2000	0.017	1,466	0.010	1,466	0.030	395	0.044	395
2001	0.016	1,465	0.010	1,465	0.030	399	0.043	399
2002	0.016	1,460	0.009	1,461	0.029	413	0.040	413
2003	0.016	1,454	0.009	1,454	0.029	426	0.037	426
2004	0.015	1,444	0.008	1,444	0.028	434	0.035	434
2005	0.015	1,424	0.007	1,424	0.027	437	0.032	437
2006	0.015	1,397	0.007	1,397	0.027	441	0.029	441
2007	0.013	1,397	0.006	1,397	0.025	431	0.027	431
2008	0.013	1,366	0.005	1,366	0.024	421	0.024	421
2009	0.012	1,351	0.005	1,351	0.023	423	0.021	423
2010	0.011	1,332	0.004	1,332	0.022	416	0.020	416
2011	0.011	1,308	0.004	1,308	0.021	411	0.019	411
2012	0.011	1,285	0.004	1,285	0.020	406	0.017	406
2013	0.010	1,278	0.003	1,278	0.020	405	0.016	405

Note: The relevant data expresses changes of simple mean over time at valid stations.

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, Ministry of the Environment, Government of Japan

6.23 Transition of Nitrogen dioxide environmental standards achieved

	General Environment Air Monitoring Station			Motor Vehicle Exhaust Monitoring Station		
	Number of monitoring stations recording levels that met criteria	Number of valid monitoring stations	Achievement rate (%)	Number of monitoring stations recording levels that met criteria	Number of valid monitoring stations	Achievement rate (%)
FY1984	1,259	1,302	96.7	207	282	73.4
1985	1,289	1,309	98.5	215	280	76.8
1986	1,287	1,321	97.4	212	282	75.2
1987	1,244	1,324	94.0	181	289	62.6
1988	1,282	1,337	95.9	204	299	68.2
1989	1,292	1,357	95.2	201	307	65.5
1990	1,280	1,367	93.6	202	314	64.3
1991	1,297	1,378	94.1	204	325	62.8
1992	1,369	1,406	97.4	240	336	71.4
1993	1,356	1,420	95.5	232	346	67.1
1994	1,377	1,439	95.7	242	359	67.4
1995	1,417	1,453	97.5	260	369	70.5
1996	1,407	1,460	96.4	241	373	64.6
1997	1,389	1,457	95.3	253	385	65.7
1998	1,382	1,466	94.3	267	392	68.1
1999	1,444	1,460	98.9	310	394	78.7
2000	1,454	1,466	99.2	316	395	80.0
2001	1,451	1,465	99.0	317	399	79.4
2002	1,447	1,460	99.1	345	413	83.5
2003	1,453	1,454	99.9	365	426	85.7
2004	1,444	1,444	100	387	434	89.2
2005	1,423	1,424	99.9	399	437	91.3
2006	1,397	1,397	100	400	441	90.7
2007	1,379	1,379	100	407	431	94.4
2008	1,366	1,366	100	402	421	95.5
2009	1,351	1,351	100	405	423	95.7
2010	1,332	1,332	100	407	416	97.8
2011	1,308	1,308	100	409	411	99.5
2012	1,285	1,285	100	406	403	99.3
2013	1,278	1,278	100	405	401	99.0

Source: "Regarding state of air contamination in FY 2013 (a press release)," Environment Management Bureau, MOE, the Government of Japan

6.24 Transition of Nitrogen Dioxide environmental standards achieved according to prefectures (General Environment Air Monitoring Station)

	FY 2008			FY 2009			FY 2010			FY 2011			FY 2012			FY 2013		
	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)
Hokkaido	69	69	100.0	70	70	100.0	70	70	100.0	69	69	100.0	67	67	100.0	63	63	100.0
Aomori	16	16	100.0	14	14	100.0	14	14	100.0	14	14	100.0	14	14	100.0	13	13	100.0
Iwate	11	11	100.0	11	11	100.0	11	11	100.0	10	10	100.0	12	12	100.0	12	12	100.0
Miyagi	31	31	100.0	27	27	100.0	26	26	100.0	22	22	100.0	23	23	100.0	24	24	100.0
Akita	12	12	100.0	12	12	100.0	13	13	100.0	13	13	100.0	13	13	100.0	13	13	100.0
Yamagata	17	17	100.0	14	14	100.0	17	17	100.0	17	17	100.0	16	16	100.0	16	16	100.0
Fukushima	29	29	100.0	28	28	100.0	26	26	100.0	25	25	100.0	23	23	100.0	21	21	100.0
Ibaraki	48	48	100.0	47	47	100.0	47	47	100.0	45	45	100.0	38	38	100.0	40	40	100.0
Tochigi	19	19	100.0	19	19	100.0	18	18	100.0	17	17	100.0	17	17	100.0	17	17	100.0
Gunma	17	17	100.0	21	21	100.0	20	20	100.0	14	14	100.0	14	14	100.0	14	14	100.0
Saitama	56	56	100.0	56	56	100.0	55	55	100.0	56	56	100.0	56	56	100.0	54	54	100.0
Chiba	111	111	100.0	114	114	100.0	112	112	100.0	112	112	100.0	106	106	100.0	105	105	100.0
Tokyo	45	45	100.0	46	46	100.0	45	45	100.0	46	46	100.0	46	46	100.0	46	46	100.0
Kanagawa	61	61	100.0	61	61	100.0	61	61	100.0	61	61	100.0	61	61	100.0	60	60	100.0
Niigata	27	27	100.0	26	26	100.0	26	26	100.0	26	26	100.0	26	26	100.0	25	25	100.0
Toyama	18	18	100.0	17	17	100.0	17	17	100.0	15	15	100.0	14	14	100.0	14	14	100.0
Ishikawa	19	19	100.0	19	19	100.0	19	19	100.0	19	19	100.0	17	17	100.0	17	17	100.0
Fukui	27	27	100.0	24	24	100.0	22	22	100.0	22	22	100.0	22	22	100.0	22	22	100.0
Yamanashi	10	10	100.0	10	10	100.0	10	10	100.0	9	9	100.0	10	10	100.0	10	10	100.0
Nagano	18	18	100.0	17	17	100.0	16	16	100.0	14	14	100.0	15	15	100.0	15	15	100.0
Gifu	12	12	100.0	11	11	100.0	11	11	100.0	11	11	100.0	11	11	100.0	11	11	100.0
Shizuoka	48	48	100.0	52	52	100.0	50	50	100.0	49	49	100.0	47	47	100.0	49	49	100.0
Aichi	98	98	100.0	100	100	100.0	88	88	100.0	86	86	100.0	84	84	100.0	84	84	100.0
Mie	26	26	100.0	21	21	100.0	21	21	100.0	21	21	100.0	22	22	100.0	24	24	100.0
Shiga	9	9	100.0	9	9	100.0	9	9	100.0	8	8	100.0	9	9	100.0	10	10	100.0
Kyoto	26	26	100.0	25	25	100.0	26	26	100.0	26	26	100.0	24	24	100.0	25	25	100.0
Osaka	66	66	100.0	65	65	100.0	66	66	100.0	66	66	100.0	65	65	100.0	66	66	100.0
Hyogo	70	70	100.0	69	69	100.0	70	70	100.0	69	69	100.0	70	70	100.0	67	67	100.0
Nara	11	11	100.0	11	11	100.0	11	11	100.0	11	11	100.0	11	11	100.0	8	8	100.0
Wakayama	26	26	100.0	25	25	100.0	25	25	100.0	24	24	100.0	24	24	100.0	25	25	100.0
Tottori	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0
Shimane	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	6	6	100.0	7	7	100.0
Okayama	45	45	100.0	43	43	100.0	44	44	100.0	44	44	100.0	44	44	100.0	44	44	100.0
Hiroshima	34	34	100.0	33	33	100.0	33	33	100.0	33	33	100.0	33	33	100.0	33	33	100.0
Yamaguchi	26	26	100.0	26	26	100.0	26	26	100.0	26	26	100.0	26	26	100.0	26	26	100.0
Tokushima	19	19	100.0	19	19	100.0	19	19	100.0	17	17	100.0	17	17	100.0	17	17	100.0
Kagawa	17	17	100.0	17	17	100.0	17	17	100.0	17	17	100.0	17	17	100.0	17	17	100.0
Ehime	12	12	100.0	12	12	100.0	12	12	100.0	12	12	100.0	12	12	100.0	12	12	100.0
Kochi	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0
Fukuoka	36	36	100.0	37	37	100.0	37	37	100.0	38	38	100.0	38	38	100.0	38	38	100.0
Saga	11	11	100.0	9	9	100.0	11	11	100.0	11	11	100.0	11	11	100.0	11	11	100.0
Nagasaki	20	20	100.0	20	20	100.0	20	20	100.0	20	20	100.0	20	20	100.0	20	20	100.0
Kumamoto	28	28	100.0	28	28	100.0	27	27	100.0	28	28	100.0	27	27	100.0	28	28	100.0
Oita	22	22	100.0	23	23	100.0	22	22	100.0	22	22	100.0	22	22	100.0	22	22	100.0
Miyazaki	14	14	100.0	14	14	100.0	14	14	100.0	14	14	100.0	14	14	100.0	11	11	100.0
Kagoshima	10	10	100.0	10	10	100.0	10	10	100.0	10	10	100.0	10	10	100.0	10	10	100.0
Okinawa	6	6	100.0	6	6	100.0	5	5	100.0	6	6	100.0	5	5	100.0	6	6	100.0
nationwide	1,366	1,366	100.0	1,351	1,351	100.0	1,332	1,332	100.0	1,308	1,308	100.0	1,285	1,285	100.0	1,278	1,278	100.0

Source: "Regarding state of air contamination in FY 2013 (a press release)," Environment Management Bureau, Ministry of the Environment, the Government of Japan

6.25 Transition of achievement status of environmental standards of Nitrogen Dioxide according to prefecture(Motor Vehicle Exhaust Monitoring Station)

	FY2008			2009			2010			2011			2012			2013		
	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)
Hokkaido	15	15	100.0	15	14	93.3	15	15	100.0	15	15	100.0	15	15	100.0	15	15	100.0
Aomori	5	5	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Iwate	3	3	100.0	3	3	100.0	3	3	100.0	2	2	100.0	2	2	100.0	2	2	100.0
Miyagi	9	9	100.0	10	10	100.0	10	10	100.0	7	7	100.0	9	9	100.0	9	9	100.0
Akita	4	4	100.0	4	4	100.0	3	3	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Yamagata	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0
Fukushima	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0
Ibaraki	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Tochigi	11	11	100.0	11	11	100.0	10	10	100.0	11	11	100.0	11	11	100.0	11	11	100.0
Gunma	8	8	100.0	7	7	100.0	8	8	100.0	8	8	100.0	8	8	100.0	8	8	100.0
Saitama	28	28	100.0	28	28	100.0	28	28	100.0	27	27	100.0	27	27	100.0	27	27	100.0
Chiba	29	26	89.7	29	28	96.6	29	28	96.6	28	28	100.0	27	27	100.0	27	27	100.0
Tokyo	38	33	86.8	39	35	89.7	39	36	92.3	39	38	97.4	39	37	94.9	39	37	94.9
Kanagawa	31	27	87.1	31	27	87.1	31	28	90.3	31	30	96.8	31	30	96.8	31	31	100.0
Niigata	5	5	100.0	5	5	100.0	5	5	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Toyama	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0
Ishikawa	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Fukui	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Yamanashi	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0
Nagano	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0
Gifu	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Shizuoka	8	7	87.5	10	10	100.0	10	10	100.0	10	10	100.0	9	9	100.0	9	9	100.0
Aichi	35	31	88.6	35	32	91.4	30	29	96.7	30	30	100.0	29	29	100.0	30	29	96.7
Mie	7	6	85.7	7	6	85.7	7	6	85.7	7	7	100.0	7	7	100.0	7	7	100.0
Shiga	5	5	100.0	5	5	100.0	5	5	100.0	5	5	100.0	4	4	100.0	4	4	100.0
Kyoto	8	8	100.0	9	9	100.0	9	9	100.0	8	8	100.0	7	7	100.0	7	7	100.0
Osaka	38	38	100.0	36	34	94.4	35	35	100.0	36	36	100.0	35	35	100.0	36	36	100.0
Hyogo	30	29	96.7	32	31	96.9	32	32	100.0	32	32	100.0	32	32	100.0	32	32	100.0
Nara	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0
Wakayama	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tottori	2	2	100.0	1	1	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0
Shimane	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	1	1	100.0
Okayama	11	11	100.0	11	11	100.0	10	10	100.0	10	10	100.0	10	10	100.0	10	10	100.0
Hiroshima	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0
Yamaguchi	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0
Tokushima	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0
Kagawa	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Ehime	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0
Kochi	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0
Fukuoka	16	16	100.0	16	15	93.8	16	16	100.0	16	16	100.0	16	16	100.0	15	14	93.3
Saga	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0
Nagasaki	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Kumamoto	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0
Oita	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0
Miyazaki	5	5	100.0	5	5	100.0	5	5	100.0	5	5	100.0	5	5	100.0	5	5	100.0
Kagoshima	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0
Okinawa	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	1	1	100.0	-	-	-
nationwide	421	402	95.5	423	405	95.7	416	407	97.8	411	409	99.5	406	403	99.3	405	401	99.0

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, Ministry of the Environment, Government of Japan

6.26 Transition of yearly mean value of suspended particulate matter concentrate(General Environment Air Monitoring Station/Motor Vehicle Exhaust Monitoring Station)

(Unit : mg/m³)

	General Environment Air Monitoring Station	Motor Vehicle Exhaust Monitoring Station
FY1976	0.049	0.068
1977	0.047	0.063
1978	0.047	0.056
1979	0.044	0.054
1980	0.042	0.053
1981	0.039	0.062
1982	0.038	0.059
1983	0.034	0.053
1984	0.037	0.051
1985	0.035	0.048
1986	0.037	0.050
1987	0.037	0.050
1988	0.036	0.048
1989	0.036	0.049
1990	0.037	0.050
1991	0.037	0.050
1992	0.035	0.047
1993	0.034	0.045
1994	0.035	0.048
1995	0.034	0.047
1996	0.034	0.047
1997	0.033	0.046
1998	0.032	0.043
1999	0.028	0.037
2000	0.031	0.040
2001	0.030	0.038
2002	0.027	0.035
2003	0.026	0.033
2004	0.025	0.031
2005	0.027	0.031
2006	0.026	0.030
2007	0.024	0.027
2008	0.022	0.026
2009	0.021	0.024
2010	0.021	0.023
2011	0.020	0.022
2012	0.019	0.021
2013	0.020	0.022

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, MOE, Government of Japan

6.27 Transition of achievement status of Environmental Standard of Suspended Particulate Matter (General environment air monitoring station/Motor vehicle exhaust station)

	General Environment Air Monitoring Station			Motor Vehicle Exhaust Monitoring Station		
	Number of monitoring stations recording levels that met criteria	Number of valid monitoring stations	Achievement rate (%)	Number of monitoring stations recording levels that met criteria	Number of valid monitoring stations	Achievement rate (%)
FY1984	304	607	50.1	9	54	16.7
1985	393	755	52.1	17	66	25.8
1986	486	855	56.8	21	74	28.4
1987	504	956	52.7	26	90	28.9
1988	515	1,094	47.1	31	119	26.1
1989	784	1,203	65.2	55	148	37.2
1990	552	1,282	43.1	33	156	21.2
1991	670	1,349	49.7	50	166	30.1
1992	811	1,409	57.6	61	182	33.5
1993	839	1,441	58.2	77	190	40.5
1994	918	1,485	61.8	69	210	32.9
1995	960	1,511	63.5	76	216	35.2
1996	1,070	1,533	69.8	97	229	42.4
1997	944	1,526	61.9	85	250	34.0
1998	1,029	1,528	67.3	96	269	35.7
1999	1,378	1,529	90.1	215	282	76.2
2000	1,292	1,529	84.4	199	301	66.1
2001	1,025	1,539	66.6	150	319	47.0
2002	807	1,538	52.5	123	359	34.3
2003	1,410	1,520	92.8	301	390	77.2
2004	1,486	1,508	98.5	393	409	96.1
2005	1,426	1,480	96.4	385	411	93.7
2006	1,363	1,465	93.0	388	418	92.8
2007	1,295	1,447	89.5	365	412	88.6
2008	1,416	1,422	99.6	400	403	99.3
2009	1,370	1,386	98.8	404	406	99.5
2010	1,278	1,374	93.0	371	399	93.0
2011	927	1,340	69.2	288	395	72.9
2012	1,320	1,316	99.7	394	393	99.7
2013	1,324	1,288	97.3	393	372	94.7

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, MOE, Government of Japan

6.28 Yearly average value of Suspended Particulate Matter

	General Environment Air Monitoring Station		Motor Vehicle Exhaust Monitoring Station	
	Yearly average ($\mu\text{g}/\text{m}^3$)	Number of stations	Yearly average ($\mu\text{g}/\text{m}^3$)	Number of stations
FY 2010	15.1	34	17.2	12
2011	15.4	105	16.1	51
2012	14.5	312	15.4	123
2013	15.3	492	16.0	181

Environment Achievement Rate of Suspended Particulate Matter

	General Environment Air Monitoring Station			Motor Vehicle Exhaust Monitoring Station		
	Number of monitoring stations recording levels that met criteria	Number of valid monitoring stations	Achievement rate (%)	Number of monitoring stations recording levels that met criteria	Number of valid monitoring stations	Achievement rate (%)
FY 2010	11	34	32.4	1	12	8.3
2011	29	105	27.6	15	51	29.4
2012	135	312	43.3	41	123	33.3
2013	79	492	16.1	24	181	13.3

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, MOE, Government of Japan

6.29 Environment achievement status of Suspended Particulate Matter according to prefectures (General Environment Air Monitoring Station)

	FY2008			2009			2010			2011			2012			2013		
	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)
Hokkaido	68	68	100.0	61	61	100.0	60	60	100.0	58	57	98.3	57	57	100.0	53	53	100.0
Aomori	16	15	93.8	14	14	100.0	14	14	100.0	14	14	100.0	14	14	100.0	14	14	100.0
Iwate	7	7	100.0	7	7	100.0	8	8	100.0	8	8	100.0	8	8	100.0	8	8	100.0
Miyagi	33	33	100.0	27	27	100.0	27	27	100.0	23	23	100.0	23	23	100.0	26	25	96.2
Akita	17	17	100.0	17	17	100.0	17	17	100.0	17	17	100.0	17	17	100.0	17	17	100.0
Yamagata	15	15	100.0	14	14	100.0	17	17	100.0	17	17	100.0	16	16	100.0	16	16	100.0
Fukushima	23	23	100.0	24	24	100.0	23	23	100.0	22	22	100.0	24	24	100.0	27	27	100.0
Ibaraki	47	46	97.9	46	46	100.0	46	46	100.0	45	45	100.0	37	37	100.0	44	41	93.2
Tochigi	25	25	100.0	25	25	100.0	24	24	100.0	22	22	100.0	23	23	100.0	23	23	100.0
Gunma	23	23	100.0	23	23	100.0	22	22	100.0	16	16	100.0	17	17	100.0	15	15	100.0
Saitama	56	56	100.0	56	56	100.0	55	55	100.0	56	56	100.0	55	55	100.0	55	54	98.2
Chiba	112	112	100.0	112	112	100.0	110	110	100.0	111	110	99.1	104	104	100.0	103	88	85.4
Tokyo	47	47	100.0	48	48	100.0	47	47	100.0	48	48	100.0	48	48	100.0	48	47	97.9
Kanagawa	61	61	100.0	61	61	100.0	61	61	100.0	61	61	100.0	61	61	100.0	60	56	93.3
Niigata	28	28	100.0	26	26	100.0	26	26	100.0	22	22	100.0	22	22	100.0	20	20	100.0
Toyama	25	25	100.0	22	22	100.0	22	22	100.0	20	20	100.0	19	19	100.0	19	19	100.0
Ishikawa	19	19	100.0	19	19	100.0	19	19	100.0	19	19	100.0	18	18	100.0	18	18	100.0
Fukui	31	31	100.0	28	28	100.0	26	26	100.0	26	26	100.0	26	26	100.0	26	26	100.0
Yamanashi	10	10	100.0	10	10	100.0	10	10	100.0	10	10	100.0	10	10	100.0	10	8	80.0
Nagano	15	15	100.0	16	16	100.0	14	14	100.0	10	10	100.0	10	10	100.0	10	10	100.0
Gifu	15	15	100.0	15	15	100.0	15	15	100.0	14	12	85.7	14	14	100.0	14	14	100.0
Shizuoka	45	44	97.8	47	47	100.0	47	47	100.0	47	44	93.6	44	44	100.0	44	44	100.0
Aichi	104	104	100.0	105	105	100.0	96	96	100.0	92	46	50.0	91	91	100.0	88	87	98.9
Mie	25	25	100.0	21	21	100.0	21	21	100.0	21	8	38.1	22	22	100.0	24	24	100.0
Shiga	9	9	100.0	9	9	100.0	9	9	100.0	8	7	87.5	9	9	100.0	9	9	100.0
Kyoto	24	24	100.0	24	24	100.0	25	25	100.0	25	12	48.0	22	22	100.0	23	23	100.0
Osaka	66	66	100.0	64	64	100.0	67	67	100.0	67	12	17.9	66	66	100.0	67	67	100.0
Hyogo	68	67	98.5	67	67	100.0	68	68	100.0	66	48	72.7	68	68	100.0	67	64	95.5
Nara	11	11	100.0	11	11	100.0	11	11	100.0	11	5	45.5	11	11	100.0	11	11	100.0
Wakayama	32	32	100.0	32	32	100.0	31	31	100.0	31	15	48.4	29	29	100.0	30	29	96.7
Tottori	2	2	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0
Shimane	7	7	100.0	7	7	100.0	7	7	100.0	7	4	57.1	7	7	100.0	7	7	100.0
Okayama	49	49	100.0	44	44	100.0	42	26	61.9	42	13	31.0	42	42	100.0	42	42	100.0
Hiroshima	32	32	100.0	32	32	100.0	32	24	75.0	32	15	46.9	32	32	100.0	32	32	100.0
Yamaguchi	32	32	100.0	32	32	100.0	32	24	75.0	32	7	21.9	32	32	100.0	32	32	100.0
Tokushima	18	18	100.0	18	18	100.0	18	18	100.0	17	13	76.5	17	17	100.0	17	17	100.0
Kagawa	18	18	100.0	18	18	100.0	16	7	43.8	17	5	29.4	17	16	94.1	17	17	100.0
Ehime	25	25	100.0	23	23	100.0	25	25	100.0	25	5	20.0	25	25	100.0	25	25	100.0
Kochi	5	5	100.0	5	5	100.0	5	5	100.0	5	5	100.0	5	5	100.0	5	5	100.0
Fukuoka	41	39	95.1	42	40	95.2	42	11	26.2	42	0	0.0	42	41	97.6	41	40	97.6
Saga	13	13	100.0	11	11	100.0	13	13	100.0	13	4	30.8	13	13	100.0	13	13	100.0
Nagasaki	20	20	100.0	20	9	45.0	20	9	45.0	20	2	10.0	20	20	100.0	20	20	100.0
Kumamoto	29	29	100.0	29	29	100.0	29	19	65.5	29	1	3.4	29	29	100.0	27	27	100.0
Oita	22	22	100.0	23	23	100.0	22	22	100.0	22	6	27.3	22	22	100.0	22	22	100.0
Miyazaki	10	10	100.0	10	10	100.0	10	7	70.0	10	9	90.0	10	10	100.0	11	10	90.9
Kagoshima	15	15	100.0	15	14	93.3	15	15	100.0	15	2	13.3	15	13	86.7	15	13	86.7
Okinawa	7	7	100.0	3	1	33.3	5	5	100.0	2	1	50.0	4	4	100.0	6	6	100.0
nationwide	1,422	1,416	99.6	1,386	1,370	98.8	1,374	1,278	93.0	1,340	927	69.2	1,320	1,316	99.7	1,324	1,288	97.3

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)," Environment Management Bureau, MOE, the Government of Japan

6.30 Environment achievement status of Suspended Particulate Matter according to prefectures (Motor Vehicle Exhaust Monitoring Station)

	FY2008			2009			2010			2011			2012			2013		
	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)	Number of valid monitoring stations	Number of monitoring stations recording levels that met criteria	Achievement rate (%)
Hokkaido	17	17	100.0	17	17	100.0	16	16	100.0	17	17	100.0	17	17	100.0	17	17	100.0
Aomori	5	5	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Iwate	3	3	100.0	3	3	100.0	3	3	100.0	2	2	100.0	2	2	100.0	2	2	100.0
Miyagi	8	8	100.0	9	9	100.0	9	9	100.0	8	8	100.0	9	9	100.0	9	9	100.0
Akita	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0
Yamagata	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0	1	1	100.0
Fukushima	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0	3	3	100.0
Ibaraki	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	3	75.0
Tochigi	11	11	100.0	11	11	100.0	10	10	100.0	11	11	100.0	11	11	100.0	11	10	90.9
Gunma	7	7	100.0	6	6	100.0	6	6	100.0	7	7	100.0	7	7	100.0	7	7	100.0
Saitama	24	24	100.0	24	24	100.0	25	25	100.0	23	22	95.7	26	26	100.0	27	27	100.0
Chiba	28	28	100.0	28	28	100.0	28	28	100.0	28	28	100.0	26	26	100.0	26	19	73.1
Tokyo	37	37	100.0	38	38	100.0	38	38	100.0	38	37	97.4	38	38	100.0	38	36	94.7
Kanagawa	31	31	100.0	31	31	100.0	31	30	96.8	31	31	100.0	31	31	100.0	31	27	87.1
Niigata	5	5	100.0	5	5	100.0	5	5	100.0	3	3	100.0	3	3	100.0	3	3	100.0
Toyama	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0
Ishikawa	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Fukui	3	3	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Yamanashi	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0
Nagano	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0	7	7	100.0
Gifu	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0	4	4	100.0
Shizuoka	9	8	88.9	10	10	100.0	10	10	100.0	10	10	100.0	9	9	100.0	9	9	100.0
Aichi	35	34	97.1	35	35	100.0	30	30	100.0	30	15	50.0	29	29	100.0	29	28	96.6
Mie	7	7	100.0	7	7	100.0	7	7	100.0	7	4	57.1	7	7	100.0	7	7	100.0
Shiga	4	4	100.0	4	4	100.0	4	4	100.0	4	3	75.0	4	4	100.0	4	4	100.0
Kyoto	8	8	100.0	9	9	100.0	9	9	100.0	8	4	50.0	7	7	100.0	7	7	100.0
Osaka	35	35	100.0	34	34	100.0	33	33	100.0	34	9	26.5	33	33	100.0	34	32	94.1
Hyogo	26	26	100.0	27	27	100.0	28	27	96.4	28	20	71.4	28	28	100.0	28	26	92.9
Nara	3	3	100.0	3	3	100.0	3	3	100.0	3	2	66.7	3	3	100.0	3	3	100.0
Wakayama	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tottori	2	2	100.0	2	2	100.0	2	2	100.0	2	2	100.0	2	1	50.0	2	1	50.0
Shimane	2	1	50.0	2	2	100.0	2	2	100.0	2	1	50.0	2	2	100.0	1	1	100.0
Okayama	10	10	100.0	10	10	100.0	9	6	66.7	9	5	55.6	9	9	100.0	9	9	100.0
Hiroshima	7	7	100.0	7	7	100.0	7	3	42.9	7	0	0.0	7	7	100.0	7	7	100.0
Yamaguchi	1	1	100.0	1	1	100.0	1	1	100.0	1	0	0.0	1	1	100.0	1	1	100.0
Tokushima	1	1	100.0	1	1	100.0	1	1	100.0	1	0	0.0	1	1	100.0	1	1	100.0
Kagawa	3	3	100.0	3	3	100.0	3	1	33.3	3	0	0.0	3	3	100.0	3	3	100.0
Ehime	1	1	100.0	1	1	100.0	1	1	100.0	1	0	0.0	1	1	100.0	1	1	100.0
Kochi	1	1	100.0	1	1	100.0	1	1	100.0	1	0	0.0	1	1	100.0	1	1	100.0
Fukuoka	16	16	100.0	16	16	100.0	16	5	31.3	16	1	6.3	16	16	100.0	15	15	100.0
Saga	2	2	100.0	2	2	100.0	2	1	50.0	2	0	0.0	2	2	100.0	2	2	100.0
Nagasaki	3	3	100.0	3	2	66.7	3	0	0.0	3	0	0.0	3	3	100.0	3	3	100.0
Kumamoto	3	3	100.0	3	3	100.0	3	2	66.7	3	0	0.0	3	3	100.0	3	3	100.0
Oita	2	2	100.0	2	2	100.0	2	2	100.0	2	0	0.0	2	2	100.0	2	2	100.0
Miyazaki	5	5	100.0	5	5	100.0	5	4	80.0	5	3	60.0	5	5	100.0	5	5	100.0
Kagoshima	2	2	100.0	2	2	100.0	2	2	100.0	2	0	0.0	2	2	100.0	2	2	100.0
Okinawa	1	1	100.0	1	0	0.0	1	1	100.0	-	-	-	1	1	100.0	-	-	-
nationwide	403	400	99.3	406	404	99.5	399	371	93.0	395	288	72.9	394	393	99.7	393	372	94.7

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, MOE, Government of Japan

6.31 Transition of Yearly Mean Value of Carbon Monoxide Concentration (General Environment Air Monitoring Station/Motor Vehicle Exhaust Monitoring Station)

	General Environment Air Monitoring Station		Motor Vehicle Exhaust Monitoring Station	
	Yearly average (ppm)	Number of stations	Yearly average (ppm)	Number of stations
FY1976	1.4	151	3.2	283
1977	1.2	163	2.8	287
1978	1.1	185	2.6	296
1979	1.0	200	2.3	322
1980	0.9	205	2.2	334
1981	0.9	200	1.9	282
1982	0.8	205	1.9	304
1983	0.7	189	1.7	297
1984	0.7	193	1.6	300
1985	0.7	191	1.6	299
1986	0.7	191	1.6	299
1987	0.7	187	1.6	304
1988	0.7	187	1.5	301
1989	0.7	189	1.5	305
1990	0.7	186	1.4	311
1991	0.7	190	1.4	314
1992	0.6	195	1.2	317
1993	0.6	187	1.2	328
1994	0.6	183	1.1	339
1995	0.6	185	1.1	343
1996	0.6	184	1.1	342
1997	0.6	150	1.0	329
1998	0.5	145	0.9	327
1999	0.5	138	0.9	319
2000	0.5	134	0.8	314
2001	0.5	131	0.8	312
2002	0.4	126	0.7	309
2003	0.4	99	0.7	302
2004	0.4	96	0.6	306
2005	0.4	91	0.6	304
2006	0.4	86	0.6	294
2007	0.4	78	0.5	291
2008	0.3	73	0.5	276
2009	0.3	71	0.5	270
2010	0.3	70	0.5	258
2011	0.3	70	0.5	258
2012	0.3	68	0.4	241
2013	0.3	60	0.4	243

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, MOE, Government of Japan

6.32 Transition of Annual Mean Value of Non-Methane Hydrocarbon Concentrate (General Environment Air Monitoring Station/Motor Vehicle Exhaust Monitoring Station)

Annual mean from 6 a.m. to 9 a.m. (ppmC)

	General Environment Air Monitoring Station	Motor Vehicle Exhaust Monitoring Station
FY1984	0.35	0.60
1985	0.35	0.57
1986	0.34	0.56
1987	0.35	0.57
1988	0.34	0.57
1989	0.33	0.53
1990	0.32	0.54
1991	0.32	0.52
1992	0.29	0.47
1993	0.27	0.42
1994	0.27	0.42
1995	0.26	0.40
1996	0.27	0.40
1997	0.26	0.38
1998	0.26	0.37
1999	0.24	0.35
2000	0.24	0.35
2001	0.23	0.34
2002	0.22	0.31
2003	0.22	0.31
2004	0.21	0.29
2005	0.21	0.28
2006	0.20	0.27
2007	0.19	0.25
2008	0.18	0.23
2009	0.17	0.22
2010	0.16	0.21
2011	0.16	0.19
2012	0.14	0.18
2013	0.14	0.18

Source: Compiled from "Regarding state of air contamination in FY 2013 (a press release)" by Environment Management Bureau, MOE, Government of Japan

6.33 Transition of national mean concentrate of hazardous air pollutants among which environmental standards are set

(Unit : $\mu\text{g}/\text{m}^3$)

	Benzene	Trichloroethylene	Tetrachloroethylene	Dichloromethane
FY2007	1.5	0.76	0.25	2.3
2008	1.4	0.65	0.23	2.3
2009	1.3	0.53	0.22	1.7
2010	1.1	0.44	0.17	1.6
2011	1.2	0.53	0.18	1.6
2012	1.2	0.50	0.18	1.6
2013	1.1	0.53	0.15	1.6

Source: Compiled from "Monitoring Results of Hazardous Air Pollutants" by Environment Management Bureau, MOE, Government of Japan

6.34 Transition of the Environmental Quality Standards Status of Hazardous Air Pollutants among which Environmental Standards are Set

(Unit : %)

	Benzene	Trichloroethylene	Tetrachloroethylene	Dichloromethane
FY2007	99.3	100	100	100
2008	99.8	100	100	100
2009	99.8	100	100	100
2010	100	100	100	100
2011	99.5	100	100	100
2012	100	100	100	100
2013	99.8	100	100	100

Source: Compiled from "Monitoring Results of Hazardous Air Pollutants" by Environment Management Bureau, MOE, Government of Japan

6.35 Transition of national mean concentrate of hazardous air pollutants among which guidelines are set

	Acrylonitrile	Vinyl chloride monomer	Chloroform	1,2-dichloroethane	Mercury and its compounds	Nickel compounds	Arsenic and its compounds	1,3-butadiene	Manganese and its compounds
	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ngHg/m ³	ngNi/m ³	ngAs/m ³	µg/m ³	ngMn/m ³
FY2007	0.10	0.081	0.21	0.15	2.2	5.1	2.0	0.19	28
2008	0.093	0.053	0.22	0.16	2.1	4.9	1.6	0.18	30
2009	0.079	0.066	0.21	0.17	2.0	4.2	1.5	0.16	27
2010	0.073	0.055	0.19	0.16	2.0	4.0	1.4	0.14	25
2011	0.088	0.053	0.21	0.18	2.1	4.4	1.6	0.15	25
2012	0.080	0.047	0.20	0.17	2.1	4.1	1.5	0.14	24
2013	0.077	0.032	0.21	0.17	2.0	4.3	1.7	0.12	25

Note: Guidelines for Arsenic and its compounds were set based on the Ninth recommendations, a report submitted by Central Environment Council in Oct, 2010. Guidelines for Manganese and its compounds were set based on the Tenth recommendations, a report submitted by Central Environment Council in April, 2014.

Source: Compiled from "Monitoring Results of Hazardous Air Pollutants" by Environment Management Bureau, MOE, Government of Japan

6.36 Transition of the guideline status of hazardous air pollutants among which guidelines are set

(Unit : %)

	Acrylonitrile	Vinyl chloride monomer	Chloroform	1,2-dichloroethane	Mercury and its compounds	Nickel compounds	Arsenic and its compounds	1,3-butadiene	Manganese and its compounds
FY2007	100	100	100	99.5	100	99.4		100	-
2008	99.7	100	100	99.7	100	99.7		100	-
2009	100	100	100	99.2	100	99.7	98.6	100	-
2010	100	100	100	100	100	100	98.9	100	-
2011	100	100	100	99.1	100	100	98.1	100	-
2012	100	100	100	99.4	100	100	98.6	100	-
2013	100	100	100	100	100	99.6	98.5	100	99.2

Note: as for Arsenic and its compounds, guidelines were set in October 2010, as for Manganese and its compounds, guidelines were set in April 2014, thus, the status of guidelines are not shown here for the period when guidelines hadn't been set.

Source: Compiled from "Monitoring Results of Hazardous Air Pollutants" by Environment Management Bureau, MOE, Government of Japan

6.37 Transition of number of days when photochemical oxidant advisors were issued and number of people who reported the damage

	Advisory/alert/warning issuance		Damage report	
	Number of prefectures	Total number of days	Number of prefectures	Total number of people
FY1972	14	176(0)	13	21,483
1973	21	328(2)	19	31,936
1974	22	288(2)	16	14,725
1975	21	266(5)	17	46,081
1976	21	150(0)	15	4,215
1977	19	167(0)	11	2,669
1978	22	169(3)	12	5,376
1979	16	84(0)	9	4,083
1980	16	86(0)	9	1,420
1981	9	59(0)	8	780
1982	13	73(0)	9	446
1983	17	131(0)	9	1,721
1984	16	135(1)	6	5,822
1985	16	171(0)	10	966
1986	15	85(0)	3	48
1987	18	168(0)	7	1,056
1988	16	86(0)	5	132
1989	17	63(0)	6	36
1990	22	242(0)	5	58
1991	15	121(0)	6	1,454
1992	16	164(0)	7	307
1993	15	71(0)	3	93
1994	19	175(0)	6	564
1995	19	139(0)	5	192
1996	18	99(0)	5	64
1997	20	95(0)	5	315
1998	22	135(0)	9	1,270
1999	19	100(0)	6	402
2000	22	259(0)	12	1,479
2001	20	193(0)	8	343
2002	23	184(2)	9	1,347
2003	19	108(0)	5	254
2004	22	189(0)	9	393
2005	21	185(1)	10	1,495
2006	25	177(0)	8	289
2007	28	220(0)	14	1,910
2008	25	144(0)	10	400
2009	28	123(0)	12	910
2010	22	182(0)	10	128
2011	18	82(0)	4	69
2012	17	53(0)	3	80
2013	18	106(0)	3	78
2014	15	83(0)	2	33

Note: parenthesized data refers to number of days where alert/warning(s) were issued and they are included in the Total numbers.

Source: Compiled from "Materials relating to photochemical air pollutants in 2014" by Environment Management Bureau, MOE, Government of Japan

6.38 Transition of number of days where photochemical oxidant advisories were issued by prefecture

(Unit : Day)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Miyagi			3								1											
Yamagata																						
Fukushima																						
Ibaraki		16	21	14	17	9	18	12	3	4		3	2	6	16	7	22	3	5	21	19	14
Tochigi			10	10	6	7	11	5	2	2			1	4	15	6	16	8	3	7	5	19
Gunma			1	4	11	1		3					1					3	3	12	2	9
Saitama	23	15	45	29	44	15	26	36	8	15	8	12	33	30	28	16	29	12	6	25	14	19
Chiba	19	21	28	26	33	21	7	14	11	13	8	8	20	16	17	8	21	4	6	17	20	19
Tokyo	33	33	45	26	41	17	21	22	12	13	14	17	24	35	19	9	15	7	7	23	15	14
Kanagawa	11	31	30	26	27	17	12	18	19	10	11	11	15	7	12	3	12	8	3	12	12	14
Niigata																						
Toyama								1														
Ishikawa									1													
Fukui								1												3		
Yamanashi									2		1						3	4	4	23	9	20
Nagano																						
Gifu														1								
Shizuoka			8	15	6	3	1	1	3	2		1	1	2	5	1	1	1		7	6	2
Aichi	1	5	8	2	6	3	2			1			2	2	6		2				2	1
Mie		4	6	7		3	1					1		1			5	8	1	10	1	4
Shiga			4	4	4	5	1	1	5	6		5	1		2		4	5	4	5	3	9
Kyoto		7	17	17	11	6	9	5	1	5	3	3	5	4	5	3	3	5	2	6		7
Osaka	4	18	26	27	23	25	25	16	12	10	12	8	8	9	19	16	21	8	10	27	8	11
Hyogo	7	19	23	19	11	3	4	2	1	1	1	1	5	7	13	3	5	1	2	7	4	1
Nara		1	6	3	9	3	3	3		1			1			1	2		2	6		
Wakayama		1	1	1													1			1		
Okayama		3	14	16	5	1	5	8	1	1		2	7	8	8	2	3	2	1	8		1
Hiroshima			9	18	4	1	6	9	1	1		1	3	2	3	6	3	7	3	14	1	
Yamaguchi				5	1	2	5	3							2							
Tokushima				2	2	3	3	1							1	2				1		
Kagawa			1	4	1			6					2	1		2			1			
Ehime		2	22	13	1	4	7	1	2	1										3		
Kochi																						
Fukuoka																				4		
Saga																						
Nagasaki																						
Kumamoto																						
Oita																						
Kagoshima																						
nationwide	98	176	328	288	266	150	167	169	84	86	59	73	131	135	171	85	168	86	63	242	121	164

6.38 Transition of number of days where photochemical oxidant advisories were issued by prefecture

(Unit : Day)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Miyagi					1			1													
Yamagata																	1				
Fukushima																		1			
Ibaraki	7	14	16	10	9	5	11	23	12	13	14	18	13	10	15	5	6	14	2	3	5
Tochigi	2	10	2	6	4	4	9	21	15	11	8	7	14	8	16	5	7	16	11	2	4
Gunma	8	18	16	18	8	6	4	16	6	15	2	15	10	5	8	11	6	12	10	4	6
Saitama	4	19	13	10	16	12	18	40	30	21	19	23	26	16	32	18	14	25	17	7	13
Chiba	6	14	22	6	13	8	9	18	23	21	11	28	28	11	17	12	3	15	11	8	14
Tokyo	5	12	19	6	11	11	5	23	23	19	8	18	22	17	17	19	7	20	9	4	17
Kanagawa	9	15	13	7	4	10	4	10	13	11	6	16	7	14	20	11	4	10	5	5	16
Niigata															1						
Toyama			1							1		2			1						
Ishikawa																					
Fukui										1											
Yamanashi	7	8	5	4	2	7	6	14	13	12	5	5	9	12	15	4	3	11	2	2	3
Nagano																1					
Gifu									4	3		3	1	4	2	4	3			1	
Shizuoka	3	8	2	3	4	6	2	9	6	4	1	5		9	7	2	2	3	1	1	2
Aichi		1				1					1		1	2	5	9	9	1	1	2	1
Mie		9	2	1	1	2	1	9	4			1	2	2				2		1	1
Shiga	1		1			1	2	3	6	4	2	2	7	6	5	2	6	4	1		3
Kyoto		1		1	1	3	1	3	1	5		3	7	7	10	6	4	11	1	2	3
Osaka	11	15	8	10	3	25	11	23	20	11	14	10	10	17	11	7	13	12	4	4	7
Hyogo	4	13	3	4	2	4	7	17	5	8	7	6	9	8	4	6	5	2		1	2
Nara	1		3			1		8	2	5	2	5	7	3		1	1	2	1		
Wakayama		1	1	1	1	1		2	1	1				1	1	1					
Okayama	2	6	6	3	4	4	2	1	2	3	1		1	8	6	6	4	9	3	5	7
Hiroshima		9	3	6	4	15	3	8	5	9	4	13	8	9	6	5	6	7	1		1
Yamaguchi						2	1	5		4	1	3	1	2	3	4	1				
Tokushima			3	2	3	6	3	2	2	1	1	3	1	3	2	1					
Kagawa		1													1						
Ehime	1	1			3	1	1				1	1			3	1	3	3			
Kochi																			1		
Fukuoka				1	1										4	2	2			1	
Saga																1	2	1			1
Nagasaki														1	3		2	1	1		
Kumamoto														1	4		2				
Oita															1		3				
Kagoshima																	1				
nationwide	71	175	139	99	95	135	100	259	193	184	108	189	185	177	220	144	123	182	82	53	106

Source: Compiled from "Materials relating to photochemical air pollutants in 2014" by Environment Management

6.39 Transition of the number of specified facilities under the Noise Regulation Law

(Unit : Facilities)

	Metalworking machinery	Air compressor	Crusher	Loom	Building materials making machinery	Grain mill	Wood processing machinery	Paper machinery	Printing press	Plastic injection molding machinery	Molding machinery	Total
FY1986	246,354	383,281	22,355	487,433	5,471	3,813	69,310	2,125	79,855	45,268	8,317	1,353,582
1987	247,914	396,212	22,625	476,521	8,943	3,783	69,691	2,115	80,803	46,291	8,265	1,363,163
1988	250,700	408,377	22,774	480,189	5,631	3,735	69,966	2,100	81,419	47,267	8,213	1,380,371
1989	254,680	421,494	22,981	477,278	5,741	3,662	70,127	2,090	82,249	48,327	8,259	1,396,888
1990	259,025	434,787	23,268	471,711	5,815	3,829	69,773	2,162	82,547	49,629	8,189	1,410,735
1991	259,719	450,215	23,648	472,173	5,950	3,662	69,887	2,118	82,924	50,581	8,207	1,429,084
1992	261,136	463,494	24,117	468,229	5,914	3,687	69,967	2,166	82,839	51,392	8,034	1,440,975
1993	260,226	476,886	24,637	466,376	5,933	3,698	69,909	2,178	82,320	51,236	7,920	1,451,319
1994	267,836	490,410	24,389	459,363	6,091	3,748	69,863	2,142	81,924	52,153	7,914	1,465,833
1995	265,720	500,969	24,523	448,120	5,977	3,794	69,486	2,127	81,495	52,810	7,880	1,462,901
1996	266,442	513,239	24,813	446,420	5,903	3,670	68,210	2,341	80,629	53,305	7,879	1,472,851
1997	268,942	528,014	25,136	432,316	5,981	3,601	68,893	2,205	80,583	55,274	7,721	1,478,666
1998	269,491	540,393	25,559	425,576	5,879	3,659	68,687	2,187	80,234	56,309	7,632	1,485,606
1999	275,300	555,606	25,647	416,530	5,732	3,625	68,911	2,357	80,363	58,754	7,707	1,500,532
2000	273,276	560,981	25,517	403,879	5,570	3,735	67,154	2,242	79,845	59,029	7,879	1,489,107
2001	276,714	581,444	25,602	418,510	5,609	3,775	67,003	2,277	79,879	59,974	8,402	1,529,189
2002	277,411	595,537	25,748	415,697	5,569	3,685	66,863	2,275	80,158	60,682	8,562	1,542,187
2003	277,208	595,044	25,616	395,535	5,492	3,686	66,293	2,242	78,030	61,595	9,714	1,520,455
2004	278,517	608,009	25,812	381,437	6,236	3,488	64,447	2,145	76,127	61,400	7,688	1,515,306
2005	275,093	609,160	25,619	360,885	5,375	3,354	62,721	2,100	74,078	59,502	8,031	1,485,918
2006	283,435	637,174	26,324	361,632	5,362	3,587	63,442	2,181	74,871	64,383	8,408	1,530,799
2007	281,965	645,335	26,002	362,633	5,296	3,578	62,822	2,036	73,437	64,853	9,127	1,537,084
2008	278,164	648,985	25,974	342,536	5,176	3,645	61,820	2,214	72,718	63,774	7,749	1,512,755
2009	282,405	667,918	26,572	337,107	5,119	3,515	62,830	2,140	72,498	66,333	9,111	1,535,548
2010	282,971	678,990	26,848	340,650	5,063	3,476	61,336	2,135	71,949	66,609	9,132	1,549,159
2011	276,426	671,628	25,522	328,243	4,954	3,457	59,942	2,127	70,229	65,989	7,832	1,516,349
2012	271,430	667,704	24,908	324,014	4,680	3,471	57,442	2,082	69,112	64,456	7,509	1,496,808
2013	276,356	680,531	25,470	320,026	4,835	3,470	58,258	2,457	67,708	63,831	6,711	1,509,653

Source: Compiled from "Survey of the Implementation of Noise Regulation Law" by Office of Odor, Noise and Vibration, Air Environment Division, Environment Management Bureau, MOE, Government of Japan

6.40 Transition of number of specified facilities under Vibration Regulation Law

(Unit : Facilities)

	Metalworking machinery	Air compressor	Crusher	Loom	Concrete block machinery	Wood processing machinery	Printing press	Mixing Mill	Plastic injection molding machinery	Molding machinery	Total
FY1986	273,001	88,905	15,466	353,819	3,213	3,361	33,027	3,627	40,448	5,037	819,904
1987	275,863	91,934	15,799	339,341	11,624	4,072	36,887	3,805	40,618	5,142	825,085
1988	272,331	95,488	16,594	350,277	4,926	3,439	34,412	3,673	42,558	5,140	828,838
1989	279,502	97,133	16,330	350,926	5,079	3,446	35,068	3,721	43,656	5,221	840,082
1990	283,170	100,987	16,744	345,887	5,233	3,448	35,602	3,842	45,030	5,368	845,311
1991	285,552	104,694	17,252	345,162	5,209	3,580	35,999	3,939	46,234	5,592	853,213
1992	283,545	107,837	17,780	344,617	4,886	3,784	36,253	3,922	46,583	5,442	854,649
1993	285,844	110,796	18,062	342,775	2,537	3,804	35,983	3,917	47,035	5,511	856,264
1994	292,432	117,936	18,280	330,722	2,545	4,153	37,340	4,019	48,518	5,806	861,751
1995	287,691	128,592	18,316	318,499	2,533	4,039	37,268	3,909	48,299	5,488	854,634
1996	289,073	123,816	18,541	320,379	2,484	5,225	36,956	4,028	49,106	6,038	855,646
1997	289,695	129,562	18,940	318,131	2,477	4,136	37,286	3,892	50,893	6,041	861,053
1998	290,328	134,908	18,997	313,169	2,212	4,318	37,235	3,877	51,534	6,231	862,809
1999	294,777	142,042	19,554	307,210	2,248	4,389	37,695	3,779	54,501	6,338	872,533
2000	292,952	147,726	19,443	288,374	2,185	4,278	38,176	3,845	55,355	6,202	858,536
2001	295,097	154,696	21,516	296,072	2,926	4,345	38,212	3,912	55,935	7,015	879,726
2002	290,420	158,521	21,442	291,453	2,964	4,285	38,093	3,737	56,362	6,461	873,738
2003	290,783	164,838	19,064	291,204	3,004	4,587	37,750	3,854	57,116	6,108	878,308
2004	282,865	166,325	19,173	269,315	2,884	4,636	37,475	3,735	57,609	5,806	849,823
2005	275,787	169,757	19,286	265,111	2,887	4,621	37,948	3,709	56,212	5,847	841,165
2006	282,472	178,316	19,703	272,698	2,146	4,588	38,596	3,722	59,173	5,883	867,297
2007	285,122	186,778	20,221	263,444	2,171	4,765	38,405	3,796	61,535	6,020	872,257
2008	279,500	188,095	20,185	257,911	2,126	4,527	38,127	3,806	60,168	5,646	860,091
2009	276,659	189,723	20,130	247,633	2,056	4,801	37,627	3,727	60,519	5,729	848,609
2010	277,826	193,192	20,214	248,851	2,086	4,643	37,515	3,882	60,514	5,945	854,668
2011	276,569	198,076	20,807	250,422	2,104	4,624	37,146	3,814	60,993	6,626	861,181
2012	271,774	199,598	20,199	248,689	2,358	4,771	36,576	3,966	60,500	6,389	854,820
2013	271,318	205,663	20,436	245,155	2,332	4,469	36,509	3,607	60,253	6,290	856,032

Source: Compiled from "Survey of the Implementation of Vibration Regulation Law" by Office of Odor, Noise and Vibration, Air Environment Division, Environment Management Bureau, MOE, Government of Japan

6.41 Transition of number of specified facilities under Noise Regulation Law by prefecture

(Unit : Facilities)

	FY2005	2006	2007	2008	2009	2010	2011	2012	2013
Hokkaido	24,415	24,431	24,180	24,450	24,029	23,716	23,538	22,390	22,274
Aomori	3,029	3,046	3,031	3,071	3,154	3,124	3,144	3,179	3,265
Iwate	5,856	5,923	5,971	5,796	5,247	5,706	5,206	5,173	5,306
Miyagi	10,936	11,504	12,319	12,130	12,296	12,182	12,346	12,426	12,729
Akita	3,818	3,890	3,939	3,940	3,786	3,716	3,721	3,771	2,987
Yamagata	8,484	8,578	8,624	6,154	6,195	8,674	7,179	8,653	8,650
Fukushima	9,851	9,706	9,133	10,245	10,379	7,245	9,162	9,124	10,777
Ibaraki	26,632	25,859	25,050	25,054	25,152	24,786	23,078	21,291	22,793
Tochigi	15,003	14,651	15,291	15,373	15,290	15,126	13,381	13,451	12,725
Gunma	28,852	34,556	35,527	36,306	34,828	35,415	35,477	34,143	36,367
Saitama	55,634	58,264	58,968	58,937	58,813	58,318	58,468	58,742	60,239
Chiba	45,776	51,299	52,068	54,242	50,775	55,514	55,353	55,108	53,966
Tokyo	142,178	143,389	137,442	134,030	139,134	139,348	140,596	136,963	134,783
Kanagawa	55,476	59,416	59,887	59,742	60,389	59,743	59,833	60,751	57,562
Niigata	31,182	31,643	32,113	31,498	31,425	31,644	31,731	32,075	32,296
Toyama	17,008	16,477	16,892	17,356	17,837	17,679	17,757	18,713	18,772
Ishikawa	37,601	37,804	38,024	38,131	38,161	38,268	37,850	38,211	38,313
Fukui	35,815	36,090	36,088	36,138	35,780	35,808	35,778	35,888	35,858
Yamanashi	8,415	8,558	8,597	8,319	7,901	8,716	9,200	9,560	9,581
Nagano	15,802	16,525	16,927	14,068	17,849	18,214	18,056	18,033	18,197
Gifu	38,851	40,866	41,681	42,270	42,625	42,988	43,283	43,865	44,389
Shizuoka	91,696	99,190	100,083	95,014	94,759	95,697	96,215	97,001	95,161
Aichi	211,063	213,372	211,269	205,325	200,970	206,436	198,832	187,452	194,566
Mie	8,997	13,249	16,385	14,060	9,421	14,255	14,563	14,552	14,734
Shiga	36,110	36,844	38,136	32,706	61,617	59,292	28,676	26,874	29,015
Kyoto	39,987	39,883	39,261	38,138	38,300	38,202	38,584	37,990	37,994
Osaka	168,613	169,308	169,249	165,748	160,926	158,783	165,159	165,620	165,729
Hyogo	76,526	77,510	78,650	79,767	80,716	81,226	78,607	78,730	79,206
Nara	10,818	11,067	11,302	11,418	11,609	11,767	11,766	11,883	12,029
Wakayama	6,745	6,443	6,161	6,278	6,319	6,345	6,385	6,356	6,426
Tottori	1,416	2,246	2,258	2,239	2,219	1,864	897	1,876	1,903
Shimane	2,217	2,223	2,238	2,254	2,725	2,726	2,725	2,565	1,799
Okayama	27,700	29,213	29,594	29,857	30,005	30,071	30,312	30,275	27,485
Hiroshima	36,397	37,003	38,038	37,248	37,615	37,734	37,866	37,641	38,355
Yamaguchi	9,280	9,389	9,348	9,319	9,307	9,269	9,552	9,642	9,767
Tokushima	4,925	5,229	5,291	5,247	5,390	5,444	5,533	5,251	5,833
Kagawa	10,272	10,516	10,594	10,827	11,304	11,684	12,071	11,922	12,280
Ehime	17,534	18,129	18,355	18,569	18,897	19,397	19,542	19,510	18,710
Kochi	2,189	2,195	2,207	2,332	2,351	2,349	2,133	2,338	2,316
Fukuoka	42,071	42,586	43,012	43,716	43,673	43,858	44,503	43,535	45,651
Saga	11,241	10,562	11,029	11,302	11,073	11,385	11,919	11,495	11,832
Nagasaki	5,298	5,490	5,120	5,450	5,343	5,392	4,850	4,862	4,848
Kumamoto	16,671	17,555	17,808	18,029	18,517	18,183	19,150	15,024	18,830
Oita	11,917	12,177	12,500	12,704	13,372	13,423	13,601	13,807	13,996
Miyazaki	4,576	5,774	5,812	6,220	6,053	6,222	6,301	6,375	6,510
Kagoshima	8,033	8,100	8,510	8,617	8,651	8,724	8,892	9,077	9,016
Okinawa	3,012	3,071	3,122	3,121	3,371	3,501	3,578	3,645	3,833
nationwide	1,485,918	1,530,799	1,537,084	1,512,755	1,535,548	1,549,159	1,516,349	1,496,808	1,509,653

6.42 Transition of number of specified facilities under Vibration Regulation Law by prefectures

	(Unit : Facilities)								
	FY2005	2006	2007	2008	2009	2010	2011	2012	2013
Hokkaido	7,625	7,704	7,766	7,851	7,675	7,456	7,388	6,907	6,965
Aomori	1,200	1,225	1,278	1,301	1,336	1,337	1,330	1,341	1,356
Iwate	2,205	2,327	2,324	2,187	1,910	2,097	2,039	1,897	2,025
Miyagi	4,026	4,915	5,597	5,466	5,763	5,719	5,778	5,808	5,939
Akita	1,264	1,325	1,358	1,381	1,346	1,273	1,279	1,292	1,236
Yamagata	5,568	5,636	5,608	5,583	5,678	5,695	4,925	5,735	5,758
Fukushima	5,477	4,640	5,675	5,726	5,532	4,117	4,788	4,852	5,347
Ibaraki	9,983	8,688	9,073	9,109	9,241	9,317	9,192	9,423	8,820
Tochigi	10,320	10,192	10,482	10,455	10,221	10,307	8,570	8,592	8,239
Gunma	22,044	25,969	26,571	25,359	24,542	24,695	25,154	24,892	25,679
Saitama	34,796	35,808	36,376	35,534	34,808	34,829	34,752	34,787	36,548
Chiba	12,743	15,151	15,366	15,983	15,471	16,645	16,434	15,870	16,074
Tokyo	64,719	64,702	62,782	61,947	61,147	59,964	60,734	59,723	58,696
Kanagawa	32,995	35,211	35,196	34,201	34,598	33,375	33,578	34,471	30,852
Niigata	21,482	21,719	21,971	21,622	21,575	21,699	21,810	21,951	22,003
Toyama	7,958	8,312	8,450	8,460	8,593	8,611	8,608	9,055	8,809
Ishikawa	27,993	28,115	28,256	28,329	28,321	28,388	28,435	28,445	28,496
Fukui	21,495	21,752	21,874	21,899	21,776	21,830	21,819	21,823	21,861
Yamanashi	6,647	6,667	6,747	6,606	6,102	6,763	7,043	7,275	7,278
Nagano	9,804	10,132	10,374	8,610	10,230	10,344	10,266	10,357	10,468
Gifu	21,334	30,792	33,733	34,304	34,568	34,815	35,113	35,585	36,046
Shizuoka	65,650	67,731	68,562	64,756	61,698	65,611	65,669	66,130	60,302
Aichi	150,001	154,634	143,492	149,429	146,711	151,881	150,453	143,122	152,497
Mie	6,536	8,557	10,305	8,878	6,400	8,874	8,990	9,079	9,103
Shiga	23,780	20,643	24,619	19,528	16,022	13,563	17,729	16,354	17,062
Kyoto	21,857	21,921	21,510	20,985	21,191	21,396	21,553	21,047	20,210
Osaka	104,326	102,933	104,449	100,275	98,668	95,698	97,556	97,812	97,368
Hyogo	40,724	41,062	41,664	42,276	42,533	42,657	42,726	42,937	42,727
Nara	7,179	7,397	7,609	7,703	7,819	7,966	7,983	8,114	8,240
Wakayama	2,620	2,274	2,528	2,823	2,929	3,035	3,221	3,290	3,319
Tottori	769	1,087	1,096	1,080	1,077	894	525	904	905
Shimane	1,062	1,036	1,049	1,157	1,395	1,395	1,443	2,347	758
Okayama	18,209	18,985	19,286	19,464	19,421	19,461	19,518	19,474	17,503
Hiroshima	14,283	14,607	14,870	14,466	14,963	15,068	14,806	14,788	14,732
Yamaguchi	4,280	4,379	4,453	4,439	4,392	4,310	4,322	4,345	4,361
Tokushima	2,374	2,404	2,388	2,489	2,501	2,286	2,342	2,127	2,559
Kagawa	3,746	3,897	3,920	3,931	4,018	3,980	4,021	4,381	4,665
Ehime	7,742	7,782	8,069	7,836	7,944	8,001	7,915	8,067	7,981
Kochi	1,043	1,057	1,076	1,080	1,147	1,164	1,194	1,195	1,182
Fukuoka	14,449	14,788	14,970	15,191	15,448	15,595	15,604	15,420	16,075
Saga	3,821	2,605	3,085	3,227	3,096	3,502	4,450	4,273	4,455
Nagasaki	1,520	1,637	1,334	1,597	1,448	1,569	1,614	1,613	1,643
Kumamoto	4,239	4,345	4,339	4,477	6,045	5,970	6,601	5,724	6,760
Oita	4,454	4,675	4,791	4,884	5,054	5,104	5,206	5,262	5,382
Miyazaki	835	1,608	1,595	1,785	1,754	1,822	1,951	1,963	1,970
Kagoshima	3,135	3,379	3,453	3,510	3,541	3,596	3,691	3,861	3,782
Okinawa	853	892	888	912	961	994	1,063	1,110	1,131
nationwide	841,165	867,297	872,257	860,091	848,609	854,668	861,181	854,820	855,167

Source: "Survey of the Implementation of Vibration Regulation Law," Office of Odor, Noise and Vibration, Air Environment Division, Environment Management Bureau, MOE, the Government of Japan

6.43 Transition of number of complaints regarding noise, vibration and odor

(Unit : Incident)			
	Noise	Vibration	Odor
FY1976	20,904	3,536	15,996
1977	21,038	3,823	16,676
1978	22,886	4,033	16,742
1979	22,686	3,914	15,499
1980	22,571	3,766	13,439
1981	22,103	3,737	13,541
1982	22,322	3,067	13,395
1983	21,781	3,103	12,741
1984	22,894	3,131	13,529
1985	20,171	3,118	13,070
1986	19,937	3,058	12,705
1987	22,120	3,109	12,488
1988	20,746	3,279	11,932
1989	19,479	2,921	11,717
1990	19,018	2,795	11,666
1991	16,800	2,207	10,616
1992	15,539	2,193	10,753
1993	15,094	2,083	9,972
1994	15,986	2,547	11,946
1995	14,359	2,742	11,276
1996	15,059	2,662	11,942
1997	14,011	2,257	14,554
1998	12,685	2,124	20,092
1999	12,452	2,084	18,732
2000	14,066	2,264	21,205
2001	14,547	2,480	23,776
2002	15,461	2,614	23,519
2003	15,928	2,608	24,587
2004	16,215	3,289	19,657
2005	16,470	3,599	19,114
2006	17,192	3,615	18,805
2007	16,434	3,384	17,533
2008	15,558	2,941	16,245
2009	15,101	2,540	15,937
2010	15,849	2,882	15,194
2011	15,944	3,222	14,569
2012	16,518	3,254	14,411
2013	16,717	3,351	13,792

Note: Research between FY 1970 and FY 1974 were done by the Environmental Dispute Coordination Commission.

Source: Compiled from "Survey of the Implementation of Noise Regulation Law", "Survey of the Implementation of Vibration Regulation Law", "Survey of the Implementation of Offensive Odor Control Law" by Office of Odor, Noise and Vibration, Environment Management Bureau, MOE, Government of Japan

6.44 Achievement status on environmental standard of noise caused by automobiles, airplanes and Shinkansen

Automobile

	Number of local government conducted evaluations	Number of residences evaluated (Thousand)	Number of residence achieved standard values and its rate							
			Below standard values in both daytime and night		Below standard values only at night		Below standard values only in daytime		Exceed standard values in both daytime and night	
			(Thousand)	(%)	(Thousand)	(%)	(Thousand)	(%)	(Thousand)	(%)
FY2001	78	1,487	1,154	77.6	122	8.2	13	0.9	198	13.3
2002	102	1,934	1,549	80.1	127	6.6	24	1.2	234	12.1
2003	141	2,395	1,933	80.7	177	7.4	22	0.9	263	11.0
2004	165	2,663	2,167	81.4	194	7.3	22	0.8	280	10.5
2005	165	2,914	2,458	84.4	181	6.2	22	0.7	253	8.7
2006	172	3,292	2,812	85.4	196	6.0	26	0.8	258	7.8
2007	176	3,861	3,398	88.0	211	5.5	28	0.7	225	5.8
2008	178	4,632	4,158	89.8	218	4.7	28	0.6	229	4.9
2009	179	5,072	4,595	90.6	221	4.4	25	0.5	231	4.6
2010	179	5,759	5,260	91.3	222	3.9	28	0.5	248	4.3
2011	179	6,116	5,612	91.8	224	3.7	29	0.5	252	4.1
2012	818	6,645	6,151	92.6	228	3.4	28	0.4	238	3.6
2013	828	7,209	6,695	92.9	231	3.2	30	0.4	253	3.5

Reports by prefectures of continuous monitoring of automobile noise under Noise Regulation Law started in FY 2000.

Residences within 50m from the ends of the roads facing main roads were evaluated.

Differences of housing in each year should be taken into consideration.

Total figures may not foot due to rounding.

Source: Compiled from "Survey of the road traffic noise" by Environmental Transport Policy Division, Environment Management Bureau, MOE, Government of Japan

Airplanes

	Number of measurement points	Number of measurement points that achieved target
FY2001	592	441
2002	583	402
2003	554	403
2004	581	417
2005	590	433
2006	584	418
2007	577	426
2008	576	438
2009	568	423
2010	582	454
2011	563	435
2012	568	441
2013	549	420

This table refers to the results of the measurement among areas where local governments concerned specified the patterns, carrying out the calculations each year.

Source: Compiled from materials from Environmental Transport Policy Division, Environment Management Bureau, MOE, Government of Japan

Shinkansen

	Number of measurement points	Number of measurement points that achieved target
FY2001	292	114
2002	296	123
2003	314	118
2004	331	129
2005	374	144
2006	373	153
2007	378	160
2008	346	149
2009	412	195
2010	424	219
2011	504	299
2012	482	290
2013	496	289

This table refers to the results of the measurements among areas where local governments specified patterns, carrying out calculation.

It should be taken into consideration that measurement points each year may not be the same.

In "countermeasures against 75dB" target sections, the noise level may exceed Environmental standards after the implementation of countermeasures against 75dB since the countermeasures only aims at lowering the noise level below 75dB for the time being.

In regard to Shinkansen Superspeed Railway noise, concerned governmental agencies and enterprises have been promoting the "countermeasures against 75dB(phon)" since FY1985 for reduction of noise focusing on the "target sections", which means densely populated residential areas along the Shinkansen railroads where the noise level exceeds 75 phon.

Source: Compiled from materials from Environmental Transport Policy Division, Environment Management Bureau, MOE, Government of Japan

7.01 Dioxins emission inventory

Source	Amount of emission (g-TEQ/Year)					Remarks column				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
1 Emission to air										
General waste incinerators	36	33	32	31	30	①	②	③	④	⑤
Industrial waste incinerators	33	28	27	28	19	①	②	③	④	⑤
Small-scale waste incinerators	33-34	32-33	24.5	22.6	23	①	②	③	④	⑤
Crematoria	1.2-2.8	1.2-3.0	1.3-3.1	1.3-3.1	1.3-3.2	②	③	④	⑤	⑥
Electric steel-making furnaces	20.1	30.1	21.6	21.2	23.3	③	④	⑤	⑥	⑦
Sintering process for steel industry	9.1	10.9	11.9	14.1	12	③	④	⑤	⑥	⑦
Facilities for recovering zinc	2.2	2.3	2.5	0.93	3.2	③	④	⑤	⑥	⑦
Secondary aluminum smelting and refining facilities	8.53	7.3	7.59	6.76	6.97	③	④	⑤	⑥	⑦
Aluminum scrap melting process for aluminum rolling industry	2.2	1.1	1.1	1.1	1.4	③	④	⑤	⑥	⑦
Aluminum scrap melting process for automobile dismantling and metal scrapping industry	1a)	0.32	0.32	0.32	0.32	③	④	⑤	⑥	⑦
Aluminum scrap melting process for aluminum casting/die-casting industry	1a)	0.014	0.014	0.014	0.014	③	④	⑤	⑥	⑦
Aluminum cutting chips drying process for automobile and automobile parts manufacturing industry		0.006	0.0009	0.001	0.0004	③	④	⑤	⑥	⑦
Paper manufacturing (Kraft pulp recovery boilers)	1b)	0.056	0.073	0.073	0.073	③	④	⑤	⑥	⑦
PVC monomer manufacturing facilities		0.31	0.51	0.51	0.18	③	④	⑤	⑥	⑦
Caprolactam manufacturing (using nitrosyl chloride) facilities	5)	-	-	-	-	-	-	-	-	-
Chlorobenzene manufacturing facilities		0.000012	0.000002	0.000002	0.000002	③	④	⑤	⑥	⑦
Potassium sulphate manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Short alumina fiber manufacturing facilities		0.093	0.050	0.050	0.050	③	④	⑤	⑥	⑦
Cement manufacturing facilities	4)	0.86 (1.79)	0.54 (1.20)	0.54 (1.20)	0.54 (1.20)	③	④	⑤	⑥	⑦
Refractory material manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Fire brick manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Roof tile manufacturing facilities	5)	0.0029	0.0032	-	-	③	④	⑤	⑥	⑦
Sheet glass manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Glass fiber manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Electric glass manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Optical glass manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Frit (roof tile glazing materials) manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Frit (enamel-glazing materials) manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Glass container manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Glass tableware manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Tile manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Sanitary earthenware manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Kiln furniture manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Ceramic tableware manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Insulator manufacturing facilities	5)	-	-	-	-	-	-	-	-	-
Lime manufacturing facilities	1a)	0.8	1.1	1.1	1.1	③	④	⑤	⑥	⑦
Cast and forged steel manufacturing facilities		0.17	0.217	0.22	0.22	③	④	⑤	⑥	⑦
Primary copper smelting facilities		0.43	0.322	0.32	0.32	③	④	⑤	⑥	⑦
Primary lead smelting facilities		0.013	0.094	0.094	0.094	③	④	⑤	⑥	⑦
Primary zinc smelting facilities		0.918	1.367	1.37	1.37	③	④	⑤	⑥	⑦
Copper recovery facilities		0	0	0	0	③	④	⑤	⑥	⑦
Lead recovery facilities		0.0068	0.011	0.011	0.011	③	④	⑤	⑥	⑦
Precious metals recovery facilities	5)	-	-	-	-	-	-	-	-	-
Wrought copper and copper alloy products manufacturing facilities	1a)	1.24	1.42	1.42	1.42	③	④	⑤	⑥	⑦
Copper wire and cable manufacturing facilities	1b)	0.48	0.53	0.53	0.53	③	④	⑤	⑥	⑦
Aluminum casting/die-casting facilities	5)	0.011	0.014	-	-	③	④	⑤	⑥	⑦
Automobile manufacturing (aluminum casting/die-casting) facilities		0.50	0.30	0.30	0.30	③	④	⑤	⑥	⑦
Automobile parts manufacturing (aluminum casting/die-casting) facilities		0.282	0.388	0.388	0.388	③	④	⑤	⑥	⑦
Thermal power plants		1.18	1.26	1.26	1.26	③	④	⑤	⑥	⑦
Cigarette smoke		0.06	0.06	0.05	0.05	③	④	⑤	⑥	⑦
Exhaust gas from automobiles	1b)	1.0	1.0	1.0	1.0	③	④	⑤	⑥	⑦

7.01 Dioxins emission inventory

Source	Amount of emission (g-TEQ/Year)					Remarks column				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
2 Emission to water										
General waste incinerators	0.0010	0.0020	0.0007	0.0010	0.00062	㊸	㊸	㊸	㊸	㊸
Industrial waste incinerators	0.60	0.71	0.35	0.64	0.48	㊸	㊸	㊸	㊸	㊸
Bleaching facilities for pulp making	0.19	0.24	0.24	0.24	0.09	㊸	㊸	←	←	㊸
PVC monomer manufacturing facilities	0.055	0.051	0.051	0.051	0.12	㊸	㊸	←	←	㊸
Aluminum alloy manufacturing (rolling, etc.)	0.008	0.011	0.011	0.011	0.008	㊸	㊸	←	←	㊸
Aluminum alloy manufacturing (automobiles and automobile parts manufacturing)	0.000009	0.000013	0.000013	0.000013	0.0000002	㊸	㊸	←	←	㊸
Caprolactam manufacturing (using nitrosylchloride) facilities	0.012	0.010	0.010	0.010	0.0047	㊸	㊸	←	←	㊸
Chlorobenzene manufacturing facilities	0.0000002	0.000001	0.000001	0.000001	0.000002	㊸	㊸	←	←	㊸
Potassium sulphate manufacturing facilities	0					㊸	㊸	←	←	㊸
Acetylene manufacturing (dry process) facilities	0.0010	0.0012	—	—	—	㊸	㊸	—	—	—
Short alumina fiber manufacturing facilities	0.0016	0.0010	—	—	—	㊸	㊸	—	—	—
Dioxazine violet manufacturing facilities	0	0	—	—	—	㊸	㊸	—	—	—
Facilities for recovering Zinc	0.00083	0.00040	0.00003	0.00006	0.00002	㊸	㊸	㊸	㊸	㊸
Yellow pigment intermediates	5)	—	—	—	—	—	—	—	—	—
4-Chlorophthalic acid monosodium salt manufacturing facilities	0.0000001	0.0000002	—	—	—	㊸	㊸	—	—	—
2, 3-dichloro-1, 4-naphthoquinone manufacturing facilities	0.000006	0.000137	—	—	—	㊸	㊸	—	—	—
Terminal sewage treatment facilities	0.131	0.23	0.50	0.11	0.22	㊸	㊸	㊸	㊸	㊸
Joint wastewater treatment facilities	0.056	0.264	0.26	0.26	0.057	㊸	㊸	㊸	←	㊸
Final landfill sites	0.006	0.006	0.007	0.007	0.006	㊸	㊸	㊸	㊸	㊸
Facilities for processing exhaust gas from carrier type catalyst manufacturing facilities	0.000083	0.00000055	—	—	—	㊸	㊸	—	—	—
Facilities for processing PCB	7)	0.0000046	0.000005	0.000063	0.000006	㊸	㊸	㊸	㊸	㊸
Facilities for destroying CFC	7)	0.00014	0.000023	0.000012	0.00001	㊸	㊸	㊸	㊸	㊸
Total	155-157	158-160	141-143	136-138	128-130					
Of which, emission to water	1.1	1.5	1.4	1.3	1.0					

Note:

1: Unit of emission: g-TEQ/year. Emissions from 2001 to 2007 are expressed by WHO-TEF(1998) as Toxicity Equivalency Factor. Emissions after 2008 are expressed by WHO-TEF(2006) when it is possible.

1a: Emissions from Aluminum scrap melting process for automobile dismantling and metal scrapping industry, Aluminum scrap melting process for aluminum casting/die-casting industry, Roof tile manufacturing facilities, Lime manufacturing facilities, and Wrought copper and copper alloy products manufacturing facilities are expressed by WHO-TEF (1998) as Toxicity Equivalency Factor.

1b: Parts of Emission data from Paper manufacturing (Kraft pulp recovery boilers), Copper wire and cable manufacturing facilities, Exhaust gas from automobiles are expressed by WHO-TEF(1998) as Toxicity Equivalency Factor.

2: Arrows in the Remarks column indicate that it is considered to have occurred the same emissions the year which arrow points

3: Small-scale waste incinerators refer to incinerating capacity of less than 200kg/h and are implemented at plants.

4: Parenthesized values refer to the number of facilities having permissions for installing industrial waste disposal facilities and the numbers are excluded from total.

5: Sources not listed in Stockholm Convention on Persistent Organic Pollutants Annexes C, amounts of which are so small as to not affect total of emissions in any way, are excluded from the calculation.

6: Up until 2003, generation source of aluminum related products was called as "Aluminum alloy manufacturing facilities" as a collective term, from 2004, it was called as "Secondary aluminum smelting and refining facilities" as "the Government Plan to Reduce Dioxin Levels Resulting from Business Activities in Japan" described. No alternation on data has been conducted so far.

7: Data collection on an amount of gas emission from operators nationwide began and they were compiled when operators were registered as a so-called specified facility which "the Law Concerning Special Measures against Dioxins" stipulates.

8: Numbers in the Remark column correspond with the followings.

- ①: estimated by METI in Sep., 2004
- ②: estimated by MoE in Dec., 2007
- ③: estimated by MHLW in Oct., 2007
- ④: estimated by METI in Oct., 2007
- ⑤: estimated by MoE in Nov., 2008
- ⑥: estimated by MHLW in Nov., 2008
- ⑦: estimated by METI in Nov., 2008
- ⑧: estimated by MoE in Nov., 2009
- ⑨: estimated by MHLW in Sep., 2009
- ⑩: estimated by METI in Oct., 2009

- ㊸: estimated by MoE in Dec., 2010
- ㊹: estimated by MHLW in Oct., 2010
- ㊺: estimated by METI in Nov., 2010
- ㊻: estimated by MoE in Feb., 2012
- ㊼: estimated by MHLW in Nov., 2011
- ㊽: estimated by METI in Feb., 2012
- ㊾: estimated by MoE in Jan., 2013
- ㊿: estimated by MHLW in Nov., 2012
- ㋀: estimated by METI in Dec., 2012
- ㋁: estimated by MoE in Feb., 2014

- ㋂: estimated by MHLW in Nov., 2013
- ㋃: estimated by METI in Feb., 2014
- ㋄: estimated by MoE in Mar., 2015
- ㋅: estimated by MHLW in Nov., 2014
- ㋆: estimated by METI in Feb., 2015

Source: "Dioxin Emission Inventory" by Dioxins Control Office, Policy Planning Division, Water Environment Division, Environmental Management Bureau, MOE, the Government of Japan

7.02 Result of environmental survey on dioxins in FY 2013

Unit : Air pg-TEQ/m³
 Water quality pg-TEQ/L
 Sediments pg-TEQ/g
 Soil quality pg-TEQ/g

Environmental samples	Type of survey or classification of areas (Water area)	Number of Sampling points	Number of samples	Sampling points that exceed environmental standards	Results of Survey			Environmental Standard values
					Average	Minimum value	Maximum value	
Air	All	666 (721)	2,075 (2,146)	0 (-)	0.023 (0.023)	0.0029 (0.0029)	0.20 (0.20)	0.6
	General Environment	508 (541)	1,586 (1,631)	0 (-)	0.022 (0.022)	0.0029 (0.0029)	0.091 (0.091)	
	In the area of sources	135 (155)	409 (432)	0 (-)	0.027 (0.026)	0.0044 (0.0043)	0.20 (0.20)	
	Roadsides	23 (25)	80 (83)	0 (-)	0.025 (0.024)	0.0095 (0.0095)	0.09 (0.09)	
Public Water area Quality	All	1,537	2,045	28	0.19	0.0130	3.2	1
	River	1,189	1,662	25	0.22	0.0130	3.2	
	Lakes and marshes	83	93	3	0.19	0.0180	1.5	
	Sea areas	265	290	0	0.070	0.0160	0.41	
Public Water area Sediment	All	1,247	1,298	5	6.7	0.0560	640	150
	River	948	997	5	6.1	0.0560	640	
	Lakes and marshes	73	73	0	8.5	0.2100	32	
	Sea areas	226	228	0	8.6	0.0940	110	
Groundwater Source		556	559	3	0.260	0.0110	110.0	1
Soil	Total	921	921	0	3.6	0	230	1,000
	General Environment Survey	647	647	0	2.2	0	110	
	Survey of the vicinities of pollution sources	274	274	0	7.0	0	230	

Note:

Average, Minimum value, and Maximum value are the annual average, minimum, and maximum values taken at each sampling points.

WHO-TEF(2006) is implemented to calculate amount of toxic equivalent.

As for Air, data includes survey results of fixed points designated by Ministry of the Environment, as well as the survey results independently carried out by Air Pollution Control Law ordinance designated municipality. The lower parenthesized data refers to data from all of the sampling points.

Sampling point that exceed environmental standards for public water area sediment refers to number of sampling points that exceed the environmental standards more than once a year.

As for underground water, besides the survey reported here, investigation on the surrounding area of pollution well (6 samples from 6 sampling points) and continuous monitorings and researches (21 samples from 26 sampling points) were implemented.

As for soil, data from 8 samples of 8 sampling points against a simplified measuring method are not included when calculated averages and concentration range. Also, Study Area Survey (1 sample from 1 sampling point in 1 area) and Confirming Target Index Survey (5 samples from 5 sampling points in 1 area) have been carried out for soil.

Source: "Dioxin Emission Inventory," Water Environment Division, Dioxins Control Office, Policy Planning Division, Environmental Management Bureau, MOE, the Government of Japan

7.03 Transition of total daily intake of dioxins over time

Convert per body weight 1kg (Unit : pg-TEQ / kg bw / day)

	Air and Soil		FOOD ²⁾														Tolerable daily intake (TDI)
	Air ³⁾	Soil ⁴⁾	Rice and Processed rice	Grains except rice, Nuts(Fruits) Potatoes	Sugar and Confectionary	Oils and fats	Beans and Processed bean	Fruit, Juice	Green and Yellow Vegetables	Other vegetables, Mushrooms, Sea Weeds	Alcoholic beverages and Beverages	Seafood	Meat and Eggs	Milk and Dairy Products	Seasoning	Drinking Water	
FY 2000	0.042 0.051	0.0092	0.0002	0.0038	0.011	0.0032	0.0004	0.0002	0.0212	0.0288	0.00	1.107	0.194	0.0794	0.0048	0.00	Approx. 1.50
									1.453								
FY 2001	0.042 0.048	0.0064	0.0004	0.0268	0.004	0.001	0.0028	0.0004	0.0222	0.0028	0.0076	1.335	0.154	0.0698	0.0020	0.00	Approx. 1.68
									1.629								
FY 2002	0.028 0.035	0.0068	0.0002	0.001	0.006	0.001	0.0002	0.00	0.0030	0.001	0.00	1.290	0.150	0.0346	0.0014	0.00	Approx. 1.52
									1.489								
FY 2003	0.020 0.025	0.0052	0.00	0.001	0.002	0.002	0.00	0.00	0.0018	0.001	0.0002	1.147	0.141	0.0322	0.0018	0.00	Approx. 1.36
									1.330								
FY 2004	0.017 0.021	0.0044	0.0004	0.0026	0.002	0.001	0.0004	0.00	0.0028	0.0026	0.001	1.245	0.101	0.0468	0.0020	0.00	Approx. 1.43
									1.409								
FY 2005	0.015 0.019	0.0040	0.0004	0.0022	0.002	0.001	0.0008	0.00	0.0028	0.001	0.000	1.090	0.0686	0.0328	0.0014	0.00	Approx. 1.22
									1.203								
FY 2006	0.015 0.019	0.0038	0.0006	0.0054	0.002	0.001	0.0002	0.00	0.0012	0.001	0.000	0.9400	0.0704	0.0212	0.0012	0.00	Approx. 1.06
									1.045								
FY 2007	0.012 0.017	0.0054	0.0002	0.001	0.002	0.0004	0.0004	0.00	0.0006	0.001	0.00	1.033	0.0422	0.0226	0.0012	0.00	Approx. 1.12
									1.106								
FY 2008	0.011 0.017	0.0056	0.00	0.0008	0.001	0.0004	0.0002	0.00	0.0008	0.001	0.00	0.8634	0.0396	0.0076	0.0008	0.00	Approx. 0.93
									0.9152								
FY 2009	0.009 0.014	0.0042	0.00	0.0010	0.001	0.0006	0.0002	0.00	0.0004	0.001	0.00	0.7840	0.0398	0.013	0.0012	0.00	Approx. 0.86
									0.8428								
FY 2010	0.009 0.014	0.0042	0.00	0.0004	0.001	0.0004	0.0000	0.00	0.0006	0.0004	0.00	0.7626	0.0416	0.0028	0.0036	0.00	Approx. 0.83
									0.8134								
FY 2011	0.008 0.012	0.0040	0.00	0.0006	0.001	0.0004	0.0002	0.00	0.0002	0.0004	0.00	0.6308	0.0416	0.0008	0.0016	0.00	Approx. 0.69
									0.6774								

	total (pg-TEQ/kg)	Air and Soil (%)		Food (%)						Tolerable daily intake (TDI) (pg-TEQ/kg)
		Air ³⁾	Soil ⁴⁾	Seafood	Meat and Eggs	Seasoning	Milk and Dairy Products	Sugar and Confectionary	others	
FY2012	0.7	1.14	0.46	89.52	7.70	0.23	0.40	0.11	0.30	4 ⁵⁾
FY2013	0.59	1.12	0.75	89.39	7.75	0.27	0.10	0.10	0.51	

Note:

WHO-TEF(1998) is used from FY 2000 to FY 2007 and WHO-TEF(2006) is used after FY2008 to calculate toxic equivalent (TEQ).

Effective digit is based on daily intake of dioxin according to food category and total daily intake of diet.

As for average values for General Environment and roadside, each average values are added with the value

Average values for General Environment are used.

TDI are set under Act on Special Measures against Dioxins (Act No. 106 of July 16, 1999)

Reference: <http://law.e-gov.go.jp/htmldata/H11/H11HO105.html> and http://www1.mhlw.go.jp/houdou/1106/h0621-3_13.html

Source: "Result of environmental survey on dioxin," Ministry of the Environment, the Government of Japan

"Survey of daily intake of dioxin from diet (Health Labour Sciences Research)," Ministry of Health, Labour and Welfare, the Government of Japan

7.04 Transition of daily intake of dioxins over time originated from total diet samples

Survey on transition of daily intake of dioxin over time from stored samples.

(Unit : pg-TEQ / kg bw / day)

	Dioxins	Co-planar PCB	PCDDs + PCDFs
FY 1977	8.18	4.43	3.75
1982	5.32	2.96	2.36
1988	5.58	3.14	2.44
1992	2.07	1.23	0.84
1995	2.30	1.15	1.15
1998	2.72	1.80	0.92

Survey on daily intake ²⁾

(Unit : pg-TEQ / kg bw / day)

	Dioxins	Co-planar PCB	PCDDs + PCDFs
FY 1998	2.00	1.16	0.83
1999	2.25	1.36	0.89
2000	1.45	0.88	0.57
2001	1.63	1.09	0.54
2002	1.49	0.97	0.52
2003	1.33	0.89	0.44
2004	1.41	0.96	0.45
2005	1.20	0.82	0.38
2006	1.04	0.73	0.31
2007	1.11	0.78	0.33
2008	0.92	0.66	0.26
2009	0.84	0.61	0.24
2010	0.81	0.57	0.24
2011	0.68	0.47	0.20
2012	0.69	0.48	0.21
2013	0.58	0.39	0.18

Note:

For total diet samples taken and stored at five sample points in Kansai area between FY 1977 and FY 1995 (six sampling points if FY 1998 sampling points are added), dioxins were analyzed and estimated transition of the amount of dioxin intake from average daily life over time.

Total diet samples are taken from all over the country, of which dioxin was analyzed and estimated for the amount of dioxin intake from average daily life.

Source: "Survey of daily intake of dioxin from diet (Health Labour Sciences Research)," Ministry of Health, Labour and Welfare

7.05 Status of applications submitted from specified facilities based on the Law concerning Special Measures against Dioxins

(Unit: Facility)

	Facility subject to air standard regulation						Facility subject to water standard regulation					
	The end of FY 2008	The end of FY 2009	The end of FY 2010	The end of FY 2011	The end of FY 2012	The end of FY 2013	The end of FY 2008	The end of FY 2009	The end of FY 2010	The end of FY 2011	The end of FY 2012	The end of FY 2013
Hokkaido	295	292	285	288	278	271	86	83	84	88	90	94
Aomori	147	140	139	139	138	137	55	72	77	73	73	73
Iwate	144	142	139	130	126	126	8	8	8	9	9	9
Miyagi	145	140	136	148	150	123	17	17	17	16	16	16
Akita	96	94	91	88	84	84	11	11	11	11	10	10
Yamagata	129	128	123	117	120	116	47	47	48	43	43	42
Fukushima	167	162	157	156	156	154	72	69	61	61	60	60
Ibaraki	500	486	458	437	421	411	112	114	112	106	98	91
Tochigi	292	277	274	248	244	228	19	19	21	16	18	20
Gunma	211	169	166	135	131	128	29	21	21	15	16	15
Saitama	420	407	393	375	357	351	255	251	253	240	242	239
Chiba	426	404	395	384	373	360	156	147	142	136	137	136
Tokyo	360	343	331	325	326	324	262	252	256	259	263	258
Kanagawa	153	153	151	144	140	127	92	96	103	105	105	87
Niigata	268	257	248	246	240	230	72	73	73	73	73	71
Toyama	135	129	127	124	117	113	50	49	51	43	39	40
Ishikawa	99	90	89	88	86	84	13	11	11	11	11	11
Fukui	144	140	137	126	120	111	43	41	41	40	37	31
Yamanashi	101	99	95	91	88	88	14	13	13	10	10	10
Nagano	219	207	199	184	181	166	114	111	109	102	102	91
Gifu	269	261	257	245	240	227	49	46	46	42	43	40
Shizuoka	428	415	394	377	366	345	308	306	304	297	298	290
Aichi	461	438	423	413	392	387	114	109	104	99	100	93
Mie	283	274	267	254	253	256	64	64	56	55	54	48
Shiga	172	154	149	140	129	121	24	19	19	20	19	19
Kyoto	96	96	93	92	91	89	23	23	22	22	22	22
Osaka	187	184	175	166	160	150	156	158	153	120	120	115
Hyogo	335	293	290	285	272	264	117	87	86	87	86	81
Nara	198	196	195	194	195	190	35	34	38	34	34	33
Wakayama	107	100	94	91	89	85	23	20	20	19	19	19
Tottori	100	97	96	95	94	91	39	39	39	39	39	39
Shimane	102	91	90	82	79	80	30	32	31	29	28	32
Okayama	143	135	136	132	141	142	31	31	31	31	32	34
Hiroshima	188	181	178	165	159	150	35	33	33	29	27	27
Yamaguchi	202	190	185	176	162	157	75	74	69	69	67	67
Tokushima	177	173	172	166	162	149	49	47	47	41	41	39
Kagawa	139	137	132	128	125	121	37	37	36	38	37	35
Ehime	216	206	203	202	197	189	34	37	37	36	36	37
Kochi	129	127	127	124	121	114	9	9	9	9	7	6
Fukuoka	282	278	261	248	236	233	71	73	71	70	63	66
Saga	131	128	122	118	114	111	20	20	21	18	18	20
Nagasaki	133	123	124	118	116	116	26	26	26	26	24	23
Kumamoto	168	159	154	146	137	135	10	10	10	12	12	12
Oita	65	65	65	66	64	62						
Miyazaki	80	78	76	70	70	69	4	5	5	6	6	6
Kagoshima	168	167	168	166	166	161	2	1	1	1	1	1
Okinawa	114	110	103	102	102	105	34	37	36	36	37	37

7.05 Status of applications submitted from specified facilities based on the Law concerning Special Measures against Dioxins

(Unit: Facility)

	Facility subject to air standard regulation						Facility subject to water standard regulation					
	The end of FY 2008	The end of FY 2009	The end of FY 2010	The end of FY 2011	The end of FY 2012	The end of FY 2013	The end of FY 2008	The end of FY 2009	The end of FY 2010	The end of FY 2011	The end of FY 2012	The end of FY 2013
Sapporo	30	30	30	27	27	26	22	22	22	20	20	20
Sendai	33	31	30	33	31	27	15	13	13	32	32	22
Saitama	41	35	30	30	29	29	12	12	11	12	12	12
Chiba	55	54	52	53	48	46	36	36	36	36	35	35
Yokohama	93	91	86	85	82	82	66	68	68	67	61	61
Kawasaki	62	61	59	59	56	54	74	74	70	71	71	75
Sagamihara	36	24	22	22	20	20	50	40	35	35	33	33
Niigata	71	72	71	68	59	57	25	25	24	23	21	19
Shizuoka	89	89	77	74	69	67	24	24	22	22	22	22
Hamamatsu	67	65	64	61	60	60	20	20	20	20	20	20
Nagoya	75	74	75	72	66	63	41	42	45	45	45	45
Kyoto	76	71	73	72	71	68	31	31	33	33	31	27
Osaka	72	67	65	65	65	60	52	51	52	59	57	54
Sakai	53	55	56	53	52	50	17	17	18	16	16	16
Kobe	42	40	37	36	34	35	29	22	21	20	21	23
Okayama	63	61	58	56	52	51	17	17	16	16	15	15
Hiroshima	66	61	61	60	53	49	52	51	55	53	53	45
Kitakyushu	66	66	68	65	65	59	74	108	113	111	110	107
Fukuoka	23	23	23	23	23	23	25	25	25	25	25	25
Kumamoto	20	22	22	21	21	22	6	6	6	6	6	7
Hakodate	9	9	9	9	9	10	1	1	1	1	1	1
Asahikawa	12	12	12	12	12	10	4	4	4	4	4	4
Aomori	35	35	36	32	31	27	6	6	6	5	5	4
Morioka	28	28	29	26	23	23	3	3	3	3	3	3
Akita	19	18	18	17	17	17	15	15	15	14	14	14
Koriyama	21	18	18	17	17	18	3	3	3	3	5	3
Iwaki	37	35	36	34	32	32	29	27	34	34	36	36
Utsunomiya	27	25	25	24	24	25	22	19	19	19	19	20
Maebashi		39	33	32	29	30		12	10	12	12	12
Takasaki				27	27	25				6	6	6
Kawagoe	16	15	14	12	12	11	12	12	9	8	8	7
Funabashi	21	21	18	18	16	16	2	2	2	2	1	1
Kashiwa	22	18	18	17	16	16						
Yokosuka	17	17	17	17	19	19	21	21	20	20	21	21
Toyama	49	47	47	46	46	45	15	15	15	15	15	14
Kanazawa	31	34	33	30	30	28	5	5	9	11	9	9
Nagano	26	24	22	20	20	18	18	16	14	13	13	11
Gifu	29	29	27	26	26	26	6	6	6	6	6	6
Toyohashi	23	21	22	22	20	21	8	7	8	8	8	7
Okazaki	35	32	28	26	27	26	10	11	7	5	5	5
Toyoda	53	52	51	48	48	49	51	50	50	51	51	51
Otsu		16	15	15	14	13		5	5	7	7	7
Toyonaka				6	8	8				13	10	10
Takatsuki	14	14	14	14	14	14	19	19	19	18	18	18
Higashi Osaka	17	17	17	16	16	16	14	14	14	12	12	12
Himeji	74	79	78	74	74	75	45	55	56	53	57	57
Amagasaki		20	19	18	18	19		25	26	25	25	24
Nishinomiya	8	8	11	11	8	8	4	4	5	8	7	7
Nara	29	29	29	27	26	26	4	4	4	4	4	4
Wakayama	57	53	51	46	45	45	11	10	10	10	10	10
Kurashiki	70	70	70	68	66	66	45	45	45	43	43	43
Fukuyama	69	66	64	61	58	56	17	15	18	18	16	16
Shimonoseki	31	30	28	28	28	28	2	2	2	2	2	2
Takamatsu	27	26	26	25	25	24	7	7	7	7	7	7
Matsuyama	36	34	39	37	35	34	4	4	4	4	4	4
Kochi	28	27	27	27	27	25	7	7	7	7	7	6
Kurume	23	23	23	23	21	21	3	3	3	3	3	3
Nagasaki	21	19	18	17	15	15	9	9	9	7	7	7
Oita	43	44	44	42	41	39	23	23	23	23	22	22
Miyazaki	17	17	16	15	15	15	4	4	4	5	5	5
Kagoshima	38	36	35	35	34	34	7	7	7	7	7	7
Naha	-	-	-	-	-	1	-	-	-	-	-	-
nationwide	11,769	11,364	11,058	10,686	10,380	10,054	4,090	4,083	4,070	3,980	3,943	3,834

Source: "Enforcement status of the Law concerning Special Measures against Dioxins," Dioxins Control Office, Policy Planning Division, Environmental Management Bureau, MOE, the Government of Japan

An application based on the Law concerning Special Measures against Dioxins and a permission based on the Act on Special Measures concerning Conservation of the Environment of the Seto Inland Sea are summarized together.

Water Environment Management, MOE, the Government of Japan

Source: "Enforcement status of the Law concerning Special Measures against Dioxins" by Dioxins Control Office, Policy Planning Division, Environmental Management Bureau, Ministry of the Environment, Government of Japan

Soil Environment Management, MOE, the Government of Japan

Water Environment Management, Ministry of the Environment, the Government of Japan

Soil Environment Management, Ministry of the Environment, the Government of Japan

7.06 Status of applications submitted from facilities under air control standards, based on the Law Concerning Special Measures against Dioxins (according to contents of applications)

(Unit : Piece)

	March, 31 2008 Present number of installed facilities	March, 31 2009 Present number of installed facilities	March, 31 2010 Present number of installed facilities	March, 31 2011 Present number of installed facilities	March, 31 2012 Present number of installed facilities	March, 31 2013 Present number of installed facilities	March, 31 2014 Present number of installed facilities
Sintering furnace for producing sintered ores	32	32	32	32	31	31	31
Electric furnace for steel	110	111	112	114	112	112	110
Zinc recovery facility	Roasting furnace	7	10	12	13	13	12
	Sintering furnace	2	2	5	5	5	6
	Blast furnace	2	2	2	3	2	2
	Melting furnace	3	3	2	2	3	3
	Drying furnace	1	2	6	9	8	9
	Subtotal	15	19	27	32	31	32
Aluminum alloy facility	Roasting furnace	22	22	27	28	30	29
	Melting furnace	759	756	748	731	722	671
	Drying furnace	62	62	60	58	54	52
	Subtotal	843	840	835	817	772	752
Waste incinerator	More than 4t/h	1,121	1,125	1,103	1,106	1,112	1,115
	More than 2t/h ~ less than 4t/h	1,489	1,481	1,460	1,450	1,431	1,395
	Less than 2t/h	8,510	8,161	7,793	7,499	7,165	6,619
	More than 200kg/h ~ less than 2t/h	2,955	2,884	2,772	2,673	2,570	2,357
	More than 100kg ~ Less than 200kg	3,802	3,602	3,433	3,307	3,178	2,976
	More than 50kg/h ~ less than 100kg/h	1,227	1,175	1,109	1,063	987	895
	Less than 50kg/h (more than 0.5m ²)	526	500	479	456	430	391
	Subtotal	11,120	10,767	10,356	10,055	9,708	9,129
Total	12,120	11,769	11,362	11,050	10,686	10,380	10,054

Note: Number of reported facilities according to Acts No.12 and No.13 were added.

Source: "Enforcement status of the Law concerning Special Measures against Dioxins," Dioxins Control Office, Policy Planning Division, Environmental Management Bureau, MOE, the Government of Japan

Water Environment Management, Soil Management, MOE, the Government of Japan

7.07 Status of applications submitted from facilities under water control standards, based on the Law Concerning Special Measures against Dioxins (according to contents of applications)

(Unit : Piece)

(Unit : Piece)

	Number of installed facilities at the end of Fiscal Year							
	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	
Bleaching facility using chlorine or chlorine compound used to produce sulfate cellulose (craft pulp) or sulfite cellulose (sulfite pulp.)	91	89	75	76	77	76	72	
Acetylene cleaning facility used to produce acetylene from calcium carbide.	57	56	55	55	55	57	57	
Waste gas cleaning facility used to produce sulfuric acid potassium.	0	0	0	0	0	0	0	
Waste gas cleaning facility used to produce alumina fiber.	21	22	22	22	23	27	26	
Waste gas cleaning facility used to process gas produced from baking furnace that is used to produce a catalyst with a carrier.	6	7	7	7	7	7	9	
Dichloro ethylene cleaning facility used to produce vinyl chloride monomer.	32	32	32	32	32	32	32	
Sulfuric acid concentrating facility, cyclohexane separating facility, waste gas cleaning facility used to produce caprolactm.	5	5	3	5	5	5	5	
Water cleaning facility and waste gas cleaning facility used to produce chlorobenzene or dichlorobenzene.	4	2	2	2	2	2	2	
Filtering treatment facility, drying facility and waste gas cleaning facility to produce 4-Chlorophthalic acid.	6	6	3	3	3	3	3	
Filtering treatment facility, and waste gas cleaning facility to produce 2, 3-dichloro-1, 4-naphthoquinone.	3	3	3	3	3	3	3	
Nitration derivative separation facility, nitration-reduction derivative separation facility, nitration derivative cleaning facility, nitration-reduction derivative cleaning facility, dioxazine purple cleaning facility, Hot-air drying facility used to produce dioxazine purple.	7	7	7	7	7	7	7	
Roasting furnace, melting furnace, or drying furnace used to produce aluminum or the alloy thereof that are related to waste gas cleaning facility and wet-type dust collection facility.	82	80	79	80	73	72	72	
Refinement facility, waste gas cleaning facility and wet-type dust collection facility that are used in collection of zinc.	16	19	38	44	45	43	43	
Filtering treatment facility, refinement facility and waste gas cleaning facility used in metallic collection from a catalyst with a carrier.	254	253	252	251	249	255	246	
Waste gas cleaning facility, wet-type dust collection facility and ash collection facility related to waste incinerator that discharge polluted water or waste fluid.	Waste gas cleaning facility, wet-type dust collection facility	2,215	2,199	2,137	2,110	2,003	1,976	1,899
	Ash collection facility	849	834	877	875	893	879	862
Subtotal	3,064	3,033	3,014	2,985	2,896	2,855	2,761	
Decomposition facility for waste PCB or processed PCB, and cleaning facility and decomposition facility for PCB polluted materials and processed PCB.	130	128	127	126	128	130	129	
Plasma reaction facility, waste gas cleaning facility and wet-type dust collection facility used in destruction of CFC.	54	59	61	62	61	61	61	
Sewage terminal processing facility	252	252	256	258	258	253	249	
Facility that processes water discharged from the factory or business establishment where facility under the Water Quality Control is installed.	55	54	54	58	56	55	57	
total	4,139	4,107	4,090	4,076	3,980	3,943	3,834	

Note: An application based on enforcement status of the Law concerning Special Measures against Dioxins and a permission based on the Act on Special Measures concerning Conservation of the Environment of the Seto Inland Sea are summarized together.

Source: "Enforcement status of the Law concerning Special Measures against Dioxins," Dioxins Control Office, Policy Planning Division, Environmental Management Bureau, MOE, the Government of Japan

Water Environment Management, MOE, the Government of Japan

7.08 Number of applications for new chemical compounds submitted according to the Law Concerning the Examination and Regulation of Manufacture

(Unit : Case)

	New	Fiscal Year	New: Small quantity	
			Produced	Imported
1975	82	1975	773	469
1980	253	1980	1,833	937
1985	376	1985	3,893	2,177
1990	272	1990	6,848	4,799
1995	296	1995	8,050	5,951
2000	373	2000	10,032	7,222
2001	322	2001	10,669	7,559
2002	292	2002	11,763	8,153
2003	362	2003	13,087	8,973
2004	121			

(Unit : Case)

	New: Regular	Low production amount	Intermediates		New: Small quantity		
			Produced	Imported		Produced	Imported
FY 2004	238	191	425	281	144	14,823	9,889
FY 2005	225	194	202	102	100	15,923	10,650
FY 2006	284	219	170	98	72	17,687	11,718
FY 2007	384	242	226	113	113	19,641	12,694
FY 2008	378	298	172	98	74	21,356	13,551
FY 2009	306	271	213	114	99	22,860	14,111
FY 2010	321	339	266	140	126	25,848	-
FY 2011	453	311	265	120	145	28,547	-
FY 2012	454	248	259	116	143	31,672	-
FY 2013	315	234	204	80	124	34,056	-
FY 2014	367	233	231	103	128	36,053	-

Note: For 2004 (regular year), from Jan. to Mar.

7.09 Result of the initial environmental survey for Environmental Survey and Monitoring of Chemicals (FY2013)

Water quality

No.	Substance registry number	Name of substances	Number of detected substances/Number of samples	Number of study areas where substances are detected /Number of study areas	Detection range (ng/L)	Detection limit (ng/L)
1	1	Chlormadinone and its acetate esters				
2	1-1	Chlormadinone	0/18	0/18	nd	0.038
3	1-2	Chlormadinone acetate	13/18	13/18	nd ~ 0.76	0.033
4	2	Dichlorobenzene derivatives				
5	2-1	2,3-Dichloroaniline	0/18	0/18	nd	3.1
6	2-2	2,4-Dichloroaniline	3/18	3/18	nd ~ 2.8	1.1
7	2-3	2,5-Dichloroaniline	1/18	1/18	nd ~ 2.2	1.8
8	2-4	2,6-Dichloroaniline	0/18	0/18	nd	1.5
9	2-5	3,4-Dichloroaniline	7/18	7/18	nd ~ 25	2.6
10	2-6	3,5-Dichloroaniline	0/18	0/18	nd	2.3
11	4	Disodium 4-amino-3-[[4'-(2,4-diaminophenyl)diazenyl]biphenyl-4-yl]diazenyl]-5-hydroxy-6-(phenyldiazenyl)naphthalene-2,7-disulfonate (aka: CI Direct Black 38)	0/14	0/14	nd	34
12	5	N,N-Dimethyloctadecan-1-ylamine	5/12	5/12	nd ~ 15	0.80
13	6	N,N-Dimethyldodecan-1-ylamine	3/13	3/13	nd ~ 1,200	6.2
14	7	2-[[Thiocyanatomethyl]sulfanyl]-1,3-benzothiazole (aka: TCMTB)	1/15	1/15	nd ~ 1.1	0.82
15	8	1,1':2',1"-Terphenyl	0/15	0/15	nd	0.46
16	11	Sodium 2-biphenylate	3/11	3/11	nd ~ 10	2.4
17	12	3-Hydroxyestra-1,3,5(10),7-tetraen-17-one (aka: Equilin)	0/16	0/16	nd	0.17
18	13	4,4'-Bipyridyl	0/14	0/14	nd	0.9
19	14	(+/-)-1,7,7-trimethyl-3-[[4-methylphenyl]methylene]bicyclo[2.2.1]heptan-2-one	0/17	0/17	nd	440

Note: Range of detection refers to maximum and minimum values of detected sample substance.

Source: "Environmental Survey and Monitoring of Chemicals in 2014," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

Air

No.	Substance registry number	Name of substances	Number of detected substance/Number of samples	Number of study areas where substances are detected /Number of study areas	Detection range (ng/m ³)	Detection limit (ng/m ³)
1	3	Ethene, 1,1-dichloro- *	8/51	4/17	nd ~ 2,700	19
2	9	Triethylamine *	6/48	3/16	nd ~ 210	11
3	10	2,4,6-Trichlorophenol	0/42	0/14	nd	13

Note: Range of detection refers to maximum and minimum values of detected sample substance.

*: materials investigated that are detected at points with due consideration of information related to emission.

Source: "Environmental Survey and Monitoring of Chemicals in 2014," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

7.10 Environmental survey details of the chemical environment in fiscal year 2013

Water quality

No.	Substance registry number	Name of substances	Number of detected substance/Number of samples	Number of study areas where substances are detected /Number of study areas	Detection range (ng/L)	Detection limit (ng/L)
1	1	1,5,9-Cyclododecatriene	0/22	0/22	nd	25
2	2	2,4-Di-tert-pentylphenol	0/25	0/25	nd	0.98
3	3	Thiourea *	2/23	2/23	nd ~ 310,000	140
4	4	1,3-Butadiene *	0/25	0/25	nd	49
5	6	Methyl dodecanoate	9/22	9/22	nd ~ 38	5.2
6	7	2-Methylpropan-2-ol (aka: tert-butyl alcohol, TBA)	23/23	23/23	59 ~ 2,300	20

Note: Range of detection refers to maximum and minimum values of detected sample substance.

*: materials investigated that are detected at points with due consideration of information related to emission.

Source: "Environmental Survey and Monitoring of Chemicals in 2014," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

Bottom sediment

No.	Substance registry number	Name of substances	Number of detected substance/Number of samples	Number of study areas where substances are detected /Number of study areas	Detection range (ng/g-dry)	Detection limit (ng/g-dry)
1	1	1,5,9-Cyclododecatriene	6/69	2/23	nd ~ 3.4	0.32
2	2	2,4-Di-tert-pentylphenol	16/72	7/24	nd ~ 1.6	0.14

Note: Range of detection refers to maximum and minimum values of detected sample substance.

Source: "Environmental Survey and Monitoring of Chemicals in 2014," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

Living organism

No.	Substance registry number	Name of substances	Number of detected substance/Number of samples	Number of study areas where substances are detected /Number of study areas	Detection range (ng/g-wet)	Detection limit (ng/g-wet)
1	1	1,5,9-Cyclododecatriene	1/39	1/13	nd ~ 1.1	0.32

Note: Range of detection refers to maximum and minimum values of detected sample substance.

Source: "Environmental Survey and Monitoring of Chemicals in 2014," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

Air

No.	Substance registry number	Name of substances	Number of detected substance/Number of samples	Number of study areas where substances are detected /Number of study areas	Detection range (ng/g-wet)	Detection limit (ng/g-wet)
1	5	1,6-Diisocyanatohexane *	2/63	2/21	nd ~ 0.41	0.14

Note: Range of detection refers to maximum and minimum values of detected sample substance.

*: materials investigated that are detected at points with due consideration of information related to emission.

Source: "Environmental Survey and Monitoring of Chemicals in 2014," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

7.11 Results of Environmental Monitoring in FY 2013

Registry Numbers	Target substance	Water quality (pg/L)		Bottom sediment (pg/g-dry)		Organism (pg/g-wet)						Air (pg/m ³)			
		Range (Detection Frequency)	Average	Range (Detection Frequency)	Average	Seashells		Fish		Birds		1st (Warm season)		2nd (Cool season)	
						Range (Detection Frequency)	Average	Range (Detection Frequency)	Average	Range (Detection Frequency)	Average	Range (Detection Frequency)	Average	Range (Detection Frequency)	Average
1	PCBs	tr(13) ~ 2,600 (48/48)	140	tr(43) ~ 650,000 (62/62)	6,200	730 ~ 44,000 (5/5)	5,200	1,000 ~ 270,000 (19/19)	14,000	250,000 ~ 510,000 (2/2)	360,000	24 ~ 1,100 (35/35)	140	tr(19) ~ 300 (35/35)	57
2	HCB	tr(4) ~ 260 (48/48)	14	7.2 ~ 6,600 (63/63)	120	nd ~ 250 (4/5)	32	36 ~ 1,500 (19/19)	240	2,900 ~ (2/2)	3,900	52 ~ 180 (36/36)	110	73 ~ 180 (36/36)	97
3	Aldrin														
4	Dieldrin														
5	Endrin														
6	DDT and its derivatives					290 ~ 6,200 (5/5)	1,600	730 ~ 22,000 (19/19)	4,200	170,000 (2/2)	170,000	0.68 ~ 62 (36/36)	9.5	1.2 ~ 16 (36/36)	3.1
6-1	p,p'-DDT					46 ~ 890 (5/5)	190	5.2 ~ 3,300 (19/19)	280	4.3 ~ 46 (2/2)	14	0.20 ~ 17 (36/36)	2.8	0.18 ~ 4.5 (36/36)	0.65
6-2	p,p'-DDE					170 ~ 3,000 (5/5)	790	430 ~ 16,000 (19/19)	2,900	170,000 (2/2)	170,000	0.2 ~ 37 (36/36)	4.1	0.6 ~ 11 (36/36)	1.6
6-3	p,p'-DDD					19 ~ 1,300 (5/5)	270	68 ~ 4,700 (19/19)	500	70 ~ 270 (2/2)	140	0.027 ~ 0.80 (36/36)	0.16	tr(0.015) ~ 0.14 (36/36)	0.056
6-4	o,p'-DDT					12 ~ 180 (5/5)	49	4 ~ 310 (19/19)	58	nd ~ tr(1) (1/2)	nd	0.15 ~ 12 (36/36)	1.7	0.20 ~ 2.4 (36/36)	0.47
6-5	o,p'-DDE					4 ~ 260 (5/5)	28	tr(1) ~ 3,000 (19/19)	51	nd ~ tr(1) (1/2)	nd	0.051 ~ 3.3 (36/36)	0.38	0.097 ~ 0.65 (36/36)	0.21
6-6	o,p'-DDD					7.8 ~ 1,800 (5/5)	100	nd ~ 940 (18/19)	70	2.4 ~ 12 (2/2)	5.4	tr(0.03) ~ 1.2 (36/36)	0.17	nd ~ 0.17 (35/36)	0.06
7	Chlordane derivatives	9 ~ 720 (48/48)	54	7.2 ~ 19,000 (63/63)	250	280 ~ 6,800 (5/5)	1,300	350 ~ 20,000 (19/19)	2,400	2,000 ~ 4,800 (2/2)	3,100	5.0 ~ 1,800 (36/36)	180	tr(1.7) ~ 280 (36/36)	34
7-1	cis-Chlordane	2.9 ~ 260 (48/48)	18	tr(1.9) ~ 5,400 (63/63)	65	75 ~ 2,000 (5/5)	410	65 ~ 5,700 (19/19)	540	tr(10) ~ 140 (2/2)	37	1.5 ~ 580 (36/36)	58	tr(0.5) ~ 86 (36/36)	11
7-2	trans-Chlordane	3 ~ 200 (48/48)	15	2.5 ~ 5,600 (63/63)	74	58 ~ 1,700 (5/5)	280	tr(14) ~ 2,700 (19/19)	160	tr(10) ~ 68 (2/2)	26	1.7 ~ 690 (36/36)	64	tr(0.4) ~ 110 (36/36)	13
7-3	Oxychlordane	nd ~ 12 (41/48)	1.8	nd ~ 54 (50/63)	1.5	8 ~ 210 (5/5)	42	31 ~ 560 (19/19)	130	1,900 ~ 3,400 (2/2)	2,500	0.36 ~ 4.7 (36/36)	1.4	0.20 ~ 1.0 (36/36)	0.43
7-4	cis-Nonachlor	tr(0.7) ~ 74 (48/48)	5.1	tr(0.6) ~ 3,100 (63/63)	41	38 ~ 900 (5/5)	150	34 ~ 3,000 (19/19)	430	74 ~ 970 (2/2)	270	0.15 ~ 72 (36/36)	6.4	tr(0.06) ~ 12 (36/36)	1.0
7-5	trans-Nonachlor	2.3 ~ 170 (48/48)	14	2.2 ~ 4,700 (63/63)	67	98 ~ 2,000 (5/5)	380	150 ~ 7,800 (19/19)	1,100	18 ~ 170 (2/2)	55	1.2 ~ 470 (36/36)	46	0.5 ~ 75 (36/36)	8.5
8	Heptachlor derivatives					nd ~ 120 (4/5)	29	tr(8) ~ 200 (19/19)	44	160 ~ 570 (2/2)	300	0.90 ~ 47 (36/36)	14	0.43 ~ 23 (36/36)	4.2
8-1	Heptachlor					nd ~ 19 (4/5)	3	nd ~ 12 (9/19)	nd	nd (0/2)	nd	0.46 ~ 43 (36/36)	11	tr(0.10) ~ 22 (36/36)	3.1
8-2	cis-Heptachlor epoxide					4.4 ~ 110 (5/5)	28	7.3 ~ 190 (19/19)	42	160 ~ 560 (2/2)	300	0.43 ~ 7.7 (36/36)	2.0	0.32 ~ 1.4 (36/36)	0.66
8-3	trans-Heptachlor epoxide					nd (0/5)	nd	nd (0/19)	nd	nd ~ tr(5) (1/2)	nd	nd ~ tr(0.11) (7/36)	nd	nd (0/36)	nd
9	Toxaphenes														
9-1	Parlar-26														
9-2	Parlar-50														
9-3	Parlar-62														
10	Mirex														
11	HCHs														
11-1	α-HCH	9 ~ 1,900 (48/48)	57	tr(0.6) ~ 3,200 (63/63)	94	6 ~ 690 (5/5)	30	tr(2) ~ 320 (19/19)	32	16 ~ 130 (2/2)	46	13 ~ 220 (36/36)	36	tr(3.9) ~ 75 (36/36)	10
11-2	β-HCH	20 ~ 1,100 (48/48)	130	4.5 ~ 6,900 (63/63)	160	17 ~ 710 (5/5)	61	7.2 ~ 420 (19/19)	80	610 ~ 3,000 (2/2)	1,400	0.66 ~ 37 (36/36)	4.7	tr(0.17) ~ 6.7 (36/36)	0.97
11-3	γ-HCH (alias : Lindane)	3.2 ~ 560 (48/48)	21	0.9 ~ 2,100 (63/63)	33	tr(2.1) ~ 31 (5/5)	7.2	nd ~ 81 (17/19)	8.6	tr(1.5) ~ 24 (2/2)	6.0	tr(2.0) ~ 58 (36/36)	12	nd ~ 12 (34/36)	2.8
11-4	δ-HCH	tr(0.6) ~ 320 (48/48)	8.2	0.4 ~ 2,500 (63/63)	31	nd ~ 230 (3/5)	3	nd ~ 40 (14/19)	3	tr(2) ~ 4 (2/2)	3	tr(0.05) ~ 20 (36/36)	1.0	nd ~ 5.3 (34/36)	0.17

7.11 Results of Environmental Monitoring in FY 2013

Registry Number	Target material	Water (pg/L)		Bottom Sediment (pg/g-dry)		Organism						Air (pg/m ³)			
		Range (Detection)	Average	Range (Detection)	Average	Shellfish Range (Detection)	Average	Fish Range (Detection)	Average	Birds Range (Detection)	Average	1st (Warm season) Range (Detection)	Average	2nd (Cool season) Range (Detection)	Average
12	Chlordecone														
13	Hexabromobiphenyl derivatives														
14	Heptabromobiphenyl ether derivatives (4-10 bromide)														
14-1	Tetrabromodiphenyl ether derivatives														
14-2	Pentabromodiphenyl ether derivatives														
14-3	Hexabromodiphenyl ether derivatives														
14-4	Heptabromodiphenyl ether derivatives														
14-5	Octabromodiphenyl ether derivatives														
14-6	Nonabromodiphenyl ether derivatives														
14-7	Decabromodiphenyl ether														
15	Perfluorooctane sulfonic acid (PFOS)											1.2 ~ 9.6 (36/36)	4.6	1.6 ~ 7.4 (36/36)	3.7
16	Perfluorooctane acid (PFOA)											3.2 ~ 190 (36/36)	23	3.0 ~ 53 (36/36)	14
17	Pentachlorobenzene	tr(3) ~ 170 (48/48)	12	2.2 ~ 3,800 (63/63)	84	nd ~ 87 (1/5)	nd	nd ~ 160 (11/19)	tr(35)	230 ~ 390 (2/2)	300	27 ~ 160 (36/36)	55	230 ~ 390 (36/36)	55
18	Endosulfans														
18-1	α-Endosulfan														
18-2	β-Endosulfan														
19	1,2,5,6,9,10-Hexabromocyclododecane derivatives														
19-1	.0														
19-2	β-1,2,5,6,9,10-Hexabromocyclododecane														
19-3	γ-1,2,5,6,9,10-Hexabromocyclododecane														
19-4	δ-1,2,5,6,9,10-Hexabromocyclododecane														
19-5	ε-1,2,5,6,9,10-Hexabromocyclododecane														
20	N,N-dimethylformamid	nd ~ tr(43) (1/48)	nd	nd ~ 1,600 (20/63)	nd	nd ~ tr(7.1) (1/5)	nd	nd ~ 59 (4/19)	nd	nd	nd				

Note: Average refers to geometric mean value. "nd"(less than detection limit) is calculated as half value of detection limit.

Since range is shown based on samples and detection frequency is based on sampling points, even when substance is detected in all points, range may be expressed as "nd". Shaded data refers to non-target substances.

Source: "Chemicals in the Environment FY2014" by Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan. "Report on Environmental Survey and Monitoring of Chemicals FY 2013" (A list of values of detection limit)

7.11 Results of Environmental Monitoring in FY 2013

Registry Number	Target substance	Water quality (pg/L)	Bottom Sediment (pg/g-dry)	Organism (pg/g-wet)	Air (pg/m ³)
1	PCBs	≪25 [≪6]	≪44 [≪13]	≪44 [≪14]	≪20 [≪6.5]
2	HCB	7 [2]	5.3 [1.8]	31 [10]	3.8 [1.3]
3	Aldrin				
4	Dieldrin				
5	Endrin				
6	DDTs			≪18 [≪6]	≪0.36 [≪0.13]
6-1	p,p'-DDT			3.3 [1.1]	0.11 [0.04]
6-2	p,p'-DDE			4.3 [1.4]	0.10 [0.03]
6-3	p,p'-DDD			1.9 [0.7]	0.018 [0.007]
6-4	o,p'-DDT			3 [1]	0.054 [0.018]
6-5	o,p'-DDE			4 [1]	0.023 [0.009]
6-6	o,p'-DDD			1.8 [0.7]	0.05 [0.02]
7	Chlordane derivatives	≪9 [≪3]	≪7.0 [≪2.7]	≪44 [≪15]	≪2.2 [≪0.7]
7-1	cis-Chlordane	2.7 [0.9]	2.0 [0.8]	13 [4]	0.7 [0.2]
7-2	trans-Chlordane	3 [1]	1.8 [0.7]	16 [5.2]	0.8 [0.3]
7-3	Oxychlordane	0.9 [0.4]	1.3 [0.5]	3 [1]	0.03 [0.01]
7-4	cis-Nonachlor	0.8 [0.3]	0.7 [0.3]	2.2 [0.7]	0.07 [0.02]
7-5	trans-Nonachlor	1.5 [0.6]	1.2 [0.4]	10 [3.4]	0.5 [0.2]
8	Heptachlors			≪12 [≪5]	≪0.31 [≪0.11]
8-1	Heptachlor			3 [1]	0.16 [0.05]
8-2	cis-Heptachlor epoxide			2.1 [0.8]	0.03 [0.01]
8-3	trans-Heptachlor epoxide			7 [3]	0.12 [0.05]
9	Toxaphenes				
9-1	Parlar-26				
9-2	Parlar-50				
9-3	Parlar-62				
10	Mirex				
11	HCHs				
11-1	α-HCH	7 [2]	1.5 [0.5]	3 [1]	5.2 [1.7]
11-2	β-HCH	7 [2]	0.4 [0.1]	2.2 [0.8]	0.21 [0.07]
11-3	γ-HCH (alias : Lindan)	2.7 [0.8]	0.6 [0.2]	2.4 [0.9]	2.2 [0.7]
11-4	δ-HCH	1.1 [0.4]	0.3 [0.1]	3 [1]	0.08 [0.03]

Registry Number	Target substance	Water quality (pg/L)	Bottom sediment (pg/g-dry)	Organism (pg/g-wet)	Air (pg/m ³)
12	Chlordecone				
13	Hexabromobiphenyl derivatives				
14	Polybrominated diphenyl ether derivatives (4 ~ 10 bromide)				
14-1	Tetrabromodiphenyl ether derivatives				
14-2	Pentabromodiphenyl ether derivatives				
14-3	Hexabromodiphenyl ether derivatives				
14-4	Heptabromodiphenyl ether derivatives				
14-5	Octabromodiphenyl ether derivatives				
14-6	Nonabromodiphenyl ether derivatives				
14-7	Decabromodiphenyl ether				
15	Perfluorooctane sulfonic acid (PFOS)				0.3 [0.1]
16	Perfluorooctane acid (PFOA)				1.8 [0.6]
17	Pentachlorobenzene	4 [1]	2.1 [0.7]	78 [26]	1.7 [0.6]
18	Endosulfans				
18-1	α-Endosulfan				
18-2	β-Endosulfan				
19	1,2,3,4,6,9,10-Hexabromocyclododecane derivatives				
19-1	α-1,2,5,6,9,10-Hexabromocyclododecane				
19-2	β-1,2,5,6,9,10-Hexabromocyclododecane				
19-3	ε-1,2,5,6,9,10-Hexabromocyclododecane				
19-4	ζ-1,2,5,6,9,10-Hexabromocyclododecane				
19-5	η-1,2,5,6,9,10-Hexabromocyclododecane				
20	Perfluorooctane acid (PFOA)	94 [37]	9.9 [3.8]	9.4 [3.7]	

Note:

Upper row refers to lower limit of quantification and lower row refers to detection limit.
 ≪ refers to the total of lower limit of quantification according to homologue or relevant substar
 Shaded data refers to non-target substances.

Source: "Chemicals in the Environment in 2014" by Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

7.12 PRTR releases and transfers according to industry (FY 2013)

Industry	Reported numbers	Releases (kg/year)					Transfers (kg/year)			Releases and transfers combined in total (kg/year)	Rate
		Air	Public waters	Soil	Landfill	Total	Waste transfer	Transfer to sewage	Total		
Mining and smelting	14	132	93,465	890	600	95,087	2,200	0	2,200	97,287	0.03%
oil and natural gas industry	24	18,603	142,076	0	0	160,679	86	0	86	160,765	0.04%
Manufacturing	13,266	138,731,815	2,897,891	4,634	7,975,465	149,609,805	210,983,716	1,290,366	212,274,082	361,883,887	96.33%
Manufacture of food	454	2,720,069	3,670	0	0	2,723,739	319,291	1,951	321,242	3,044,982	0.81%
Manufacture of beverages, tobacco and feed	141	5,707	45	0	0	5,753	58,728	0	58,728	64,481	0.02%
Manufacture of textile mill products	171	1,946,409	130,771	1	0	2,077,181	1,104,435	249,233	1,353,668	3,430,849	0.91%
Manufacture of apparel and other finished products made from fabrics and similar materials	28	104,448	4,963	0	0	109,411	154,424	242	154,666	264,077	0.07%
Manufacture of lumber and wood products	200	1,866,316	649	179	0	1,667,144	57,372	54	57,427	1,724,570	0.46%
Manufacture of furniture and fixtures	90	659,199	7	0	0	659,206	159,235	246	159,481	818,687	0.22%
Manufacture of pulp, paper and paper products	438	6,441,095	214,906	0	0	6,656,001	1,835,144	7,034	1,842,178	8,498,179	2.26%
Publishing, printing and allied industries	330	7,142,689	34	0	0	7,142,722	2,440,782	38	2,440,820	9,583,542	2.55%
Manufacture of chemical and allied products	2,328	17,994,958	1,371,756	4,298	350	19,371,362	80,726,934	756,605	81,483,539	100,854,901	26.85%
Manufacture of petroleum and coal products	646	1,058,638	62,984	0	0	1,121,622	583,964	19,756	603,722	1,725,344	0.46%
Manufacture of plastic products	1,086	19,283,844	12,869	33	0	19,296,745	11,403,246	20,213	11,423,459	30,720,204	8.18%
Manufacture of rubber products	309	6,386,620	7,980	1	0	6,394,600	1,292,856	1,178	1,294,034	7,688,634	2.05%
Manufacture of leather tanning, leather products and fur skins	23	94,891	76	0	0	94,967	30,023	11,396	41,419	136,386	0.04%
Manufacture of ceramic, stone and clay products	573	3,671,216	45,426	2	0	3,716,643	10,663,508	18,155	10,681,663	14,398,306	3.83%
Manufacture of iron and steel	376	2,910,961	382,774	0	110,948	3,404,684	58,486,811	6,526	58,493,336	61,898,020	16.48%
Manufacture of non-ferrous metals and products	556	1,885,702	276,661	2	7,864,065	10,026,430	9,038,539	29,553	9,068,092	19,094,521	5.08%
Manufacture of fabricated metal products	1,820	13,170,990	95,642	2	102	13,266,735	10,603,849	26,990	10,630,839	23,897,574	6.36%
Manufacture of general machinery	828	9,177,339	2,274	9	0	9,179,622	2,402,437	6,034	2,408,472	11,588,093	3.08%
Manufacture of electrical machinery, equipment and supplies	1,337	5,351,770	167,071	0	0	5,518,841	13,407,250	92,469	13,499,718	19,018,559	5.06%
Manufacture of transportation equipment	1,194	34,894,320	64,086	107	0	34,958,514	4,681,582	37,116	4,718,698	39,677,212	10.56%
Manufacture of precision instruments and machinery	237	990,207	52,992	0	0	1,043,199	1,111,226	5,059	1,116,285	2,159,484	0.57%
Manufacture of ordnance and accessories	7	10,722	0	0	0	10,722	1,682	0	1,682	12,404	0.00%
Miscellaneous manufacturing industries	94	1,163,706	256	0	0	1,163,963	420,398	518	420,916	1,584,879	0.42%
Electricity industry	256	309,133	3,043	0	0	312,176	333,791	2,623	336,414	648,590	0.17%
Gas industry	30	21,551	0	0	0	21,551	0	0	0	21,551	0.01%
Heat supply industry	12	2,420	2,200	0	0	4,620	1,900	0	1,900	6,520	0.00%
Sewage industry	2,030	1,309	3,920,279	0	0	3,921,588	69,124	5,100	74,224	3,995,812	1.06%
Railway industry	54	85,193	0	0	0	85,193	75,918	383	76,301	161,493	0.04%
Warehouse industry	127	871,143	12,004	0	0	883,148	88,415	0	88,415	971,563	0.26%
Petroleum wholesale industry	493	993,925	0	0	0	993,925	6,700	0	6,700	1,000,625	0.27%
Scrap iron wholesale industry	8	32	0	0	0	32	5,730	0	5,730	5,762	0.00%
Automobile maintenance industry	7	6,939	0	0	0	6,939	554	0	554	7,493	0.00%
Fuel retail industry	16,381	2,844,723	0	0	0	2,844,723	1,146	0	1,146	2,845,870	0.76%
Laundry industry	163	219,064	69	0	0	219,134	210,081	1,617	211,699	430,832	0.11%
Photography industry	2	7,100	0	0	0	7,100	1,100	0	1,100	8,200	0.00%
Automobile maintenance industry	179	394,906	0	0	0	394,906	45,412	0	45,412	440,318	0.12%
Machinery and equipment repair industry	32	121,029	213	0	0	121,242	44,991	2,300	47,291	168,533	0.04%
Product testing industry	30	5,497	0	0	0	5,497	84,581	0	84,581	90,078	0.02%
Measurement certification industry	37	13,353	3	0	0	13,356	108,595	19	108,614	121,970	0.03%
Household waste disposal industry	1,822	1,258	76,435	1	0	77,693	50,501	29	50,529	128,223	0.03%
Industrial waste disposal industry	477	73,340	173,655	0	43	247,037	636,535	48	636,583	883,620	0.24%
Medical and other health services	127	11,008	990	0	0	11,998	55,793	150	55,943	67,941	0.02%
Higher educational institutions	134	85,314	289	0	0	85,604	606,666	843	607,509	693,113	0.18%
Research institutes for natural science	269	54,651	150	13	0	54,813	772,629	976	773,605	828,418	0.22%
Industry covered	35,974	144,873,435	7,322,763	5,538	7,976,108	160,177,843	214,186,164	1,304,455	215,490,619	375,668,462	100%
Rate (%)		38.56%	1.95%	0.00%	2.12%	42.64%	57.01%	0.35%	57.36%		

Note: Release and transfers combined in total refers to relevant data (except for dioxin, data is expressed to tenth place) reported by each business offices. The data is rounded to the nearest whole, thus, total figures may not foot.

Source: "Overview of the PRTR system in FY 2013," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

7.13 PRTR releases and transfers according to prefecture (FY 2013)

	Reported numbers	Releases (kg/year)					Transfers (kg/year)			Releases and transfers combined in total (kg/year)	Rate
		Air	Public waters	Soil	Landfill	Total	Waste transfer	Transfer to sewage	Total		
Hokkaido	1,981	1,891,395	382,900	4	139	2,274,437	1,425,487	1,448	1,426,935	3,701,373	0.99%
Aomori	452	354,198	96,843	0	0	451,041	622,014	169	622,183	1,073,224	0.29%
Iwate	506	1,354,792	60,979	13	0	1,415,784	832,111	3,498	835,609	2,251,393	0.60%
Miyagi	733	1,043,990	113,827	0	350,727	1,508,544	788,973	2,940	791,913	2,300,457	0.61%
Akita	463	446,880	105,215	3	2,549,732	3,101,829	1,899,079	1	1,899,081	5,000,910	1.33%
Yamagata	513	719,527	36,518	5	0	756,050	1,538,052	11,322	1,549,374	2,305,424	0.61%
Fukushima	924	3,100,108	303,715	0	0	3,403,822	4,676,471	0	4,676,471	8,080,293	2.15%
Ibaraki	1,134	6,589,461	123,153	0	16,238	6,728,852	7,065,031	382,240	7,447,270	14,176,122	3.77%
Tochigi	737	5,031,756	67,208	13	0	5,098,978	4,591,483	7,829	4,599,313	9,698,290	2.58%
Gunma	793	4,399,000	65,311	107	0	4,464,418	4,436,108	127,160	4,563,268	9,027,686	2.40%
Saitama	1,545	7,572,045	286,856	0	0	7,832,902	8,089,125	62,437	8,151,563	15,984,464	4.25%
Chiba	1,284	5,853,293	301,610	79	0	6,154,982	12,251,092	1,729	12,252,821	18,407,803	4.90%
Tokyo	1,182	1,604,628	383,133	0	0	1,987,761	3,129,233	22,461	3,151,694	5,139,455	1.37%
Kanagawa	1,402	5,492,653	280,235	0	0	5,772,888	8,684,687	90,580	8,775,268	14,548,156	3.87%
Niigata	1,010	2,370,077	229,280	79	200,000	2,799,435	2,801,699	737	2,802,436	5,601,871	1.49%
Toyama	526	1,801,625	186,060	0	0	1,987,685	3,074,068	192	3,074,260	5,061,945	1.35%
Ishikawa	478	1,943,764	155,171	0	0	2,098,935	1,770,103	180,471	1,950,574	4,049,508	1.08%
Fukui	366	1,866,368	91,637	0	0	1,958,005	4,533,705	26,242	4,559,947	6,517,952	1.74%
Yamanashi	332	1,515,668	13,435	0	0	1,529,103	552,002	69	552,071	2,081,173	0.55%
Nagano	1,173	1,824,349	104,704	0	0	1,929,052	1,178,715	12,869	1,191,584	3,120,637	0.83%
Gifu	885	4,537,036	62,304	0	1,314,406	5,913,746	3,299,910	2,373	3,302,283	9,216,028	2.45%
Shizuoka	1,579	8,866,150	181,061	1	350	9,047,562	5,620,513	16,722	5,637,235	14,684,797	3.91%
Aichi	2,074	11,343,431	421,742	0	93,800	11,858,973	24,102,843	65,891	24,168,734	36,027,707	9.59%
Mie	806	5,146,023	204,232	2	0	5,350,257	7,184,158	354	7,184,512	12,534,770	3.34%
Shiga	635	3,677,268	32,151	0	0	3,709,418	5,219,928	16,270	5,236,198	8,945,616	2.38%
Kyoto	584	1,923,267	120,304	0	0	2,043,571	999,797	103,326	1,103,123	3,146,694	0.84%
Osaka	1,614	3,796,063	562,249	4,101	0	4,362,413	15,938,048	69,195	16,007,243	20,369,656	5.42%
Hyogo	1,559	6,684,573	336,550	0	1,665	7,022,788	14,894,807	49,396	14,944,203	21,966,991	5.85%
Nara	306	503,205	10,801	0	0	514,006	885,132	412	885,545	1,399,551	0.37%
Wakayama	280	950,976	47,346	1	0	998,323	1,851,569	1,401	1,852,971	2,851,293	0.76%
Tottori	255	662,305	6,480	0	0	668,785	227,613	1,306	228,919	897,703	0.24%
Shimane	269	1,687,777	102,280	0	0	1,790,057	766,745	38	766,782	2,556,840	0.68%
Okayama	821	4,097,629	183,449	0	0	4,281,078	9,474,213	15,103	9,489,316	13,770,394	3.67%
Hiroshima	906	5,999,389	286,422	190	3,434,900	9,720,901	5,103,464	6,627	5,110,091	14,830,992	3.95%
Yamaguchi	563	3,401,569	344,780	46	0	3,746,395	8,429,143	470	8,429,613	12,176,008	3.24%
Tokushima	288	442,456	47,988	0	0	490,444	794,066	0	794,066	1,284,510	0.34%
Kagawa	395	4,427,395	52,249	0	0	4,479,644	1,078,874	2,652	1,081,526	5,561,170	1.48%
Ehime	523	4,697,754	132,922	3	14,151	4,844,829	5,990,588	0	5,990,588	10,835,417	2.88%
Kochi	187	431,696	14,179	0	0	445,874	177,550	3,600	181,150	627,024	0.17%
Fukuoka	1,211	5,834,021	250,273	2	0	6,084,295	15,798,752	5,459	15,804,211	21,888,506	5.83%
Saga	339	1,928,038	18,439	0	0	1,946,477	761,519	80	761,599	2,708,076	0.72%
Nagasaki	351	2,926,747	56,139	0	0	2,982,886	308,482	3,456	311,938	3,294,824	0.88%
Kumamoto	569	2,068,414	127,362	0	0	2,195,775	3,324,292	3,653	3,327,944	5,523,720	1.47%
Oita	395	1,200,020	82,990	0	0	1,283,010	2,674,721	1,070	2,675,791	3,958,801	1.05%
Miyazaki	363	302,536	154,343	0	0	456,879	4,965,677	1,200	4,966,877	5,423,756	1.44%
Kagoshima	456	373,725	102,655	890	0	477,271	174,781	5	174,786	652,057	0.17%
Okinawa	227	188,398	19,287	0	0	207,686	199,741	0	199,741	407,426	0.11%
nationwide	35,974	144,873,435	7,322,763	5,538	7,976,108	160,177,843	214,186,164	1,304,455	215,490,619	375,668,462	100%
Rate (%)		38.56%	1.95%	0.00%	2.12%	42.64%	57.01%	0.35%	57.36%	100%	

Note: Release and transfers combined in total refers to relevant data (except for dioxin, data is expressed to tenth place) reported by each business offices.

The data is rounded to the nearest whole, thus, total figures may not foot.

Source: "Overview of the PRTR system in FY 2013," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

7.14 PRTR reported releases and releases outside notifications according to prefecture (FY 2013)

	Reported numbers	Reported releases (kg / year)	Releases outside notification (kg/year)					Reported releases and releases outside notification combined in total (kg/year)	Rate
			Listed industries	Non-listed industries	Households	Mobile source	Subtotal		
Hokkaido	1,981	2,274,437	1,536,026	6,019,176	1,343,574	3,287,182	12,185,959	14,460,396	3.61%
Aomori	452	451,041	370,430	2,381,449	975,648	1,002,451	4,729,979	5,181,019	1.29%
Iwate	506	1,415,784	336,473	1,242,938	836,261	1,060,474	3,476,146	4,891,930	1.22%
Miyagi	733	1,508,544	580,857	1,090,171	881,722	1,319,269	3,872,020	5,380,564	1.34%
Akita	463	3,101,829	396,329	833,647	687,499	769,782	2,687,257	5,789,086	1.44%
Yamagata	513	756,050	423,747	997,218	511,634	883,261	2,815,860	3,571,910	0.89%
Fukushima	924	3,403,822	972,392	1,125,176	1,176,902	1,321,769	4,596,239	8,000,061	2.00%
Ibaraki	1,134	6,728,852	1,395,549	3,481,297	1,672,396	2,141,294	8,690,536	15,419,388	3.85%
Tochigi	737	5,098,978	742,810	1,335,415	1,028,577	1,620,605	4,727,407	9,826,385	2.45%
Gunma	793	4,464,418	853,229	2,965,735	1,287,119	1,548,646	6,654,729	11,119,148	2.77%
Saitama	1,545	7,832,902	2,156,141	1,962,921	2,611,142	2,836,772	9,566,976	17,399,878	4.34%
Chiba	1,284	6,154,982	1,322,975	3,788,489	2,570,333	2,752,444	10,434,240	16,589,222	4.14%
Tokyo	1,182	1,987,761	3,647,705	6,948,521	1,938,467	3,230,234	15,764,926	17,752,687	4.43%
Kanagawa	1,402	5,772,888	2,047,968	3,600,041	1,733,324	2,683,514	10,064,846	15,837,734	3.95%
Niigata	1,010	2,799,435	868,030	1,552,129	1,267,180	1,560,808	5,248,147	8,047,582	2.01%
Toyama	526	1,987,685	429,419	691,744	424,870	682,030	2,228,063	4,215,748	1.05%
Ishikawa	478	2,098,935	518,929	651,156	498,426	728,015	2,396,527	4,495,461	1.12%
Fukui	366	1,958,005	382,120	590,060	354,577	648,516	1,975,273	3,933,278	0.98%
Yamanashi	332	1,529,103	366,518	494,396	459,774	838,826	2,159,514	3,688,616	0.92%
Nagano	1,173	1,929,052	795,269	1,448,174	845,280	1,874,550	4,963,273	6,892,326	1.72%
Gifu	885	5,913,746	841,620	910,204	1,024,354	1,501,567	4,277,746	10,191,491	2.54%
Shizuoka	1,579	9,047,562	1,470,596	2,077,872	2,083,768	2,170,673	7,802,909	16,850,471	4.20%
Aichi	2,074	11,858,973	2,937,686	3,167,546	3,215,386	3,116,679	12,437,297	24,296,270	6.06%
Mie	806	5,350,257	626,784	839,551	1,075,922	1,581,373	4,123,630	9,473,887	2.36%
Shiga	635	3,709,418	395,497	371,578	495,311	1,062,467	2,324,853	6,034,271	1.51%
Kyoto	584	2,043,571	950,199	658,513	713,856	1,303,769	3,626,336	5,669,907	1.41%
Osaka	1,614	4,362,413	3,028,456	2,431,494	2,220,381	2,509,545	10,189,876	14,552,289	3.63%
Hyogo	1,559	7,022,788	1,620,460	1,902,209	1,458,678	2,184,094	7,165,442	14,188,230	3.54%
Nara	306	514,006	362,733	336,434	597,905	917,650	2,214,721	2,728,728	0.68%
Wakayama	280	998,323	308,698	1,217,066	887,632	752,966	3,166,363	4,164,685	1.04%
Tottori	255	668,785	158,516	461,531	346,595	547,181	1,513,824	2,182,609	0.54%
Shimane	269	1,790,057	229,731	489,598	532,428	638,081	1,889,838	3,679,895	0.92%
Okayama	821	4,281,078	593,036	1,004,278	1,059,984	1,252,301	3,909,598	8,190,676	2.04%
Hiroshima	906	9,720,901	1,016,669	1,572,496	1,347,690	1,656,051	5,592,906	15,313,807	3.82%
Yamaguchi	563	3,746,395	429,691	3,181,581	747,192	1,035,904	5,394,367	9,140,762	2.28%
Tokushima	288	490,444	400,029	872,248	688,894	574,100	2,535,270	3,025,714	0.76%
Kagawa	395	4,479,644	295,952	505,268	639,334	722,226	2,162,778	6,642,423	1.66%
Ehime	523	4,844,829	476,845	1,431,801	941,278	968,810	3,818,734	8,663,563	2.16%
Kochi	187	445,874	223,313	1,017,221	554,525	543,464	2,338,524	2,784,398	0.69%
Fukuoka	1,211	6,084,295	1,350,289	2,820,616	1,844,113	2,100,832	8,115,849	14,200,144	3.54%
Saga	339	1,946,477	236,693	892,754	513,848	770,610	2,413,905	4,360,382	1.09%
Nagasaki	351	2,982,886	557,667	1,300,381	843,840	981,062	3,682,949	6,665,835	1.66%
Kumamoto	569	2,195,775	541,422	1,892,645	903,337	1,271,828	4,609,232	6,805,008	1.70%
Oita	395	1,283,010	330,255	653,994	821,295	957,588	2,763,133	4,046,144	1.01%
Miyazaki	363	456,879	338,077	1,962,488	667,668	866,755	3,834,987	4,291,866	1.07%
Kagoshima	456	477,271	493,893	3,177,824	1,039,150	1,103,716	5,814,584	6,291,854	1.57%
Okinawa	227	207,686	413,495	726,421	705,160	777,227	2,622,303	2,829,989	0.71%
nationwide	35,974	160,177,843	40,771,221	81,075,466	51,074,227	67,629,245	240,550,160	400,728,003	100%
Rate(%)		39.97%	10.17%	20.23%	12.75%	16.88%	60.03%	100%	

Note:

As for Mobile source, prefectural total and the Total are not consistent.

Releases and transfers combined in total refers to relevant data (except for dioxins, data is expressed to tenth place) reported by each business offices. The data is rounded to the nearest whole; thus, total figures may not foot.

Source: "Overview of the PRTR system in FY 2013," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan,

7.15 PRTR top ten substances of reported releases and transfers (FY 2013)

(Unit : t / year)

PRTR chemicals	Releases	Transfers	Releases and transfers in total
Toluene	54,131	35,262	89,393
Manganese and its compounds	3,152	46,780	49,932
Xylene	28,380	7,689	36,069
Ethylbenzene	14,035	3,343	17,378
Methyl chlorides	10,921	6,320	17,241
Chromium and chromium(III) compounds	203	16,594	16,797
n-Hexane	10,410	3,621	14,031
Hydrogen fluoride and its water-soluble salts	1,896	10,265	12,161
N,N-dimethylformamide	2,537	6,767	9,304
Ferric chlorides	1	9,296	9,297

Source: "Overview of the PRTR system in FY 2013," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

7.16 PRTR top ten substances of reported releases and releases outside notifications (FY 2013)

(Unit : t / year)

PRTR chemicals	Reported releases	Releases outside notification	Reported releases and releases outside notification in total
Toluene	54,131	41,626	95,757
Xylene	28,380	39,699	68,079
Ethylbenzene	14,035	17,524	31,559
Polyoxyethylene alkyl ether (C=12-15)	88	24,628	24,716
n-Hexane	10,410	7,524	17,933
Dichloromethane (alias: methylene dichloride)	10,921	1,289	12,210
Linear alkylbenzene sulfonate (C=10-14)	15	11,649	11,664
Dichlorobenzene	95	11,260	11,355
Chlorodifluoromethane (alias HCFC-22)	252	11,047	11,298
Benzene	801	7,592	8,393

Source: "Overview of the PRTR system in FY 2013," Environmental Health and Safety Division, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

8.01 ㊦ Budget for competitive funding on environmental research and environmental technology development

(Unit : million yen)

	Name of competitive research fund system					Total
	Global Environment Research Fund 1)	Environmental Research・Environmental Technology Development Fund 1), 2)	Environmental Research Fund	Grants for scientific research to promote the creation of a recycling-oriented society 3)	Project of Developing Countermeasures against Global Warming (energy-related expenditures)	
Budget amount of FY2003	2,965	765	-	1,150	-	4,880
FY 2004	3,015	815	-	1,150	1,634	6,614
FY 2005	3,015	815	-	1,150	2,676	7,656
FY 2006	3,256	881	-	1,300	2,716	8,153
FY 2007	2,960	881	-	1,261	3,302	8,404
FY 2008	3,197	836	-	1,135	3,710	8,878
FY 2009	3,955	1,160	-	1,803	3,805	10,723
FY 2010	-	-	5,269	1,738	5,022	12,029
FY 2011	-	-	8,007	-	6,200	14,207
FY 2012	-	-	6,670	-	6,720	13,390
FY 2013	-	-	6,160	-	-	6,160
FY 2014	-	-	5,510	-	-	5,510

Note:

1) In FY 2010, incorporated into 'Environmental Research Fund.'

2) Up to FY 2008, it was 'Environmental Technology Development Fund.'

3) Up to FY 2008, it was 'Environmental Technology Development Fund.' In FY 2011, incorporated into 'Environmental Research Fund.'

4) Up to FY 2012, it was 'Environmental Competitive Research Fund.'

Source: referencial materials from Ministry of the Environment, the Government of Japan

8.01 ② Number of employees in environmental offices of local governments by prefecture

	2009			2010			2011		
	Pollutions control	Waste management	Natural environment	Pollutions control	Waste management	Natural environment	Pollutions control	Waste management	Natural environment
Hokkaido	273	832	304	245	784	292	241	740	293
Aomori	84	311	46	84	290	46	81	240	44
Iwate	43	231	71	46	216	65	47	201	67
Miyagi	91	107	87	88	117	85	87	114	83
Akita	30	270	74	28	240	77	25	238	72
Yamagata	63	165	114	63	152	114	63	141	115
Fukushima	81	349	199	80	342	193	83	326	195
Ibaraki	190	552	142	193	523	144	193	505	136
Tochigi	112	556	148	106	475	161	102	435	165
Gunma	123	483	121	126	461	131	124	446	119
Saitama	366	1,267	277	355	1,219	294	350	1,195	298
Chiba	311	1,422	313	300	1,392	297	294	1,337	296
Tokyo	728	6,064	632	713	5,792	671	710	5,541	660
Kanagawa	310	2,361	296	266	1,871	280	266	1,806	293
Niigata	95	347	115	91	332	125	89	309	126
Toyama	78	338	52	74	325	52	74	311	48
Ishikawa	121	539	86	112	341	92	110	336	95
Fukui	68	111	71	68	110	70	69	107	74
Yamanashi	34	184	114	31	176	115	32	170	108
Nagano	131	240	257	133	253	255	128	258	252
Gifu	61	782	133	58	741	129	55	711	129
Shizuoka	141	677	117	140	688	118	154	882	120
Aichi	494	1,511	239	479	1,481	247	468	1,233	215
Mie	127	797	83	126	738	79	124	686	75
Shiga	105	265	114	101	252	113	100	242	119
Kyoto	70	390	88	72	380	86	75	359	87
Osaka	401	2,424	254	367	2,314	260	348	2,222	261
Hyogo	232	1,840	190	227	1,791	178	222	1,727	177
Nara	59	1,014	74	59	983	71	58	962	68
Wakayama	59	501	48	55	481	47	52	464	46
Tottori	26	82	50	26	78	46	26	73	45
Shimane	47	218	46	45	208	51	45	173	52
Okayama	77	425	47	76	405	46	77	390	46
Hiroshima	156	599	103	154	583	100	153	552	97
Yamaguchi	81	842	60	73	792	65	74	762	63
Tokushima	62	555	60	54	548	58	56	532	54
Kagawa	73	444	42	68	426	46	70	411	49
Ehime	104	390	79	104	384	80	103	373	82
Kochi	28	283	73	30	273	79	31	256	77
Fukuoka	128	655	178	129	612	187	123	583	188
Saga	40	202	43	36	211	44	37	195	46
Nagasaki	97	668	115	101	637	113	95	611	114
Kumamoto	138	503	129	127	494	128	110	474	138
Oita	86	604	72	82	568	73	75	533	67
Miyazaki	45	375	81	45	363	89	45	331	86
Kagoshima	89	407	103	89	411	118	87	397	115
Okinawa	58	164	46	58	164	49	58	153	58
Sapporo	20	863	48	20	844	46	20	828	46
Sendai	18	278	22	18	268	22	17	265	22
Saitama	23	537	16	22	505	17	23	467	17
Chiba	40	237	18	31	216	21	27	200	33
Yokohama	113	2,058	140	111	1,934	137	115	1,846	144
Kawasaki	106	1,267	67	107	1,234	75	107	1,200	76
Sagamihara				25	385	11	25	372	13
Niigata	18	301	7	17	284	10	16	257	11
Shizuoka	12	301	26	12	292	27	12	281	26
Hamamatsu	12	252	36	12	244	38	13	234	38
Nagoya	185	1,599	55	179	1,545	57	168	1,498	45
Kyoto	67	1,230	10	103	1,187	10	93	1,154	11
Osaka	184	3,271	0	170	3,100	0	168	2,971	0
Sakai	44	253	25	42	240	25	40	224	26
Kobe	73	1,315	0	74	1,278	0	70	1,264	0
Okayama	11	460	11	11	437	10	12	427	11
Hiroshima	15	500	25	16	479	26	16	460	25
Kitakyushu	34	416	50	37	393	46	36	371	53
Fukuoka	13	328	21	12	325	23	12	316	24
Kumamoto									
Special district authority	4	8,351	3	5	7,989	5	5	7,728	5
Subtotal	7,408	58,163	6,766	7,207	55,596	6,865	7,084	53,406	6,839
Total		72,337			69,668			67,329	

Prefecture section includes specified districts in Tokyo Metropolis and Municipalities (excluding ordinance-designated cities.) showing the number of staffs on April 1st each year.

Okayama prefecture includes Okayama city between 2005 and 2008.

Source: "Survey on the Total Number Management of Civil Servants in Local Governments" by Local Administration Bureau, Ministry of Internal Affairs and Communications
"Survey on the Total Number Management of Civil Servants in Local Governments"

8.01 ② Number of employees in environmental offices of local governments by prefecture

(Unit: Person)

	2012			2013			2014		
	Pollutions control	Waste management	Natural environment	Pollutions control	Waste management	Natural environment	Pollutions control	Waste management	Natural environment
Hokkaido	240	684	294	232	654	300	235	354	311
Aomori	82	233	45	81	219	46	79	76	45
Iwate	52	196	61	51	184	59	52	67	63
Miyagi	114	141	82	107	136	76	112	23	81
Akita	23	227	67	25	215	62	24	104	65
Yamagata	65	143	119	62	139	121	62	24	119
Fukushima	206	311	205	283	302	221	346	28	240
Ibaraki	217	484	155	214	464	155	202	165	161
Tochigi	132	391	169	135	379	179	129	152	179
Gunma	133	419	130	130	391	127	125	140	123
Saitama	357	1,157	298	345	1,135	296	335	402	295
Chiba	345	1,304	282	334	1,272	282	309	400	290
Tokyo	712	5,360	663	696	5,232	662	684	1,066	668
Kanagawa	260	1,745	325	255	1,698	303	255	296	362
Niigata	93	272	127	101	264	125	104	95	121
Toyama	72	290	47	71	269	47	70	41	48
Ishikawa	110	324	93	105	351	100	111	53	78
Fukui	70	104	74	69	100	74	63	18	144
Yamanashi	32	163	106	32	155	111	30	48	111
Nagano	130	258	259	128	249	267	124	145	262
Gifu	51	700	124	58	677	119	55	122	123
Shizuoka	138	644	111	142	616	112	141	164	110
Aichi	473	1,414	235	468	1,360	241	459	304	244
Mie	120	652	75	116	612	76	120	156	78
Shiga	101	235	116	98	240	116	100	133	113
Kyoto	73	347	89	70	346	86	71	102	94
Osaka	332	2,115	252	325	2,035	243	315	337	236
Hyogo	221	1,677	179	216	1,610	177	209	317	168
Nara	60	918	74	63	903	77	59	218	77
Wakayama	54	424	46	54	412	48	51	66	48
Tottori	27	67	42	27	67	45	27	17	42
Shimane	51	170	54	52	163	49	54	74	48
Okayama	73	378	49	73	349	48	72	100	49
Hiroshima	155	517	100	154	484	97	151	116	95
Yamaguchi	73	749	68	68	722	68	70	174	66
Tokushima	55	516	49	54	506	48	53	66	51
Kagawa	69	401	49	70	389	49	69	56	50
Ehime	104	363	81	102	350	80	106	81	73
Kochi	29	241	84	80	242	81	30	43	76
Fukuoka	127	548	197	120	526	199	120	215	197
Saga	37	181	43	36	182	23	37	63	42
Nagasaki	93	588	109	98	546	54	95	175	107
Kumamoto	108	120	86	108	117	88	101	56	84
Oita	75	502	72	72	479	72	74	194	69
Miyazaki	45	309	89	45	291	86	44	98	82
Kagoshima	86	381	119	79	366	117	82	32	117
Okinawa	57	153	62	60	152	59	41	83	79
Sapporo	20	819	47	19	805	51	20	158	52
Sendai	17	270	22	17	261	22	18	68	24
Saitama	23	453	18	22	430	19	22	51	21
Chiba	26	184	32	25	165	30	26	51	29
Yokohama	117	1,803	139	117	1,756	145	124	253	148
Kawasaki	109	1,148	74	107	1,121	74	108	119	61
Sagamihara	24	366	13	26	360	13	26	69	13
Niigata	15	228	14	16	215	16	15	74	14
Shizuoka	12	273	25	12	262	25	12	19	26
Hamamatsu	12	2,312	31	12	214	31	12	41	30
Nagoya	166	1,462	44	166	1,420	42	169	164	47
Kyoto	98	1,141	10	95	1,116	9	105	95	10
Osaka	157	2,862	0	154	2,696	0	121	206	0
Sakai	40	207	25	40	203	25	19	85	47
Kobe	70	1,216	0	70	1,166	0	66	94	0
Okayama	12	419	11	11	409	12	12	55	11
Hiroshima	15	446	21	15	442	21	15	97	21
Kitakyushu	37	368	50	36	354	45	37	78	48
Fukuoka	11	303	29	13	309	30	14	138	27
Kumamoto	4	350	49	4	322	49	4	67	49
Special district authority	5	7,484	4	5	7,200	4	1	7,063	6
Subtotal	7,322	53,630	6,913	7,346	49,776	6,834	7,203	16,304	7,068
Total		67,865			63,956			30,575	

Prefecture section includes specified districts in Tokyo Metropolis and Municipalities (excluding ordinance-designated cities.)

The current number of employees on April 1, each year.

Okayama prefecture includes Okayama city between 2005 and 2008.

Source: "Survey on the Total Number Management of Civil Servants in Local Governments" by Local Administration Bureau, Ministry of Internal Affairs and Communications
"Survey on the Total Number Management of Civil Servants in Local Governments"

8.02 Transition of the Number of Trainees at the National Environmental Research and Training Institute, Ministry of the Environment

FY	Administrative Training course				Analytical Training course				Total
	National	Local public entity	Public corporation	Subtotal	National	Local public entity	Public corporation	Subtotal	
1975	107	468	4	579	36	277	5	318	897
1976	110	472	7	589	34	204	5	243	832
1977	123	451	7	581	33	196	3	232	813
1978	184	512	13	709	25	210	3	238	947
1979	187	499	22	708	24	206	6	236	944
1980	190	517	37	744	18	175	2	195	939
1981	194	601	34	829	22	212	5	239	1,068
1982	198	551	35	784	10	168	2	180	964
1983	191	571	41	803	9	163	2	174	977
1984	195	519	61	775	6	152	7	165	940
1985	173	507	63	743	13	165	3	181	924
1986	234	650	135	1,019	14	167	2	183	1,202
1987	235	680	144	1,059	16	161	2	179	1,238
1988	209	639	125	973	21	148	3	172	1,145
1989	208	633	115	956	24	170	3	197	1,153
1990	211	628	103	942	19	172	4	195	1,137
1991	197	660	116	973	22	156	2	180	1,153
1992	199	639	109	947	16	162	0	178	1,125
1993	208	674	125	1,007	18	196	0	214	1,221
1994	160	614	113	887	16	221	0	237	1,124
1995	220	692	101	1,013	22	234	0	256	1,269
1996	209	661	114	984	25	199	0	224	1,208
1997	227	720	103	1,050	23	205	0	228	1,278
1998	231	766	48	1,045	21	208	0	229	1,274
1999	235	727	46	1,008	26	184	0	210	1,218
2000	233	867	57	1,157	22	201	0	223	1,380
2001	345	993	94	1,432	16	218	4	238	1,670
2002	332	1,003	76	1,411	8	236	7	251	1,662
2003	400	1,014	74	1,488	7	238	7	252	1,740
2004	375	1,096	72	1,543	11	236	10	257	1,800
2005	435	1,238	65	1,738	13	246	11	270	2,008
2006	387	1,303	60	1,750	10	232	12	254	2,004
2007	397	1,343	59	1,799	15	263	13	291	2,090
2008	345	975	52	1,372	13	259	14	286	1,658
2009	388	1,311	56	1,755	12	270	6	288	2,043
2010	295	945	43	1,283	1	211	5	217	1,500
2011	243	1,194	44	1,481	4	254	4	262	1,743
2012	238	1,268	42	1,548	7	274	7	288	1,836
2013	240	1,277	34	1,551	5	279	5	289	1,840
2014	272	1,299	39	1,610	4	267	9	280	1,890

(Note)

In addition, 57 participants completed Environmental Administration Internship program (practical trainings).

Besides, accepted 12 trainees through environmental aquatic monitoring project, a group training program, conducted from September 16th to October 17, in cooperation with the Japan International Cooperation Agency (JICA).

Source: Training Center for Environmental Survey, Ministry of the Environment "Annual Report of Training Courses" provided.

8.03 Transition of number of arrests due to environmental crime

(Unit : incident)

	Total	Waste Management and Public Cleansing Law	Water Pollution Control Law	Others
2006	6,030	5,301	5	724
2007	7,076	6,107	10	959
2008	7,173	6,124	5	1,044
2009	7,164	6,128	11	1,025
2010	7,179	6,183	5	991
2011	6,503	5,700	1	802
2012	6,503	5,655	4	844
2013	5,923	5,169	2	752
2014	5,628	4,909	2	717

Note: Others includes Act on Conservation of Endangered Species of Wild Fauna and Flora, Wildlife Protection and Hunting Law, and Natural Parks Act.

Source: Annual Report on the Environment, the Sound Material-Cycle Society and Biodiversity in Japan 2015

8.04 Number of arrests due to violation of Waste Disposal Act, by type

(2013) (Unit : incident)

	Illegal dumping	Violation of commission (note 1)	Unauthorized business (note 2)	Others	Total
Total number of incidents	2,712	24	22	2,411	5,169
Industrial waste	236	23	15	648	922
Household waste	2,476	1	7	1,763	4,247

(2014) (Unit : incident)

	Illegal dumping	Violation of commission (note 1)	Unauthorized business (note 2)	Others	Total
Total number of incidents	2,531	24	24	2,330	4,409
Industrial waste	205	22	8	604	839
Household waste	2,326	2	16	1,726	4,070

Note:

Consignment standards violations are included, and Subcontracted violations between allowed companies are not included.
It refers to Unauthorized collection and transportation of waste, the disposal of waste and The treatment facility taking of waste.

Source: Annual Report on the Environment, the Sound Material-Cycle Society and Biodiversity in Japan 2015

8.05 Transition of general personnel and processing personnel of environmental laws violation cases

Year	Ordinary acceptance	Processing personnel			Prosecution rate (%)
		Prosecution	Not prosecuted	Total	
2008	9,739 (100)	5,994	3,494	9,488	63.2
2009	9,688 (99)	5,598	3,719	9,317	60.1
2010	9,518 (98)	5,305	3,903	9,208	57.6
2011	8,862 (91)	4,821	3,740	8,561	56.3
2012	9,155 (94)	4,936	3,875	8,811	56.0
2013	8,699 (90)	4,767	3,719	8,486	56.2
2014	8,172 (86)	4,508	3,498	8,006	56.3

Note:

For figures in parentheses, the index in 2008 is deemed to be 100.

Prosecution rate is calculated by the following formula:

Prosecution rate = (# of prosecuted persons ÷ (# of prosecuted + # of not prosecuted)) × 100.

Source: Annual Report on the Environment, the Sound Material-Cycle Society and Biodiversity in Japan 2015

8.06 Pollution measure expenses of local governments

(Unit : 100 million yen %)

	Settlement amount of FY 2010						Settlement amount of FY 2011						Increase and decrease	Growth rate
	Prefectures		Municipalities		Total (A)		Prefectures		Municipalities		Total (B)				(A) - (B)	(A) - (B) (B)
		Distribution ratio		Distribution ratio		Distribution ratio		Distribution ratio		Distribution ratio		Distribution ratio		
General expense	930	15.3	918	5.4	1,848	8.0	932	14.7	913	4.7	1,845	7.1	3	0.2
Pollution control and research expense	195	3.2	158	0.9	354	1.5	228	3.6	178	0.9	406	1.6	▲ 52	▲ 12.8
Expense of Public Pollution Control Works	4,074	67.2	15,335	89.6	19,409	83.7	4,771	75.4	17,727	90.8	22,499	87.0	▲ 3,090	▲ 13.7
Sewage works	3,194	52.7	12,369	72.3	15,563	67.1	3,757	59.4	14,351	73.5	18,109	70.1	▲ 2,546	▲ 14.1
Improvement of waste management facilities	248	4.1	2,535	14.8	2,784	12.0	291	4.6	2,827	14.5	3,118	12.1	▲ 334	▲ 10.7
Compensation for expense and loss of pollution-related health damage	117	1.9	510	3.0	628	2.7	98	1.5	524	2.7	622	2.4	6	1.0
Others	747	12.3	194	1.1	941	4.1	301	4.8	177	0.9	478	1.8	463	96.9
Total	6,064	100.0	17,116	100.0	23,180	100.0	6,330	100.0	19,520	100.0	25,850	100.0	▲ 2,670	▲ 10.3

Note:

Grants and expense that overlap are deducted.

Totals may not foot due to rounding.

Shaded Sewage works and Improvement of waste management facilities are part of the Expense of Public Pollution Control Works

Source: materials of Ministry of Internal Affairs and Communications.

8.07 Regions under the Regional Environmental Pollution Control Programs

(as of March 31, 2015)

Region (Prefecture)	Designated municipalities											
Kashima (Ibaraki)	Kashimashi	Kamisushi										
Saitama (Saitama)	Saitamashi	Kumagayashi	Kawaguchishi	Gyodashi	Tokorozawashi	Kasukabeshi	Sayamashi	Kounosushi	Ageoshi	Soukashi	Koshigayashi	Yashioishi
Chiba (Chiba)	Hasudashi	Sakadoshi	Tsurugashimashi	Inamachi								
Chiba (Chiba)	Chibashi	Ichikawashi	Funabashishi	Matsudoshi	Nodashi	Naritashi	Sakurashi	Narashinoshi	Kashiwashi	Ichiharashi	Nagareyamashi	Yachiyoshi
Tokyo (Tokyo)	Abikoshi	Kamagayashi	Kimitsushi	Yotsukaidoshi	Inzaishi	Shiraishi						
Tokyo (Tokyo)	Chuo-ku	Minato-ku	Sumida-ku	Koto-ku	Shinagawa-ku	Ohita-ku	Setagaya-ku	Kita-ku	Itabashi-ku	Adachi-ku	Hachiojishi	Machidashi
Kanagawa (Kanagawa)	Yokohamashi	Kawasakishi	Yokosukashi									
Niigata (Niigata)	Nigatashi											
Gifu (Gifu)	Gifuishi	Kakamigaharashi										
Fuji (Shizuoka)	Fujishi											
Aichi (Aichi)	Nagoyashi	Toyohashishi	Okazakishi	Hekinanshi	Anjyoshi	Komakishi						
Kyoto (Kyoto)	Kyotoshi	Ujishi	Mukoshi	Nagaokakyoshi	Oyamazaki-cho							
Osaka (Osaka)	Osakashi	Sakashi	Kishiwadashi	Toyonakashi	Ikedashi	Suitashi	Izumitsushi	Takatsukishi	Kaizukashi	Hirakatashi	Ibarakishi	Yaoshi
Osaka (Osaka)	Izumisanoshi	Tondabayashishi	Neyagawashi	Kawachinaganoshi	Matsubarashi	Daitoushi	Izumishi	Minohshi	Kashiwarashi	Habikinoshi	Kadomashi	Settsushi
Hyogo (Hyogo)	Fujiderashi	Higashiosakashi	Shiyonawateshi	Katanoshi	Osakasayamashi	Tadaoka-cho						
Hyogo (Hyogo)	Kobeshi	Amagasakishi	Nishinomiyaishi	Itamishi	Kakogawashi	Takarazukashi	Kawanishishi					
Nara (Nara)	Narashi	Yamatotakadashi	Yamatokoriyamashi	Tenriishi	Ikomashi	Ohji-cho						
Wakayama (Wakayama)	Wakayamashi											
Okayama (Okayama)	Okayamashi	Kurashikishi	Tamanoshi	Hayashima-cho								
Bingo (Okayama・Hiroshima)	Fukuyamashi	Kasaokashi										
Hiroshima (Hiroshima)	Hiroshimashi											
Kagawa (Kagawa)	Sakaideshi											
Fukuoka (Fukuoka)	Fukuokashi											
Kitakyushu (Fukuoka)	Kitakyushushi											
Ohmuta (Fukuoka)	Ohmutashi											
	21 regions, 18 prefectures, 121 cities and towns (106 cities, 5 towns, 10 wards)											

8.08 The Costs relating to the Pollution Prevention Projects, and Additional Subsidies

(Unit: billion yen)

Area of the Projects	FY	2010		2011		2012		2013		2014	
		Project	Subsidies	Project	Subsidies	Project	Subsidies	Project	Subsidies	Project	Subsidies
Sewerage (Final treatment of sewage, etc.)		2,239	3	1,853	1	1,875	1	1,687	0	1,535	1
Facilities of green buffer zone, etc.		4	0	-	-	-	-	-	-	-	-
Construction of waste treatment facilities		236	19	-	-	-	-	-	-	-	-
School environment facilities		19	0	-	-	-	-	-	-	-	-
Dredging, water-conducting		23	8	24	6	25	9	26	8	26	9
Improvement of polluted agricultural land, etc.		11	0	4	0	3	0	2	0	0	0
Countermeasures against soil contamination with dioxins		14	0	0	0	0	0	0	0	0	0
Strengthening of monitoring and measurement system		2	0	-	-	-	-	-	-	-	-
Transfer facilities of designated facilities		0	0	-	-	-	-	-	-	-	-
Total		2,549	30	1,881	8	1,903	10	1,715	9	1,560	11

Note: The sum of the costs in each column may not match the total value due to rounding.

Since FY 2011, due to the removal from the Pollution Prevention Projects, there were no records about the cost of 'Facilities of green buffer zone, etc.,'

'Construction of waste treatment facilities,' 'School environment facilities,' 'Strengthening of monitoring and measurement system,' and 'Transfer facilities of designated facilities.'

Source: Ministry of the Environment

8.09 Existing number of Patients by Region, subject to Law Concerning Pollution-Related Health Damage Compensation and other Measures

(as of end of March, 2014)

Group		Area		Municipalities	Issue date	Certified patients
Former Class I / Non-Common disease	Chronic bronchitis, Asthma, Asthmatic bronchitis, Emphysema and these sequelae	Chiba	Southern Sea front	Chiba	November 30, 1974	257
		Tokyo	Chiyoda-ku	Chiyoda-ku	November 30, 1974	126
		"	Chuo-ku	Chuo-ku	December 19, 1975	204
		"	Minato-ku	Minato-ku	November 30, 1974	341
		"	Shinjuku	Shinjuku	"	942
		"	Bunkyo-ku	Bunkyo-ku	"	408
		"	Taito-ku	Taito-ku	December 19, 1975	391
		"	Shinagawa-ku	Shinagawa-ku	November 30, 1974	753
		"	Ota-ku	Ota-ku	"	1,609
		"	Meguro-ku	Meguro-ku	December 19, 1975	473
		"	Shibuya-ku	Shibuya-ku	November 30, 1974	452
		"	Toshima-ku	Toshima-ku	December 19, 1975	589
		"	Kita-ku	Kita-ku	"	862
		"	Itabashi-ku	Itabashi-ku	"	1,493
		"	Sumida-ku	Sumida-ku	"	562
		"	Koto-ku	Koto-ku	November 30, 1974	1,177
		"	Arakawa-ku	Arakawa-ku	December 19, 1975	626
		"	Adachi-ku	Adachi-ku	"	1,522
		"	Katsushika-ku	Katsushika-ku	"	999
		"	Edogawa-ku	Edogawa-ku	"	1,418
		Tokyo / Total				14,947
		Yokohama	Tsurumi Sea front areas	Yokohama	February 1, 1972	416
		Kawasaki	Kawasaki-ku, Saiwai-ku	Kawasaki	December 27, 1969	1,455
		"	"	"	February 1, 1972	"
		"	"	"	November 30, 1974	"
		Fuji	Midland areas	Fuji	February 1, 1972	407
		"	"	"	January 13, 1977	"
		Nagoya	South-central areas	Nagoya	February 1, 1973	2,055
		"	"	"	December 19, 1975	"
		"	"	"	June 02, 1978	"
		Thokai	North, Midland areas	Aichi (Pref.)	February 1, 1973	347
		Yokkaichi	Rinkai areas	Yokkaichi	December 27, 1969	411
		"	"	"	November 30, 1974	"
		Osaka	All area	Osaka	December 27, 1969	6,471
		"	"	"	November 30, 1974	"
		"	"	"	December 19, 1975	"
		Toyonaka	South areas	Toyonaka	February 1, 1973	187
		Suita	South areas	Suita	November 30, 1974	199
		Moriguchi	All area	Moriguchi	January 13, 1977	1,146
		Higashiosaka	West-central areas	Higashiosaka	June 02, 1978	1,234
		Yao	West-central areas	Yao	"	704
		Sakai	West areas	Sakai	August 1, 1973	1,509
		"	"	"	January 13, 1977	"
		Kobe	Sea front areas	Kobe	"	681
		Amagasaki	East, South areas	Amagasaki	December 1, 1970	1,944
		"	"	"	November 30, 1974	"
		Kurashiki	Mizushima areas	Kurashiki	December 19, 1975	1,190
		Tamano	Southern sea front areas	Okayama (Pref.)	"	30
		Bizen	Around Katagamiwan areas	"	"	43
		Kitakyushu	Dokaiwan areas	Kitakyushu	February 1, 1973	864
		Omuta	Midland areas	Omuta	August 1, 1973	776
		Total				37,273
Class II / Common disease	Minamata disease	Agano river	Downstream areas	Niigata (Pref.)	December 27, 1969	73
	"	"	"	Niigata	"	110
	"	Minamata bay	Coastal areas	Kagoshima (Pref.)	"	126
	"	"	"	Kumamoto (Pref.)	"	315
	Itai-itai disease	Jinzu river	Downstream areas	Toyama (Pref.)	"	3
	Chronic arsenic	Shimane	Sasagatani areas	Shimane (Pref.)	July 4, 1974	3
	"	Miyazaki	Toroku areas	Miyazaki (Pref.)	February 1, 1973	47
Total		Total				677
						37,950

Note) The names of the areas in this table are the ones designated under the political sub-division in those days.

* Kusu-cho was merged with Yokkaichi in February, 2005. Since 2004, the number of certified patients of Yokkaichi has included that of Kusu-cho.

Source: Article of Planning Division, Environmental Health Department, Integrated Environmental Policy Bureau, Ministry of the Environment

8.10 Transition of Existing number of Patients by Region, subject to the Pollution Damage Compensation Act

Region	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Chiba	737	765	778	751	747	736	705	707	694	662	633	606	579	560	540	518	492
Chiyoda-ku	229	234	257	266	287	293	313	309	313	296	288	267	250	239	231	220	214
Chuo-ku	356	372	381	425	477	498	498	546	513	473	431	418	397	374	353	326	323
Minato-ku	855	937	991	1,041	1,062	1,069	1,056	1,091	1,144	1,067	988	922	858	808	766	746	707
Shinjuku	1,226	1,364	1,472	1,585	1,760	2,008	2,218	2,475	2,550	2,409	2,282	2,188	2,084	2,003	1,950	1,883	1,795
Bunkyo-ku	965	1,021	1,078	1,116	1,158	1,220	1,214	1,278	1,323	1,231	1,152	1,096	1,037	968	920	871	821
Taito-ku	737	818	876	950	995	1,046	1,105	1,151	1,112	1,048	988	943	891	860	820	782	733
Shinagawa-ku	1,398	1,504	1,626	1,696	1,831	1,950	2,053	2,146	2,118	1,997	1,899	1,804	1,703	1,614	1,549	1,483	1,422
Ota-ku	3,443	3,491	3,699	3,795	4,036	4,282	4,459	4,703	4,853	4,539	4,250	4,059	3,926	3,719	3,562	3,361	3,160
Meguro-ku	1,057	1,105	1,143	1,227	1,263	1,307	1,338	1,423	1,414	1,317	1,212	1,126	1,048	970	929	869	806
Shibuya-ku	834	944	1,028	1,095	1,201	1,314	1,451	1,572	1,520	1,412	1,329	1,258	1,176	1,102	1,043	973	904
Toshima-ku	1,035	1,086	1,159	1,267	1,345	1,427	1,523	1,632	1,677	1,603	1,478	1,402	1,339	1,211	1,103	1,051	999
Kita-ku	1,919	1,981	2,108	2,167	2,251	2,283	2,352	2,525	2,610	2,485	2,304	2,188	2,088	1,990	1,905	1,810	1,707
Itabashi-ku	1,888	2,043	2,213	2,361	2,492	2,620	2,726	3,036	3,162	3,004	2,822	2,716	2,623	2,519	2,471	2,428	2,332
Sumida-ku	848	884	1,011	1,114	1,225	1,301	1,406	1,620	1,583	1,512	1,411	1,333	1,238	1,155	1,085	1,053	999
Koto-ku	1,861	2,004	2,199	2,384	2,589	2,828	2,985	3,368	3,490	3,250	2,968	2,813	2,652	2,499	2,412	2,306	2,165
Arakawa	1,062	1,148	1,305	1,401	1,490	1,585	1,679	1,920	1,892	1,791	1,688	1,592	1,500	1,425	1,378	1,322	1,263
Adachi-ku	3,834	4,231	4,511	4,770	4,926	5,099	5,294	5,589	5,393	4,893	4,403	4,170	3,926	3,586	3,412	3,251	3,071
Katsushika-ku	1,660	1,815	1,978	2,136	2,298	2,468	2,562	2,787	2,850	2,691	2,467	2,338	2,219	2,076	1,967	1,841	1,701
Edogawa-ku	2,064	2,211	2,429	2,688	2,994	3,301	3,677	4,086	4,085	3,836	3,591	3,438	3,261	3,006	2,865	2,696	2,533
(Total of Tokyo)	27,271	29,193	31,464	33,484	35,680	37,899	39,909	43,257	43,602	40,854	37,951	36,071	34,216	32,124	30,721	29,272	27,655
Yokohama	860	874	899	912	938	947	950	1,003	977	919	885	851	805	767	739	715	690
Kawasaki	3,247	3,286	3,332	3,299	3,290	3,273	3,319	3,455	3,478	3,318	3,190	3,041	2,933	2,828	2,746	2,663	2,584
Fuji	948	950	944	896	886	883	879	876	843	783	740	711	661	634	605	582	563
Nagoya	4,480	4,718	4,887	4,927	5,055	5,157	5,285	5,747	5,852	5,525	5,229	4,974	4,699	4,407	4,207	4,009	3,763
Tokai	777	788	816	809	849	884	900	1,067	1,048	991	936	903	853	804	768	739	696
Yokkaichi	925	903	896	866	876	864	836	907	867	829	801	783	746	722	701	674	650
Kusunoki	103	101	95	89	89	88	85	90	90	87	84	83	81	73	71	67	63
Osaka	19,408	19,015	18,719	18,682	18,743	18,769	19,064	19,639	19,973	18,890	17,912	16,885	16,011	15,125	14,318	13,651	12,965
Toyonaka	533	547	548	547	570	587	570	601	577	545	524	505	469	446	420	395	369
Suita	334	363	391	405	431	432	435	494	512	494	462	430	415	399	380	366	353
Moriguchi	2,851	3,198	3,290	3,274	3,248	3,166	3,080	3,107	3,001	2,843	2,678	2,547	2,428	2,319	2,213	2,115	2,018
Higashiosaka	1,838	2,078	2,425	2,635	2,916	3,190	3,569	3,696	3,887	3,563	3,359	3,186	3,036	2,940	2,697	2,601	2,409
Yao	1,100	1,242	1,382	1,516	1,617	1,645	1,720	1,796	1,854	1,785	1,727	1,586	1,511	1,445	1,363	1,310	1,260
Sakai	3,377	3,470	3,567	3,613	3,710	3,831	3,922	4,242	4,305	4,145	3,983	3,821	3,626	3,446	3,309	3,158	3,023
Kobe	1,450	1,569	1,658	1,788	1,899	1,965	1,990	2,066	2,302	2,161	2,076	1,955	1,850	1,741	1,662	1,601	1,510
Amagasaki	5,029	5,128	5,249	5,235	5,306	5,380	5,494	5,682	5,633	5,380	5,104	4,809	4,563	4,334	4,117	3,939	3,741
Kurashiki	1,745	1,920	2,019	2,060	2,123	2,182	2,273	2,545	2,910	2,824	2,717	2,592	2,518	2,450	2,342	2,253	2,173
Tamano	78	80	79	80	86	88	96	98	97	95	92	90	86	84	81	79	75
Bizen	111	116	127	134	138	137	136	141	143	139	133	128	124	119	112	108	103
Kitakyushu	1,610	1,681	1,712	1,736	1,814	1,867	1,954	2,108	2,124	2,032	1,932	1,868	1,777	1,678	1,615	1,541	1,487
Omura	1,124	1,226	1,298	1,315	1,339	1,421	1,523	1,703	2,438	2,394	2,314	2,166	2,065	2,006	1,915	1,839	1,772
Total of Class I Areas	79,936	83,211	86,575	89,053	92,350	95,391	98,694	105,027	107,207	101,258	95,462	90,591	86,052	81,451	77,642	74,195	70,414
Class II Area																	
Niigata (Pref.)	310	305	296	284	276	267	257	245	237	229	224	214	208	198	191	184	177
Niigata	278	273	270	263	256	248	247	240	232	227	223	218	212	209	207	206	203
Kumamoto (Pref.)	1,042	1,049	1,077	1,082	1,082	1,065	1,058	1,028	996	962	936	908	874	838	812	789	752
Kagoshima (Pref.)	258	269	283	287	302	309	315	318	310	310	308	300	296	287	276	271	263
(Sub-total)	1,888	1,896	1,926	1,916	1,916	1,889	1,877	1,831	1,775	1,728	1,691	1,640	1,590	1,532	1,486	1,450	1,395
Shimane (Pref.)	11	11	10	9	9	8	7	7	7	6	6	6	6	6	6	6	6
Miyazaki (Pref.)	109	110	107	103	101	99	96	94	86	84	79	78	79	73	75	77	74
(Sub-total)	120	121	117	112	110	107	103	101	93	90	85	84	85	79	81	83	80
Toyama (Pref.)	40	37	39	37	29	22	20	18	16	12	13	13	15	15	14	12	10
Total of Class II Area	2,048	2,054	2,082	2,065	2,055	2,018	2,000	1,950	1,884	1,830	1,789	1,737	1,690	1,626	1,581	1,545	1,485
Total	81,984	85,265	88,657	91,118	94,405	97,409	100,694	106,977	109,091	103,088	97,251	92,328	87,742	83,077	79,223	75,740	71,899

* Kusu-cho was merged with Yokkaichi in February, 2005. Since 2004, the number of certified patients of Yokkaichi has included that of Kusu-cho.

Source: Article of Planning Division, Environmental Health Department, Integrated Environmental Policy Bureau, Ministry of the Environment.

8.10 Transition of Existing number of Patients by Region, subject to the Pollution Damage Compensation Act

Region	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Chiba	475	457	441	429	407	390	380	368	359	346	333	326	316	303	280	271	257
Chiyoda-ku	206	194	184	177	172	165	158	150	146	147	139	141	143	138	133	126	128
Chuo-ku	300	286	284	276	274	263	259	252	251	244	240	229	225	227	214	209	204
Minato-ku	670	621	584	559	534	510	485	470	445	421	410	405	388	373	362	351	341
Shinjuku	1,758	1,708	1,652	1,615	1,513	1,399	1,330	1,278	1,222	1,181	1,135	1,098	1,065	1,056	1,009	971	942
Bunkyo-ku	780	730	680	651	621	587	560	536	517	498	490	468	457	443	427	414	408
Taito-ku	704	670	629	604	584	550	527	514	495	475	468	460	447	432	410	401	391
Shinagawa-ku	1,380	1,327	1,302	1,166	1,126	1,102	1,063	1,038	988	948	910	882	849	833	804	779	753
Ota-ku	3,073	2,988	2,903	2,868	2,822	2,748	2,699	2,232	2,123	2,064	1,998	1,941	1,889	1,784	1,714	1,654	1,609
Meguro-ku	773	739	705	689	661	627	616	601	581	563	551	534	521	510	496	487	473
Shibuya-ku	854	817	790	774	725	702	676	654	621	590	572	548	516	499	481	465	452
Toshima-ku	946	909	856	817	793	773	751	736	707	697	682	664	650	638	639	626	589
Kita-ku	1,626	1,533	1,442	1,409	1,355	1,268	1,227	1,191	1,148	1,122	1,098	1,077	1,062	1,047	1,028	1,014	862
Itabashi-ku	2,305	2,260	2,219	2,013	1,925	1,863	1,828	1,797	1,770	1,733	1,699	1,664	1,617	1,581	1,561	1,534	1,493
Sumida-ku	961	943	894	849	829	758	744	736	688	665	655	627	616	601	580	574	562
Koto-ku	2,089	2,004	1,880	1,831	1,757	1,718	1,676	1,637	1,589	1,546	1,503	1,453	1,394	1,377	1,344	1,275	1,177
Arakawa	1,224	1,158	1,075	1,015	983	942	927	910	881	838	820	760	727	697	671	643	626
Adachi-ku	2,892	2,778	2,530	2,445	2,308	2,167	2,056	1,984	1,886	1,817	1,774	1,719	1,678	1,635	1,608	1,545	1,522
Katsushika-ku	1,649	1,579	1,489	1,437	1,379	1,318	1,296	1,263	1,212	1,170	1,153	1,120	1,100	1,070	1,030	1,015	999
Edogawa-ku	2,449	2,392	2,303	2,173	2,085	1,998	1,964	1,905	1,812	1,756	1,704	1,634	1,599	1,559	1,517	1,463	1,418
(Total of Tokyo)	26,639	25,636	24,401	23,368	22,446	21,458	20,842	19,884	19,082	18,475	18,001	17,424	16,943	16,500	16,028	15,546	14,947
Yokohama	675	657	647	633	610	591	579	553	534	522	517	503	487	464	440	426	416
Kawasaki	2,495	2,397	2,304	2,245	2,179	2,091	2,036	1,984	1,913	1,831	1,786	1,739	1,700	1,604	1,549	1,503	1,455
Fuji	555	551	539	530	518	514	510	485	473	463	459	450	445	434	425	416	407
Nagoya	3,627	3,505	3,320	3,204	3,074	2,917	2,828	2,730	2,615	2,533	2,435	2,360	2,278	2,216	2,159	2,107	2,055
Toukai	669	628	586	567	549	521	504	476	452	432	419	399	391	380	371	359	347
Yokkaichi	626	589	574	553	532	515	501	523	513	499	488	476	462	450	433	422	411
Kusunoki	62	58	56	53	51	49	49	-	-	-	-	-	-	-	-	-	-
Osaka	12,342	11,815	11,214	10,718	10,289	9,960	9,543	9,139	8,790	8,468	8,142	7,819	7,468	7,204	6,890	6,674	6,471
Toyonaka	348	327	314	299	291	281	270	260	251	237	235	226	217	206	197	193	187
Suita	336	325	310	297	287	274	264	255	250	243	235	230	225	219	209	205	199
Moriguchi	1,942	1,848	1,754	1,687	1,641	1,581	1,493	1,454	1,398	1,360	1,335	1,293	1,261	1,223	1,206	1,177	1,146
Higashiosaka	2,290	2,237	2,123	2,000	1,909	1,846	1,801	1,749	1,676	1,570	1,514	1,453	1,402	1,358	1,322	1,274	1,234
Yao	1,209	1,176	1,139	1,103	1,073	1,035	1,015	981	938	913	887	856	814	776	756	721	704
Sakai	2,907	2,813	2,727	2,583	2,452	2,339	2,250	2,170	2,100	2,021	1,968	1,911	1,835	1,765	1,703	1,655	1,509
Kobe	1,427	1,390	1,331	1,273	1,250	1,207	1,186	1,145	1,095	1,024	959	916	863	830	786	758	681
Amagasaki	3,584	3,428	3,258	3,119	3,015	2,876	2,764	2,674	2,570	2,456	2,357	2,298	2,221	2,157	2,108	2,022	1,944
Kurashiki	2,086	2,014	1,956	1,894	1,829	1,773	1,721	1,675	1,614	1,548	1,490	1,449	1,392	1,340	1,293	1,240	1,190
Tamano	75	66	65	64	63	59	54	50	47	45	44	41	39	36	33	32	30
Bizen	99	97	92	88	80	75	71	70	66	62	60	55	52	51	49	46	43
Kitakyushu	1,431	1,372	1,331	1,255	1,212	1,156	1,114	1,087	1,060	1,037	1,012	987	958	937	912	895	864
Omura	1,703	1,629	1,572	1,453	1,381	1,311	1,249	1,192	1,149	1,108	1,063	1,012	963	919	866	825	776
Total of Class I Areas	67,602	65,015	62,054	59,415	57,138	54,819	53,024	50,904	48,945	47,193	45,739	44,223	42,732	41,372	40,015	38,767	37,273
Class II Area																	
Niigata (Pref.)	172	162	156	145	139	129	122	114	109	101	97	92	85	82	74	75	73
Niigata	200	196	195	189	186	175	169	159	149	145	138	132	129	125	119	112	110
Kumamoto (Pref.)	718	678	645	616	595	570	549	521	502	468	448	426	410	382	357	334	315
Kagoshima (Pref.)	251	240	234	221	215	204	199	192	186	181	172	168	163	150	144	132	126
(Sub-total)	1,341	1,276	1,230	1,171	1,135	1,078	1,039	986	946	895	855	818	787	739	694	653	624
Shimane (Pref.)	6	6	5	5	5	5	5	5	5	4	3	3	3	3	3	3	3
Miyazaki (Pref.)	75	74	73	68	65	63	58	56	55	54	50	51	49	53	50	50	47
(Sub-total)	81	80	78	73	70	68	63	61	60	58	53	54	52	56	53	53	50
Toyama (Pref.)	7	9	6	5	4	4	4	3	2	4	5	5	5	5	4	4	3
Total of Class II Area	1,429	1,365	1,314	1,249	1,209	1,150	1,106	1,050	1,008	957	913	877	844	800	751	710	677
Total	69,031	66,380	63,368	60,664	58,347	55,969	54,130	51,954	49,953	48,150	46,652	45,100	43,576	42,172	40,766	39,477	37,950

* Kusu-cho was merged with Yokkaichi in February, 2005. Since 2004, the number of certified patients of Yokkaichi has included that of Kusu-cho.

Source: Article of Planning Division, Environmental Health Department, Integrated Environmental Policy Bureau, Ministry of the Environment.

8.11 Number of certified persons according to Act on Compensation, etc. for pollution related health damage (Status of application process for Minamata disease certification)

(As of the end of April, 2015)

		Applied	Withdrawn	Processed		Unprocessed
				Certified	Rejected	
Kumamoto	Old legislation	3,312	92	1,500	1,720	0
	New legislation	18,061	6,667	285	10,042	1,067
	Total	21,373	6,759	1,785	11,762	1,067
Kagoshima	Old legislation	230	3	114	113	0
	New legislation	8,751	4,229	378	3,574	570
	Total	8,981	4,232	492	3,687	570
Niigata	Old legislation	644	10	335	299	0
	New legislation	792	153	36	537	66
	Total	1,436	163	371	836	66
City of Niigata	Old legislation	588	38	309	241	0
	New legislation	494	126	22	299	47
	Total	1,082	164	331	540	47
Total	Old legislation	4,774	143	2,258	2,373	0
	New legislation	28,098	11,175	721	14,452	1,750
	Total	32,872	11,318	2,979	16,825	1,750
Act on Temporary Measures		487	80	33	340	34

Source: Materials from Special Environmental Diseases, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

8.11 ㊟ Judgement result on relief measures based on the Law Concerning Special Measures for Compensation of Minamata Disease

(unit: person)

	the number of applicants for lump-sum payment, etc.				number of switched cases (*1)
	㊟ accepted (for lump-sum)	㊟ accepted (for cost of medical care)	㊟ number of cases fall under neither ㊟ nor ㊟	㊟ total	
Kumamoto	19,306	3,510	5,144	27,960	14,797
Kagoshima	11,127	2,418	4,428	17,973	1,998
Nigata (*2)	1,811	85	77	1,973	29

(※1) The number of people who switched to the Handbook of the Minamata Disease Victims (stipulated by the Law Concerning Special Measures for Compensation of Minamata Disease) from their National Health Insurance card that they possessed before the law was promulgated.

(※2) For Niigata Prefecture, provisional values as of August 22, 2014, are shown.

Source: Materials from Special Environmental Diseases, Environmental Health Department, Environmental Policy Bureau, MOE, the Government of Japan

8.12 Status of accepting applications and certifying according to the Act on Asbestos Health Damage Relief

1. Status of application for certifying

(As of the end of 2013)

	Mesothelioma	Pulmonary	Asbestosis	Diffuse pleural thickening	Others	Total
Patients in case	5,555	1,849	137	122	179	7,842
Bereaved families of the deceased before enforcement	3,633	638	51	16	72	4,410
Bereaved families of the unclaimed deceased	687	245	26	24	20	1,002
Total	9,875	2,732	214	162	271	13,254

2. Status of certified process

(As of the end of 2013)

	Mesothelioma	Pulmonary	Asbestosis	Diffuse pleural thickening	Total
Patients in case	4,310	941	19	48	5,318
Bereaved families of the deceased before enforcement	3,364	145	36	10	3,555
Bereaved families of the unclaimed deceased	462	130	2	4	598
Total	8,136	1,216	57	62	9,471

Source: "Status of accepting and certifying according to the Act on Asbestos Health Damage Relief" by Environmental Restoration and Conservation Agency

8.13 Rate of green purchasing in local governments and enterprises

(Unit : %)		
	Local government	Enterprise
FY 2002	38.7	56.0
2003	38.4	60.5
2004	41.5	57.4
2005	44.2	56.0
2006	76.1	60.8
2007	76.2	73.3
2008	76.0	73.6
2009	73.1	74.1
2010	73.8	71.9
2011	78.6	62.6
2012	81.3	-
2013	82.5	62.4

Note:

Source for the Local government: "Survey of green purchasing of local public entities" by Environment and Economy Division, Environmental Policy Bureau, MOE, the Government of Japan

As for the Local Government, questions on the Survey were changed in FY 2006 to those asking for implementation rates according to categories such as paper and stationary and any entities were considered to be contributing to green purchasing if they fall under any of the above mentioned questions .

Rate of entities which undertake green purchasing organization-wise were shown.

Source for the Enterprise: 'Survey Results of Environmentally Friendly Corporate Behaviors' by Environment and Economy Division, Environmental Policy Bureau, MOE, the Government of Japan

Starting in FY 2007, "Selection upon creating the guidelines" "Selection and utilization upon creating the guidelines" and "Selection and utilization upon creating the guidelines by industry groups", and "Considering environment without utilizing the guidelines" are combined to make up data.

For FY2012, vacancy due to no detailed research records.

8.14 Enforcement status of performed environmental impact assessment under Environmental Impact Assessment Law

(Unit : incident)

	Road	River	Railroad	Airport	Power plant	Disposal site	Land fill/ Reclamation	Surface improvement	Total
Procedures started	79 (21)	8 (0)	18 (4)	10 (0)	169 (85)	6 (1)	17 (3)	21 (9)	321 (122)
In the process	11 (0)	1 (0)	4 (1)	1 (0)	99 (63)	2 (0)	3 (0)	2 (0)	122 (64)
Procedures completed	59 (20)	6 (0)	12 (3)	8 (0)	55 (16) 3	4 (1)	12 (2) 3	14 (7)	165 (48)
Procedures halted	9 (1)	1 (0)	2 (0)	1 (0)	15 (6) 0	0 (0)	2 (1)	5 (2)	34 (10)
Comments from the Minister of the Environment	61 (21)	7 (0)	13 (3)	8 (0)	68 (26) 0	0 (0)	5 (0)	15 (8)	174 (58)
Impact Statement	0 (0)	0 (0)	1 (0)	0 (0)	4 (0)	0 (0)	1 (0)	1 (0)	7 (0)
Scoping ¹⁾	-	-	-	-	-	-	-	-	-
Evaluation ²⁾	61 (21)	7 (0)	12 (3)	8 (0)	64 (26) 4	0 (0)	4 (0)	14 (8)	167 (58)
Report	0 (0)	0 (0)	0 (0)	0 (0)	0 (0) 0	0 (0)	0 (0)	0 (0)	0 (0)

Note:

Parenthesized data refers to businesses that have changed procedures to procedures according to the law in the middle of the procedures.

When two business projects were merged, they were counted as one.

Starting on April 1st, 2012, when the relevant minister is asked by the business owner to give technical advice with respect to scoping items of environmental influence judgment, the Minister of the Environment will be asked to make a comment.

Including business owners that expressed no opinion. For further information, the Minister of the Environment used to make a comment only when the relevant authority of the business office was the state organ, however, starting on April 1st, 2012, the Minister can give advice when asked by the heads of the local governments. In case of power plant business, the Minister will make recommendations on Draft EIS.

Including 6 business projects (that are determined as assessment procedures unnecessary as a result of the screening) that the notifications based on Article 4, Paragraph 3, Item 2 of The Environmental Impact Assessment Law have been completed.

There are 12 other business projects to which Ministry of the Environment submit comments, based on Environmental Assessment Enforcement Outline in regard to Wind Energy project (Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry, June 6th, 2012).

Source: materials by Office of Environmental Impact Assessment Review, Environmental Impact Assessment Division, Environmental Health Department, MOE, the Government of Japan

8.15 The number of cases completed in an environmental impact assessment procedures under Environmental Impact Assessment Law (as of the end of FY2013)

(Unit : incident)

	Industry																	
	Road		River		Railroad		Airport		Power plant		Disposal site		Land fill/Reclamation		Surface improvement		Total	
	Completed	Suspended	Completed	Suspended	Completed	Suspended	Completed	Suspended	Completed	Suspended	Completed	Suspended	Completed	Suspended	Completed	Suspended	Completed	Suspended
FY 1999	8(8)	-	-	-	1(1)	-	-	-	3(3)	-	1(1)*	-	1(1)*	-	1(1)	-	14(14)*	-
2000	8(8)	-	-	-	1(1)	-	1(0)*	-	10(8)	-	-	-	2(1)*	-	6(6)	1(1)	27(24)*	1(1)
2001	5(5)	-	-	-	6(1)	-	1(0)	-	3(1)	-	-	-	1(0)	-	1(0)	-	17(7)	-
2002	1(0)	-	1(0)	1(0)	-	-	1(0)	-	2(0)	2(0)	1(0)	-	-	-	-	-	6(0)	3(0)
2003	-	2(0)	-	-	-	-	-	-	2(0)	-	-	-	-	-	4(0)	-	6(0)	2(0)
2004	7(0)	4(0)	1(0)	-	-	-	1(0)	-	1(0)	-	-	-	-	-	-	-	10(0)	4(0)
2005	6(0)	1(1)	1(0)	-	2(0)	-	2(0)	-	2(0)	-	1(0)*	-	1(0)*	-	-	1(0)	14(0)*	2(1)
2006	5(0)	2(0)	-	-	-	2(0)	1(0)*	-	6(0)	1(0)	-	-	2(0)*	-	-	1(0)	13(0)*	6(0)
2007	5(0)	-	1(0)	-	-	-	-	1(0)*	2(0)	-	1(0)	-	1(0)	1(0)*	2(0)	-	12(0)	1(0)*
2008	5(0)	-	1(0)	-	-	-	-	-	-	-	-	-	-	-	-	-	6(0)	-
2009	2(0)	-	-	-	-	-	-	-	5(0)	1(0)	-	-	-	-	-	-	7(0)	1(0)
2010	2(0)	-	-	-	-	-	-	-	3(0)	1(0)	-	-	-	-	-	1(1)	5(0)	2(1)
2011	2(0)	-	-	-	-	-	-	-	2(0)	-	-	-	1(0)	1(1)	-	-	5(0)	1(1)
2012	-	-	1(0)	-	2(0)	-	-	-	9(4)	1(0)	-	-	1(0)	-	-	-	13(4)	1(0)
2013	3(0)	-	-	-	-	-	1(0)	-	5(0)	9(6)	-	-	2(0)	-	-	1(0)	10(0)	10(6)
Total	59(20)	9(1)	6(0)	1(0)	12(3)	2(0)	8(0)*	1(0)*	55(16)	15(6)	4(1)*	0(0)	12(2)*	2(1)*	14(7)	5(2)	165(48)*	34(10)*

Parenthesized data refers to businesses that have changed procedures to procedures according to the law in the middle of the procedures.

Regarding data with *, when two business projects were merged into one, they were counted as one.

Source: materials of Office of Environmental Impact Assessment Review, Environmental Impact Assessment Division, Environmental Health Department, MOE, the Government of Japan

8.16 Status of formulating basic articles of Environmental Policy

By Basic Property

(Unit : %)

Status of formulating basic articles of Environmental Policy	National	Prefecture	ordinance-designated city	Municipality
	(n=894)	(n=41)	(n=16)	(n=837)
Dealt with/Completed	78.1	97.6	100.0	76.7
Work in progress	0.4	0.0	0.0	0.5
Under consideration	5.1	0.0	0.0	5.5
No plan at the moment	16.3	2.4	0.0	17.3
No response	0.0	0.0	0.0	0.0

By Population

(Unit : %)

Status of formulating basic articles of Environmental Policy	Less than 10 thousand	More than 10 thousand ~ less than 100 thousand	More than 100 thousand ~ less than 300 thousand	More than 300 thousand ~ less than 500 thousand	More than 500 thousand
	(n=115)	(n=489)	(n=176)	(n=43)	(n=71)
Completed	46.1	75.9	94.3	93.0	95.8
Work in progress	0.9	0.4	0.6	0.0	0.0
Under consideration	17.4	5.3	0.0	0.0	0.0
No plan at the moment	35.7	18.4	5.1	7.0	4.2
No response	0.0	0.0	0.0	0.0	0.0

Source: Materials of "Survey questionnaire for local governments in regard to the Basic Environmental Plan 2014" by Environmental Strategy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.17 Status of formulating basic plans of Environmental Policy

By Basic Property

(Unit : %)

Status of formulating basic plans of Environmental Policy	National	Prefecture	Ordinance-designated city	Municipality
	(n=894)	(n=41)	(n=16)	(n=837)
Completed	80.9	100.0	100.0	79.6
Work in progress	1.7	0.0	0.0	1.8
Under consideration	5.6	0.0	0.0	6.0
No plan at the moment	11.9	0.0	0.0	12.7
No response	0.0	0.0	0.0	0.0

By Population

(Unit : %)

Status of formulating basic plans of Environmental Policy	Less than 10 thousand	More than 10 thousand ~ less than 100 thousand	More than 100 thousand ~ less than 300 thousand	More than 300 thousand ~ less than 500 thousand	More than 500 thousand
	(n=115)	(n=489)	(n=176)	(n=43)	(n=71)
Completed	48.7	78.3	97.2	100.0	98.6
Work in progress	2.6	2.0	1.1	0.0	0.0
Under consideration	16.5	6.1	0.6	0.0	0.0
No plan at the moment	32.2	13.5	1.1	0.0	1.4
No response	0.0	0.0	0.0	0.0	0.0

Source: materials of "Survey questionnaire for local governments in regard to the Basic Environmental Plan 2014," Environmental Strategy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.18 Status of environmental policies local governments are focusing on

(Unit : %)

Item	Total (n = 3321)
	Environmental Policies that are currently being emphasized and carried out (multiple answers allowed)
a. Conservation of global environment	27.4
b. Initiatives regarding to conservation and sustainable use of biodiversity	14.1
c. Initiatives to ensure circulation of material and a creation of a sound material-cycle society	21.8
d. Initiatives regarding to conservation of aquatic, soil and ground environment	8.9
e. Initiatives regarding to conservation of the atmospheric environment	4.4
f. Initiatives to establish and promote comprehensive hazardous chemical control	0.1
g. Promoting green economy and society	1.7
h. Enrichment of developing technologies, R&D, Monitoring and observing, etc.	0.4
i. Policies on International initiatives	0.2
h. Promoting development of local communities and human resource development	11.7
k. Improvement of and providing environmental information and enrichment of publicity	0.9
i. Evaluation of environmental impact	0.2
m. Measures for environmental health, settlement of environmental pollution disputes, and against environmental crimes	2.0
Others	0.9
No response	5.2

Source: materials of "Survey questionnaire for local governments in regard to the Basic Environmental plan 2014," Environmental Strategy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.19 Business conditions of Environmental business in Japan

(DI : "Good"- "Bad", %point)

	Present	6 months from now	10 years from now
Average	21	21	40
Previous survey	(27)	(29)	(46)
Big enterprise	25	26	52
Medium-sized enterprise	23	22	42
Small and medium sized enterprise	16	15	27
Manufacturing	23	24	44
Non-manufacturing	20	20	38

Source: "Economic Survey of Environmental Industries in December 2014," Environmental Strategy Division,
Environmental Policy Bureau, MOE, the Government of Japan

8.20 Top 5 Environmental business that are expected to grow (total of all enterprise scale)

Present (Percentage of total %)

1	Energy-saving vehicles	24.3
2	Air pollution prevention equipment/facility	17.7
3	Solar generation system (manufacturing of related equipment)	13.5
4	Waste water treatment equipment and facility	10.3
5	Renewable energy 1)	8.2

Note: Renewable energy refers to new energy sources such as Wind power, hydrogeneration, hydroelectric power generation, geothermal power generation, solar thermal application, biomass power system, medium and small hydroelectric generation, etc. and equipment manufacturing and business of thereof.

6 months from now (Percentage of total %)

1	Energy-saving vehicles	26.8
2	Air pollution prevention equipment/facility	13.8
3	Renewable energy ※)	10.8
4	Solar generation system (manufacturing of related equipment)	8.5
5	Waste water treatment equipment and facility	4.9

10 years from now (Percentage of total %)

1	Renewable energy ※)	25.8
2	Air pollution prevention equipment/facility	16.8
3	Energy-saving vehicles	7.3
4	Smart grid	6.6
5	Soil and water purification/facility (including underground water clean-up)	4.6

Source: "Economic Survey of Environmental Industries in December 2014" by Environmental Strategy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.21 Business outlook (Diffusion Index)

(DI : Good-Bad, % Point)

	→ prospect							
	2013				2014			
	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	~ 10 years from now
Environmental Business	17		22		22		23	25
Forecast made 6 months ago	(19)		(17)		(22)			(27)
A Environmental pollution control	10		9		12		14	19
B Prevention of global warming	27		32		31		30	30
C Waste disposal/Effective Utilization of Resources	8		11		14		16	19
D Natural Conservation	4		12		5		14	24
All business	9		12		11		12	7
Forecast made 6 months ago	(7)		(10)		(15)			(8)
Of which carries out environmental business	22		25		22		23	22
Of which carries out NO environmental business	6		8		8		8	3
The Bank of Japan's Short-Term Economic Survey of Enterprises in Japan including all scales of business and all industries	8	12	7	4	5	1		

Note:

1,591 valid responses were returned from Environmental business entities and 4,670 responses from all business as of December 2014.

Data from March 2015 refers to Index of Leading Economic Indicators.

Source: "Economic Survey of Environmental Industries in December 2014," Environmental Strategy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.22 Environmental business outlook (by capital and by environmental business)

(DI : Good - Bad, %Point)

	Total of all scales and sizes					
	Present		6 months from now		10 years from now	
	Valid response	DI	Valid response	DI	Valid response	DI
Total	1,591	22	1,588	23	1,551	25
Previous survey	1,585	22	1,578	24	1,536	27
A. Environmental pollution control	367	12	365	14	353	19
Previous survey	353	9	350	15	346	21
B. Prevention of global warming	842	31	843	30	824	30
Previous survey	856	32	856	34	828	36
C. Waste disposal/Effective utilization of resources	339	14	337	16	332	19
Previous survey	334	11	332	10	323	9
D. Conservation of natural environment	43	5	43	14	42	24
Previous survey	42	12	40	20	39	33
A-1 Air pollution prevention equipment/facility	38	10	38	13	37	8
A-2 Waste water treatment equipment/facility	68	13	68	14	65	32
A-3 Soil and water purifier/facility (including underground water clean-up)	19	0	19	16	19	42
A-4 Noise, vibration prevention equipment/facility	21	10	21	14	19	27
A-5 Environmental analysis, measurement, monitoring equipment	16	19	16	31	16	38
A-6 Other environmental pollution control product/equipment/facility	57	7	57	5	54	5
A-7 Waste water treatment service	37	19	37	19	37	13
A-8 Soil and water purification service (including underground water clean-up)	32	25	32	31	30	7
A-9 Environmental analysis, measurement, monitoring, assessment	35	6	34	6	34	-8
A-10 Research and development on environment/engineering	10	20	9	***	9	***
A-11 Environmental education, environmental finance and consulting	26	11	26	11	25	36
A-12 Other environmental pollution control service	8	***	8	***	8	***
B-1 Renewable energy	202	42	202	41	195	40
B-2 Photovoltaic (PV) power system (production of related machinery)	84	26	84	26	83	9
B-3 Photovoltaic (PV) power system (installation/maintenance)	125	31	125	15	122	-3
B-4 Smart grid	14	14	14	29	14	50
B-5 Energy-saving vehicle	47	31	47	27	47	36
B-6 Energy-saving home appliance	56	20	57	24	55	22
B-7 High-efficiency hot water heater	107	34	107	36	105	38
B-8 Consultancy in the field of energy-saving	37	19	37	21	37	40
B-9 Storage battery	32	35	32	35	32	44
B-10 Energy saving housing construction	55	36	55	45	53	51
B-11 Other business related to global warming countermeasures	83	12	83	18	81	47
C-1 Waste disposal equipment/facility	36	11	36	19	35	14
C-2 Household waste disposal	34	20	35	23	34	23
C-3 Industrial waste disposal	106	20	105	18	105	6
C-4 Renovation/repairing	37	22	37	22	37	46
C-5 Lease/rental	20	15	20	5	20	20
C-6 Secondhand goods	18	11	19	10	18	22
C-7 Recycled material	73	4	71	7	69	15
C-8 Other resource use	15	14	14	14	14	50
D-1 Water resource use	6	***	6	***	6	***
D-2 Sustainable agricultural forestry industries and fisheries/tree planting	22	0	22	14	21	38
D-3 Other conservation of natural environment	15	6	15	13	15	14

Source: "Economic Survey of Environmental Industries in December 2014," Environmental Strategy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.23 Initiatives toward environmental management (Listed companies)

	FY2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Formulate management policies related to environment (%)	85.0	82.9	86.5	83.6	83.9	85.6	87.1	-	-	-
Set up specific goals (%)	84.1	82.6	87.3	84.7	84.7	86.9	93.2	89.8	91.7	92.8
Formulate specific action plans (%)	80.8	80.0	-	-	-	-	-	-	-	-
Number of valid responses (Number)	1,127	1,213	1,138	1,151	1,227	1,142	1,034	949	374	483

Note:

Since FY2011, "Formulate management policies related to environment" question is no longer on the questionnaire.

Since FY2011, rates of the number of entities that grasp the picture of environmental load in their business area were diverted.

Source: "Survey on Environmentally Friendly Activities of Businesses," Environment and Economy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.24 Companies that disclose environmental information

(Unit : case)

	FY1999	2000	2001	2002	2003	2004	2005	2006	2008	2010	2011	2012	2013
States in securities reports	105	134	136	171	166	277	375	359	168	120	266	-	144
States in some parts of annual reports	-	-	-	-	-	-	-	-	324	224	-	-	-
States in IR materials (Annual reports, etc.)	-	-	-	-	-	-	-	-	-	-	337	-	228
States in website	335	607	848	1,084	1,176	977	1,180	1,317	1,329	1,254	1,320	-	768
Disclose in brochure	360	365	293	275	248	228	216	293	258	210	864	-	477
Publish environmental reports	270	430	515	633	714	801	933	1,049	1,160	1,068	1,015	514	593
Hold a meeting for local residents	-	-	161	174	197	264	288	303	310	259	-	-	-
Hold a meeting for stakeholders	-	-	-	-	-	-	-	-	-	-	244	-	157
Valid response	886	1,036	1,351	1,564	1,571	1,399	1,585	1,671	1,701	1,672	1,620	-	900

Note:

Data refers to total numbers. Since multiple answers are allowed, valid response and total numbers do not much.

Starting in FY 2008, a choice of "States in some parts of annual reports" was included in the survey.

Starting in FY 2009, the survey is conducted biennially.

Starting in FY 2011, the survey is conducted every year since the questionnaire was incorporated into White paper.

Starting in FY 2011, a choice of "State in some parts of annual reports" was simplified to "State in IR materials (IR reports, etc.)."

Starting in FY 2011, "Hold a meeting to report to the residents" was merged into "Hold a meeting to explain to stakeholders."

Only "Published environmental reports" question was asked in FY 2012 in another survey. (added up the number of entities that made environmental report(s) and the number of entities that made a part of CSR report(s), and so forth.)

In FY2013, "Publish environmental reports" shows the number that is added up the number of entities that made environmental report(s) and the number of entities that made CSR report(s) showing environmental data.

" securities reports" = "securities report(s)" + "business report bound by the Companies Act." "brochure" = "production catalogue(s)" + "business prospectus(es)."

Source: "Survey on Environmentally Friendly Activities of Businesses," Environment and Economy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.25 Status of compiling and disclosing of environmental reports

	FY2005	2006	2007	2008	2009	2010	2011	2012	2013
Compile and disclose environmental reports	933	1,049	1,011	1,160	1,091	1,068	1,015	514	593
Plan to compile and disclose environment reports next Fiscal Year	99	98	97	71	63	54	-	20	-
Compile but do not disclose	-	-	-	-	-	-	54	-	36
To be discussed	-	-	-	-	-	-	98	-	43
Not compiling	547	488	518	458	598	549	451	157	227
No response	6	9	5	12	8	1	2	0	1
Valid responses	1,585	1,644	1,631	1,701	1,760	1,672	1,620	691	900

Note:

Valid responses refer to the number of companies that disclose environmental information.

"Compile and disclose" refer to published as parts of CSR reports and Sustainability reports.

Starting in FY2011, "Plan to compile and disclose next Fiscal Year" was divided into "Compile but not disclose" and "To be discussed", but they were deleted from the Survey in FY 2012.

Source: "Survey on Environmentally Friendly Activities of Businesses" by Environment and Economy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.26 Conditions of introduction of environmental accounting

(Unit : case)

	FY2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Already introduced	491	573	661	712	790	819	761	805	771	730	652	304	395
Under discussion to be introduced	580	461	387	440	369	363	345	290	277	206	275	73	95
No plan to be introduced	1,451	1,521	1,433	1,144	1,270	1,336	1,437	1,584	1,679	1,666	1,484	627	811
Unaware of the term "Environmental accounting"	248	246	162	209	235	231	258	323	297	312	376	157	179
No response	16	25	38	19	27	25	18	26	12	9	7	0	16
Not interested in Environmental accounting	64	76	58										
Others	48	65	56										
Valid responses	2,898	2,967	2,795	2,524	2,691	2,774	2,819	3,028	3,036	2,923	2,794	1,161	1,496

Starting in FY 2004, survey methods were changed and ※questions were deleted.

Source: "Survey on Environmentally Friendly Activities of Businesses," Environment and Economy Division, Environmental Policy Bureau, MOE, the Government of Japan

8.27 Transition of test results for Pollution Control Manager and other National examinations

	# of Applicants	# of Examinee	The ratio of applicants to the number of tests taken (%)	# of successful applicant	Examination pass rate(%)	Total number of successful applicants between FY 1971 and FY 2014.	
FY 1971	115,951	95,197	82.1	36,385	38.2	Air Pollution Control Manager First grade	68,247
1972	139,558	108,487	77.7	35,667	32.9	Air Pollution Control Manager Second grade	5,111
1973	119,700	90,138	75.3	29,946	33.2	Air Pollution Control Manager Third grade	7,920
1974	116,917	86,973	74.4	21,443	24.7	Air Pollution Control Manager Fourth grade	8,105
1975	96,223	71,741	74.6	15,710	21.9	Subtotal	89,383
1976	76,345	55,550	72.8	10,698	19.3		
1977	68,680	50,153	73.0	13,308	26.5		
1978	54,731	39,320	71.8	8,402	21.4		
1979	43,108	30,095	69.8	6,572	21.8	Water Pollution Control Manager First grade	111,899
1980	38,301	27,542	71.9	5,322	19.3	Water Pollution Control Manager Second grade	21,081
1981	33,853	24,205	71.5	5,460	22.6	Water Pollution Control Manager Third grade	10,767
1982	30,780	21,790	70.8	5,137	23.6	Water Pollution Control Manager Fourth grade	23,789
1983	26,764	18,834	70.4	3,328	17.7	Subtotal	167,536
1984	23,070	17,385	75.4	3,508	20.2		
1985	21,542	16,330	75.8	3,322	20.3	Noise and Vibration Abatement Manager	3,572
1986	20,441	15,848	77.5	3,010	19.0	* Noise Abatement Manager	46,403
1987	17,727	14,173	80.0	3,413	24.1	* Vibration Abatement Manager	13,696
1988	17,881	14,253	79.7	2,885	20.2	Specific Dust Pollution Control Manager	626
1989	18,853	15,233	80.8	4,071	26.7	General Dust Pollution Control Manager	5,645
1990	20,545	16,382	79.7	3,480	21.2	Dioxins Pollution Control Manager	12,354
1991	22,741	18,352	80.7	4,283	23.3	Chief Manager of Pollution Control	12,470
1992	24,141	19,803	82.0	3,868	19.5	Total	351,685
1993	25,342	20,866	82.3	4,589	22.0		
1994	25,681	21,161	82.4	5,250	24.8		
1995	25,950	21,475	82.8	4,221	19.7		
1996	26,101	21,336	81.7	3,119	14.6		
1997	26,405	21,619	81.9	4,336	20.1		
1998	27,419	22,555	82.3	4,858	21.5		
1999	28,176	23,009	81.7	5,107	22.2		
2000	34,853	28,737	82.5	8,307	28.9		
2001	31,257	25,613	81.9	6,055	23.6		
2002	30,379	24,684	81.3	6,005	24.3		
2003	31,003	25,174	81.2	5,417	21.5		
2004	28,553	23,201	81.3	5,805	25.0		
2005	29,489	24,016	81.4	7,376	30.7		
2006	25,899	21,351	82.4	5,134	24.0		
2007	29,504	25,237	85.5	3,132	12.4		
2008	33,945	29,564	87.1	6,127	20.7		
2009	33,649	29,437	87.5	6,446	21.9		
2010	33,516	29,456	87.9	6,691	22.7		
2011	31,952	28,045	87.8	6,220	22.2		
2012	30,952	27,248	88.0	6,364	23.4		
2013	31,319	27,328	87.3	5,407	19.8		
2014	29,862	25,989	87.0	6,501	25.0		

* refers to the accumulated subtotal of successful applicants up to FY2005. After FY 2006, they were merged into Noise and Vibration Abatement Manager.

Since FY2006, "System to pass for each subject" was introduced.

Source: "Result of National exam for Pollution Control Managers (each FY)," Ministry of Economy, Trade and Industry, as well as Ministry of Environment, the Government of Japan

8.28 Number of Environmental NGO and the like

●Number of organizations by prefecture

Prefectures	# of organization	Distribution ratio(%)
Hokkaido	441	9.15
Aomori	59	1.22
Iwate	99	2.05
Miyagi	125	2.59
Akita	64	1.33
Yamagata	59	1.22
Fukushima	112	2.32
Ibaraki	62	1.29
Tochigi	55	1.14
Gunma	50	1.04
Saitama	124	2.57
Chiba	138	2.86
Tokyo	499	10.36
Kanagawa	238	4.94
Niigata	82	1.70
Toyama	66	1.37
Isikawa	60	1.25
Fukui	45	0.93
Yamanashi	34	0.71
Nagano	138	2.86
Gifu	95	1.97
Shizuoka	157	3.26
Aichi	256	5.31
Mie	128	2.66
Shiga	65	1.35
Kyoto	113	2.35
Osaka	234	4.86
Hyogo	178	3.69
Nara	50	1.04
Wakayama	50	1.04
Tottori	31	0.64
Shimane	66	1.37
Okayama	44	0.91
Hiroshima	79	1.64
Yamaguchi	63	1.31
Tokushima	55	1.14
Kagawa	58	1.20
Ehime	74	1.54
Kochi	58	1.20
Fukuoka	136	2.82
Saga	24	0.50
Nagasaki	32	0.66
Kumamoto	82	1.70
Oita	37	0.77
Miyazaki	34	0.71
Kagoshima	29	0.60
Okinawa	40	0.83
Total	4,818	100.00

●Corporate status

Kind of corporate status	# of organization	Distribution ratio(%)
Specified Nonprofit organization (NPO)	2,341	48.59
Foundation	135	2.80
Incorporated association	104	2.16
Others	152	3.15
None (non-statutory body)	1,966	41.22
No response	100	2.08
Total	4,818	100.00

●Fields of activity (Multiple answers allowed)

Field of activities	# of organization	Distribution ratio(%)
Forest conservation, Tree planting	1,151	23.89
Nature conservation	1,626	33.75
Protection of air quality	134	2.78
Protection of water and soil quality	743	15.42
Prevention of desertification	73	1.52
Waste recycling	663	13.76
Life and saving resources	425	8.82
Environmental education	1,767	36.67
Community development	1,430	29.68
Cleanup operation	966	20.05
Prevention of global warming	610	12.66
Toxic chemicals control	88	1.83
Noise, Vibration, and Odor control	31	0.64
General environmental issues	798	16.56
Others	605	12.56

●Budget range

Budget range of organization	# of organization	Distribution ratio(%)
0 ~ 1 million yen	2,452	50.89
More than 1 million yen less than 10 million yen	1,431	29.70
More than 10 million yen less than 100 million yen	683	14.18
More than 100 million yen	158	3.28
No response	94	1.95
Total	4,818	100.00

●Number of membership (No Correlation between individual memberships and group memberships)

# of individual membership of organization	# of organization	Distribution ratio(%)
More than 0 people less than 10	266	5.52
More than 10 people less than 100	2,905	60.29
More than 100 people less than 1,000	936	19.43
More than 1,000 people less than 10,000	95	1.97
Over 10,000 people	30	0.62
No response	586	12.16
Total	4,818	100.00

< Group membership of organization >

# of group membership of organization	# of organization	Distribution ratio(%)
More than 0 group less than 10	1,130	23.45
More than 10 groups less than 50	603	12.52
More than 50 groups less than 100	146	3.03
More than 100 groups less than 500	119	2.47
More than 500 groups less than 1,000	9	0.19
Over 1,000 groups	10	0.21
No response	2,801	58.14
Total	4,818	100.00

Survey was conducted among 22,613 organizations between FY 2009 and FY 2011, and 1,967 organizations in FY 2012, of which, 4,818 organizations with valid responses were compiled.

Distribution ratio refers to the ratio to the total number of organizations with valid responses (4,818 organizations.)

Source: Compiled from "Overview of Environmental NGO and NPO online data base."

8.29 The funding status of Japan Fund for Global Environment

	Adopted (Number)	Grants (Million yen)
FY2004	203	715
2005	202	704
2006	170	579
2007	174	593
2008	205	679
2009	168	513
2010	153	458
2011	179	514
2012	190	600
2013	189	578
2014	197	605

Note: Grants for FY 2014 refer to the determined amounts to be granted.

Source: materials of Japan Fund Global Environment by Environmental Restoration and Conservation Agency (incorporated administrative agency).