

## **Appendix E**

### **Trend of Major Pollutant Levels in Wildlife Monitoring (Fiscal Year 1978-1995)**

## **Appendix E**

### **Trend of Major Pollutant Levels in Wildlife Monitoring (Fiscal Year 1978-1995)**

Table E-1	Polychlorinated biphenyls (PCB) .....
Table E-2	Hexachlorobenzene (HCB) .....
Table E-3	Dieldrin .....
Table E-4	p, p'-Dichlorodiphenyltrichloroethane (p, p'-DDT) .....
Table E-5	-Hexachlorocyclohexane ( -HCH) .....
Table E-6	trans-Chlordane .....
Table E-7	cis-Chlordane .....
Table E-8	trans-Nonachlor .....
Table E-9	cis-Nonachlor .....
Table E-10	Oxychlordane .....

**Table E-1 PCB (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95			
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.	— nd nd	— nd nd																			
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.	0.03 0.05 0.01	0.03 0.04 0.02	0.02 0.04 0.01	— nd nd	— nd nd																
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.			— nd nd	— 0.02 nd	— 0.02 nd	— 0.03 nd	— tr tr	— tr nd	— 0.02 tr	— tr nd	— tr nd	— 0.01 tr	— tr nd	— 0.01 tr	— tr nd	— 0.01 tr	— tr nd	— tr nd			
Offshore of Joban	Pacific saury	Average Max. Min.	0.02 0.02 0.01	0.01 0.01 0.01	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.14 0.25	— 0.01 0.02	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd				
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.			— 0.01 nd	— 0.02 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.02 0.04	— 0.02 0.02	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd			
Tokyo Bay	Sea bass	Average Max. Min.	0.34 0.50 0.20	0.42 0.50 0.40	0.28 0.60 0.10	0.75 1.0 0.48	0.31 0.37 0.23	0.12 0.15 0.08	0.11 0.15 0.07	0.09 0.10 0.08	0.06 0.10 0.05	0.15 0.18 0.12	0.20 0.27 0.12	0.39 0.56 0.29	0.13 0.17 0.07	0.63 0.11 0.55	0.26 0.38 0.16	0.25 0.29 0.2119	0.22 0.27 0.18	0.06 0.08 0.04			
Osaka Bay	Sea bass	Average Max. Min.			0.68 1.0 0.20	13 1.8 1.1	0.80 1.1 0.30	0.62 0.70 0.43	0.58 0.77 0.26	0.18 0.19 0.15	0.15 0.23 0.09	0.21 0.40 0.13	0.12 0.15 0.08	0.48 0.57 0.40	0.59 0.73 0.41	0.25 0.39 0.11	0.47 0.53 0.42	0.55 0.53 0.15	0.24 0.33 0.19	0.19 0.24 0.14			
Seto Inland Sea	Sea bass	Average Max. Min.			0.68 0.70 0.60	0.32 0.50 0.10	0.18 0.50 0.04	1.3 2.1 0.27	0.49 0.99 0.13	0.68 1.0 0.34	0.87 1.4 0.57	0.46 1.0 0.10	0.20 0.37 0.14	0.35 0.53 0.13	0.09 0.13 0.02			0.07 0.09 0.01	0.11 0.20 0.03	0.04 0.05 0.02			
Offshore of Sanin	Sea bass	Average Max. Min.					0.17 0.23 0.14	0.12 0.22 0.05	0.13 0.16 0.09	0.09 0.12 0.06	0.07 0.12 0.05	0.07 0.13 0.10	0.12 0.13 0.06	0.08 0.09 0.05	0.06 0.06 0.05	0.06 0.06 0.05	0.08 0.09 0.06	0.09 0.11 0.07	0.03 0.03 0.01	0.02 0.03 0.01			
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.								0.28 0.65 0.07	0.12 0.28 0.06	0.04 0.08 0.01	0.08 0.16 0.03	— 0.02 tr	— 0.02 tr	0.10 0.17 0.05	— tr tr	— tr nd	— tr nd	— tr nd	— tr nd	— tr nd	— tr nd
Surrounding of Shugen Island	Sea bass	Average Max. Min.															0.03 0.04 0.01	0.06 0.13 0.04	0.02 0.03 0.01	0.03 0.04 0.02	— tr nd	— tr nd	— tr nd
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.								0.04 0.09 0.02	0.12 0.19 0.06	0.04 0.05 0.03	0.04 0.06 0.03	0.02 0.04 0.01	0.03 0.05 0.02	0.01 0.01 0.01	— tr tr	— tr nd	— tr nd	— tr nd	— tr nd	— tr nd	— tr nd
Nakagusuku Bay Okinawa Pref.	Black porgy	Average Max. Min.															— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.			0.08 0.10 0.06	0.05 0.08 0.04	0.05 0.07 0.05	0.03 0.03 0.02	0.05 0.07 0.03	0.02 0.02 0.01	0.11 0.13 0.09	0.04 0.05 0.03	0.02 0.03 0.02	0.07 0.05 0.03	0.06 0.05 0.04	0.04 0.04 0.03	0.03 0.04 0.03	0.04 0.04 0.02	0.01 0.01 0.01	0.01 0.01 0.01			

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.	0.01 0.01 0.01	0.02 0.02 0.01	0.01 0.01 0.01	— nd nd														
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.	0.07 0.08 0.05	0.07 0.08 0.07	0.03 0.03 0.03	0.06 0.06 0.06	0.04 0.04 0.04	0.05 0.05 0.03	0.03 0.04 0.03	0.03 0.04 0.01	0.02 0.02 0.01	0.02 0.04 0.03	0.04 0.04 0.03	0.02 0.02 0.02	0.02 0.02 0.01	0.01 0.02 0.01	0.02 0.02 0.01	0.01 0.01 0.01	0.01 0.01 0.01	
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.			— nd nd															
Ise Bay	Common mussel	Average Max. Min.														— 0.11 0.11	0.06 0.06	0.02 0.02	0.01 0.01	0.01 0.01
Shimane Peninsula	Common mussel	Average Max. Min.														0.04 — tr	— tr nd	— tr nd	— tr nd	— tr nd
Naruto	Asiatic mussel	Average Max. Min.	0.08 0.09 0.07	0.07 0.08 0.06	0.04 0.05 0.04	0.03 0.04 0.02	0.03 0.03 0.03	0.09 0.07 0.07	0.08 0.03 0.03	0.06 0.02 0.02	0.04 0.03 0.02	0.05 0.05 0.02	0.04 0.04 0.03	0.03 0.03 0.02	0.02 0.02 0.02	— nd nd	— nd nd	— nd nd	— nd nd	

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.	0.01 0.02 0.07	0.02 0.03 0.06	0.03 0.05 0.05	0.02 0.03 0.03	0.01 0.01 0.01	— tr tr	— 0.01 tr	— tr tr	— 0.01 tr	— 0.02 tr	— 0.01 tr	— 0.01 tr	— tr nd	— tr tr	— tr tr	— tr nd	— nd nd
Tokyo Bay	Black-tailed gull	Average Max. Min.						— 8.9 2.9	1.9 2.6 1.2	2.0 2.3 1.6	1.7 2.1 1.4	1.2 1.5 1.0	2.0 2.8 1.4	2.8 3.6 1.8	1.4 1.9 1.1	1.6 2.0 1.0	2.6 3.3 2.0	1.2 1.4 0.79	0.77 0.87 0.66
Kabushima	Black-tailed gull	Average Max. Min.																	0.34 0.67 0.14

**Table E-2 HCB (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.	0.004 0.007 0.003	0.003 0.004 0.003	0.002 0.006 0.002	0.004 0.001 0.002	— nd nd	— nd nd	— nd nd	— 0.002 nd	— nd nd	— 0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.001 nd		
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.	0.001 0.002 0.001	— nd nd	— 0.002 nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.001 nd	— nd nd	— 0.002 nd	— 0.002 nd	— 0.002 nd	— 0.004 nd	— 0.001 nd	— 0.003 0.001	— 0.03 nd	— 0.001 nd	
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.			0.001 0.002 0.001	— nd nd	— nd nd	— nd nd	— tr nd	— nd nd	— tr nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
Offshore of Joban	Pacific saury	Average Max. Min.	0.002 0.003 0.002	0.003 0.004 0.003	0.006 0.007 0.005	— 0.001 tr	0.001 nd	— nd nd	— 0.001 tr	— tr nd	— tr 0.002	— tr nd	— tr nd	— nd nd	— 0.001 nd	— nd nd	— nd nd	— nd nd	— 0.001 nd	
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.			— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
Tokyo Bay	Sea bass	Average Max. Min.	0.002 0.004 0.001	0.002 0.002 0.001	0.002 0.003 0.002	— nd nd	— 0.001 nd	0.001 0.001	— tr tr	— 0.001 tr	— tr nd	— tr nd	— nd nd	— 0.004 nd	— 0.009 0.002	— nd nd	— nd nd	— nd nd	— nd nd	
Osaka Bay	Sea bass	Average Max. Min.			— 0.006 0.005 nd	— 0.007 tr	— tr tr	— 0.002 tr	— tr tr	— nd tr	— tr tr	— tr tr	— tr tr	— 0.002 0.003 0.002	— 0.004 0.004 0.001	— tr tr	— tr nd	— tr 0.001	— tr tr	— tr tr
Seto Inland Sea	Sea bass	Average Max. Min.	0.001 0.002 0.001	— 0.001 nd	— 0.002 nd	— 0.003 nd	— 0.001 nd	— nd nd	— 0.002 nd	— 0.001 nd	— nd nd	— 0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
Offshore of Sanin	Sea bass	Average Max. Min.				— tr nd	— nd nd	— nd nd	— tr nd	— tr nd	— tr tr	— tr tr	— tr tr	— tr tr	— tr tr	— tr tr	— nd nd	— nd nd	— nd nd	
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.						0.001 0.002 0.001	— 0.001 tr	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
Surrounding of Shugen Island	Sea bass	Average Max. Min.														— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.							— tr nd	— tr nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
Nakagusuku Bay, Okinawa Pref.	Black porgy	Average Max. Min.									— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— tr nd	— nd nd
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.	0.002 0.002 0.002	0.002 0.003 0.001	— 0.001 nd	0.001 0.001	— nd nd	0.001 0.002	0.001 0.001	0.001 0.001	0.001 0.002	— nd nd	— 0.001 0.001	0.001 0.001	0.001 0.001	0.001 0.001	0.001 0.001	— nd nd	— 0.001 nd	

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.	— nd nd																
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.	— nd nd																
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.			— nd nd														
Ise Bay	Common mussel	Average Max. Min.													— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
Shimane Peninsula	Common mussel	Average Max. Min.													— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
Naruto	Asiatic mussel	Average Max. Min.	— nd nd																

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.	— tr tr	— 0.002 nd	— 0.002 nd	— 0.003 nd	— nd nd	— tr tr	— tr nd	— tr nd	— tr nd	— nd nd	— tr nd	— tr nd	— nd nd	— nd nd	— tr tr	— nd nd	— 0.001 nd		
Tokyo Bay	Black-tailed gull	Average Max. Min.					— 0.026 0.024 0.015	0.012 0.030 0.023	0.011 0.014 0.010	0.011 0.014 0.009	0.012 0.014 0.011	0.017 0.020 0.009	0.013 0.016 0.011	0.011 0.016 0.008	0.010 0.012 0.010	0.007 0.012 0.008	0.006 0.006 0.005	0.019 0.059 0.007			
Kabushima	Black-tailed gull	Average Max. Min.																	0.009 0.012 0.005		

**Table E-3 Dieldrin (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.	0.001 0.001 0.001	0.001 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd												
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.	— nd nd	— nd nd	— 0.001 nd	— nd nd	— 0.001 nd	— 0.001 nd	— nd nd	— 0.001 nd	— nd nd									
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.	— nd nd	— nd nd	— nd nd	— nd nd	— tr nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— tr nd	— nd nd	— nd nd	— nd nd	— nd nd		
Offshore of Joban	Pacific saury	Average Max. Min.	0.002 0.003 0.002	— nd nd	0.001 0.001 0.001	— nd nd	— nd nd	— tr nd	— tr tr	— tr tr	— nd nd	— nd nd	— 0.001 0.002 0.001	— nd nd	0.003 0.004 0.001	— nd nd	— nd nd	— nd nd		
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.	— nd nd	— nd nd	— nd nd	— nd nd														
Tokyo Bay	Sea bass	Average Max. Min.	0.007 0.010 0.004	0.012 0.018 0.007	0.011 0.013 0.008	— nd nd	0.004 0.005 0.004	0.002 0.002 0.001	0.001 0.001 0.001	0.003 0.003 0.003	0.003 0.003 0.003	0.002 0.003 0.002	0.002 0.003 0.002	0.002 0.004 0.001	0.003 0.003 0.002	0.002 0.005 0.001	0.004 0.002 0.001	— nd nd	— nd nd	
Osaka Bay	Sea bass	Average Max. Min.	— 0.017 0.046 0.005	— 0.015 0.023 0.010	— 0.012 0.019 0.006	— 0.005 0.007 0.003	— 0.008 0.018 0.001	— 0.002 0.003 0.001	— 0.001 0.003 0.001	— 0.004 0.005 0.003	— 0.004 0.005 0.001	— 0.002 0.003 0.001	— 0.002 0.003 0.001	— 0.004 0.007 0.017	— 0.007 0.009 0.003	— nd nd	— 0.003 0.004 0.001	— nd nd	— nd nd	
Seto Inland Sea	Sea bass	Average Max. Min.	— 0.005 0.011 0.002	— 0.003 0.005 0.002	— 0.002 0.003 0.001	— 0.002 0.003 0.001	— 0.003 0.002 0.001	— 0.002 0.002 0.001	— 0.001 0.001 0.001	— nd nd	— nd nd	— nd nd	— nd nd							
Offshore of Sanin	Sea bass	Average Max. Min.	— — —	— — —	— — —	— — —														
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.	— — —	— — —	— — —	— — —														
Surrounding of Shugen Island	Sea bass	Average Max. Min.	— — —	— — —	— — —	— — —														
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.	— — —	— — —	— — —	— — —														
Nakagusuku Bay Okinawa Pref.	Black porgy	Average Max. Min.	— — —	— — —	— — —	— — —														
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.	— 0.004 0.004	— 0.004 0.004	— 0.001	— nd	— 0.007 0.003	— 0.002 0.003	— 0.013 0.012	— 0.002 0.002	— 0.001 0.001	— nd nd	— 0.004 0.003	— 0.005 0.003	— 0.001 0.002	— 0.002 0.002	— 0.003 0.003	— 0.001 0.001	— 0.004 0.003	— 0.001 0.001

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— tr nd	— tr nd	— nd nd	— nd nd	— nd nd
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.	0.002 0.003 0.002	0.005 0.012 0.002	— 0.002 0.002	0.002 0.001	0.001 0.002	0.001 0.001	0.001 0.001	0.003 0.003	0.001 0.001	0.001 0.001	0.001 0.001	0.001 0.001	0.001 0.001	0.001 0.001	0.001 0.001	— nd nd	— nd nd
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.	— — —	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
Ise Bay	Common mussel	Average Max. Min.	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— nd nd	— 0.007 0.002	— 0.004 0.004	— 0.002 0.002	— 0.001 0.001
Shimane Peninsula	Common mussel	Average Max. Min.	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— nd nd	— tr tr	— tr tr	— nd nd	— nd nd
Naruto	Asiatic mussel	Average Max. Min.	0.58 0.76 0.12	0.34 0.69 0.058	0.18 0.65 0.05	0.13 0.25 0.022	0.051 0.088 0.037	0.067 0.082 0.060	0.27 0.35 0.18	0.13 0.18 0.10	0.078 0.24 0.003	0.054 0.067 0.044	— 0.069 0.091 0.001	0.037 0.025 0.042	0.081 0.073 0.042	0.035 0.046 0.016	0.073 0.147 0.029	0.099 0.147 0.033	0.126 0.170 0.043

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.	— 0.006 nd	0.002 0.003 0.001	0.001 0.002 nd	0.006 0.021 0.001	— nd nd	0.002 0.003 0.001	— tr nd	— nd nd	— 0.001 tr	— nd nd	— 0.001 tr	— nd nd	— tr tr	— 0.003 tr	— 0.002 tr	— 0.001 tr	— nd nd
Tokyo Bay	Black-tailed gull	Average Max. Min.	— — —	— — —	— — —	— — —	— — —	— — —	— 0.12 0.037 0.057	— 0.025 0.037 0.019	— 0.029 0.037 0.022	— 0.024 0.031 0.019	— 0.012 0.013 0.010	— 0.021 0.031 0.015	— 0.025 0.035 0.005	— 0.007 0.016 0.007	— 0.010 0.016 0.006	— 0.009 0.012 0.007	— 0.007 0.009 0.006
Kabushima	Black-tailed gull	Average Max. Min.	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	0.005 0.010 0.002	

**Table E-4 p, p'-DDT (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.	— nd nd	— 0.002 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.001 nd nd	— nd nd	— 0.001 nd nd	— nd nd	— nd nd	— nd nd	— 0.001 nd nd	— nd nd			
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.	0.034 0.048 0.025	0.017 0.026 0.009	0.036 0.074 0.010	0.041 0.068 0.020	0.069 0.11 0.027	0.052 0.068 0.021	0.058 0.081 0.031	0.023 0.041 0.011	0.023 0.072 0.014	0.035 0.051 0.024	0.039 0.068 0.025	0.029 0.076 0.008	0.030 0.068 0.021	0.046 0.076 0.025	0.034 0.088 0.014	0.078 0.043 0.025	0.036 0.050 0.050	0.022 0.044 0.012	
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.			0.003 0.005 0.002	0.003 0.004 0.002	0.002 0.003 0.001	0.004 0.006 0.002	0.002 0.003 0.002	— 0.002 0.001	0.022 0.003 0.001	— 0.001 0.001	— tr nd	— tr nd	— nd nd	— nd nd	— tr nd	— nd nd	— 0.002 nd	— nd nd	
Offshore of Joban	Pacific saury	Average Max. Min.	0.004 0.004 0.003	0.002 0.002 0.002	0.003 0.003 0.003	— 0.001 nd	0.002 0.002 0.001	0.002 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd			
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.			0.008 0.015 0.006	0.003 0.005 0.002	0.004 0.008 0.002	— 0.002 0.002 0.001	0.002 0.003 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.002 0.002 nd	— 0.002 0.002 nd	— 0.002 0.002 nd	— 0.002 0.002 nd		
Tokyo Bay	Sea bass	Average Max. Min.	0.012 0.016 0.004	0.002 0.003 0.002	0.007 0.009 0.005	— nd nd	0.002 0.003 0.002	0.001 0.002 0.001	0.000 0.003 0.001	0.020 0.003 0.001	0.001 0.002 0.001	0.001 0.002 0.001	0.007 0.012 0.004	— nd nd	0.002 0.002 0.001	0.001 0.003 0.001	0.002 0.003 0.001	— nd nd	0.002 0.002 0.001		
Osaka Bay	Sea bass	Average Max. Min.			0.010 0.022 0.004	0.013 0.022 0.009	0.006 0.010 0.003	0.007 0.013 0.002	0.005 0.006 0.002	0.003 0.004 0.003	0.002 0.003 0.002	0.002 0.003 0.001	0.001 0.002 0.001	0.007 0.003 0.002	— nd nd	0.003 0.004 0.002	0.002 0.003 0.001	0.002 0.003 0.001	0.002 0.003 0.004	0.017 0.030 0.003	
Seto Inland Sea	Sea bass	Average Max. Min.			0.028 0.036 0.020	0.007 0.010 0.004	— 0.075 nd	0.093 0.16 0.003	— 0.002 0.004 nd	0.008 0.017 0.002	0.003 0.004 0.001	0.002 0.004 0.001	0.019 0.004 0.002	0.003 0.005 0.002	— nd nd	— nd nd	— nd nd	— nd nd	— 0.002 0.003	— nd nd	
Offshore of Sanin	Sea bass	Average Max. Min.					0.009 0.011 0.007	0.007 0.009 0.005	0.002 0.003 0.001	0.006 0.022 0.001	— 0.001 0.002 tr	— 0.002 0.001	— 0.001 0.001	— 0.002 0.001	— 0.002 0.001	0.003 0.004 0.002	0.001 0.002 0.001	0.001 0.002 0.001	0.001 0.004 0.002	0.001 0.002 tr	— nd nd
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.							0.012 0.030 0.002	0.007 0.016 0.002	0.007 0.022 0.002	0.007 0.010 0.002	0.005 0.004 0.002	— nd nd	— 0.005 0.007 tr	— nd nd	— 0.002 0.007 nd	— nd nd	— nd nd		
Surrounding of Shugen Island	Sea bass	Average Max. Min.														— 0.001 nd	— nd nd	— nd nd	— tr nd		
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.							0.003 0.008 0.001	0.002 0.011 0.002	0.005 0.002 0.001	0.002 0.003 0.001	— nd nd	— 0.003 nd	— nd nd	— 0.001 tr	— 0.001 tr	— 0.001 tr	— 0.001 tr		
Nakagusuku Bay, Okinawa Pref.	Black porgy	Average Max. Min.											— 0.001 nd	— 0.001 tr	— nd nd	— nd nd	— nd nd	— tr nd	— nd nd		
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.		— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.004 0.005 0.003				

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.	0.002 0.003 0.002	0.002 0.002 0.002	0.001 0.002 0.001	— nd nd	0.002 0.002 0.001	0.001 0.002 0.001	— nd nd	0.003 0.003 0.002	— tr tr	0.002 0.002 0.002	— tr tr	0.001 0.001 0.001	— nd nd	— nd nd	— nd nd	— nd nd
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.	0.003 0.003 0.003	0.005 0.006 0.004	0.002 0.003 0.001	— nd nd	0.001 0.002 0.001	0.004 0.004 0.003	0.002 0.002 0.002	0.001 0.001 0.001	0.001 0.001 0.001	0.001 0.001 0.001	0.001 0.001 0.001	— nd nd	— 0.001 nd	— nd nd	— nd nd	— nd nd
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.			0.004 0.004 0.002	0.002 0.002 0.001	0.005 0.007 0.002	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	0.001 0.001 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
Ise Bay	Common mussel	Average Max. Min.													— nd nd	— nd nd	— nd nd	— nd nd
Shimane Peninsula	Common mussel	Average Max. Min.													— nd nd	— nd nd	— nd nd	— nd nd
Naruto	Asiatic mussel	Average Max. Min.	0.010 0.013 0.008	0.007 0.008 0.005	0.004 0.003 0.002	— nd nd	0.008 0.010 0.007	0.003 0.003 0.003	0.003 0.002 0.002	0.001 0.001 0.001	0.002 0.002 0.001	— nd nd	— 0.002 nd	— nd nd	— nd nd	— nd nd	— nd nd	

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.	0.003 0.007 nd	— nd nd	0.007 0.013 0.006	— nd nd	— nd nd	0.004 0.005 0.004	— nd nd	— nd nd	— nd nd	0.002 0.006 0.001	— tr tr	0.001 0.006 0.001	— tr nd	— 0.010 nd	— 0.001 nd	— 0.001 0.001	— 0.001 0.001
Tokyo Bay	Black-tailed gull	Average Max. Min.							— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Kabushima	Black-tailed gull	Average Max. Min.																— nd nd	

**Table E-5 - HCH (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.	0.006 0.008 0.004	— 0.005 nd	0.005 0.007 0.004	0.004 0.009 0.005	0.006 0.006 0.004	0.005 0.006 0.003	0.004 0.004 0.001	0.003 0.002 0.001	0.002 0.002 0.001	0.001 0.003 0.001	— — nd	— 0.001 0.001	— — nd	— 0.001 0.001	— 0.001 nd	— 0.001 nd	0.001 0.002 0.001	
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.	0.001 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd													
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.			0.005 0.006 0.003	0.017 0.023 0.011	0.006 0.008 0.003	0.007 0.010 0.006	0.005 0.006 0.003	0.003 0.004 0.002	0.004 0.050 0.002	0.002 0.003 0.002	— tr nd	— 0.001 tr	— tr tr	— tr nd	— tr nd	— tr nd	— tr nd	
Offshore of Joban	Pacific saury	Average Max. Min.	0.011 0.012 0.009	0.003 0.005 0.002	0.007 0.010 0.005	0.010 0.015 0.004	0.007 0.009 0.004	0.005 0.007 0.003	0.005 0.006 0.004	0.004 0.005 0.003	— tr nd	— nd nd	— nd nd	— 0.001 nd	— 0.006 nd	— nd nd	— nd nd	— nd nd		
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.			— 0.002 nd	— nd nd	— nd nd	— nd nd	— nd nd											
Tokyo Bay	Sea bass	Average Max. Min.	0.006 0.019 0.001	0.002 0.003 0.001	0.005 0.006 0.005	0.006 0.019 0.002	0.004 0.004 0.003	0.002 0.002 0.002	— tr tr	— tr tr	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Osaka Bay	Sea bass	Average Max. Min.			0.008 0.014 0.003	0.010 0.015 0.006	0.007 0.010 0.005	0.003 0.005 0.002	0.001 0.001 0.001	0.001 0.001 0.001	0.002 0.002 0.001	0.001 0.001 0.001	— tr 0.002	0.002 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
Seto Inland Sea	Sea bass	Average Max. Min.	0.003 0.006 0.001	0.005 0.010 0.002	0.003 0.006 0.001	0.003 0.006 0.003	0.006 0.007 0.002	0.005 0.009 0.002	0.002 0.003 0.001	0.002 0.003 0.001	— nd 0.002	— nd tr	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Offshore of Sanin	Sea bass	Average Max. Min.				0.013 0.017 0.011	0.007 0.012 0.004	0.006 0.007 0.004	0.002 0.003 0.001	0.001 0.002 0.001	0.001 0.002 0.001	0.002 0.003 0.001	— tr tr	— tr tr	— tr tr	— 0.001 tr	— 0.001 tr	— nd nd	— tr nd	
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.							0.002 0.003 0.002	— 0.001 nd	— tr tr	— tr nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Surrounding of Shugen Island	Sea bass	Average Max. Min.													— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.							— tr nd	— 0.001 nd	— tr nd	— nd nd	— tr nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Nakagusuku Bay Okinawa Pref.	Black porgy	Average Max. Min.									— nd nd	— tr tr	— tr nd	— nd nd	— nd nd	— nd nd	— 0.002 nd	— tr nd	— nd nd	
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.	0.003 0.004 0.003	0.011 0.013 0.009	0.004 0.007 0.001	0.005 0.010 0.003	0.004 0.005 0.002	0.009 0.012 0.006	0.003 0.003 0.003	0.004 0.005 0.003	— 0.003 nd	0.002 0.003 0.001	0.002 0.002 0.001	0.001 0.001 0.001	0.001 0.001 0.001	— nd nd	— 0.001 nd	— 0.001 nd	— 0.001 nd	

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.	0.004 0.005 0.003	0.002 0.002 0.001	0.002 0.002 0.002	0.003 0.004 0.003	0.002 0.002 0.002	0.002 0.003 0.001	0.001 0.002 0.001	— tr	0.002 0.002 tr	— 0.001 tr	0.001 0.001 0.001	— tr tr	— tr nd	— tr nd	— tr nd	— tr tr	
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.	0.002 0.002 0.002	— nd nd	— nd nd	0.002 0.002 0.001	0.001 0.001 0.001	0.002 0.002 0.001	0.001 0.001 0.001	— tr tr	— tr tr	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.			0.006 0.008 0.004	0.006 0.007 0.005	0.005 0.006 0.004	0.002 0.002 0.002	— 0.001 nd	— nd nd	0.001 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
Ise Bay	Common mussel	Average Max. Min.												— 0.001 0.001	0.001 0.001	0.002 0.002	— nd nd	— 0.001 nd	— nd nd
Shimane Peninsula	Common mussel	Average Max. Min.												— nd nd	— tr tr	— tr nd	— nd nd	— nd nd	— nd nd
Naruto	Asiatic mussel	Average Max. Min.	0.031 0.036 0.028	0.026 0.033 0.019	0.043 0.045 0.040	0.015 0.019 0.010	0.006 0.016 0.002	0.029 0.034 0.024	0.009 0.014 0.004	0.008 0.009 0.006	0.004 0.009 0.006	0.003 0.006 0.001	— nd nd	0.006 0.002 0.001	— 0.002 0.001	— nd nd	— nd nd	— nd nd	

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.	— 0.043 nd	0.003 0.005 0.002	0.008 0.019 0.003	0.006 0.011 0.003	0.004 0.005 0.003	0.007 0.009 0.005	0.010 0.037 0.002	0.002 0.001 0.001	— tr	— tr	— tr	— tr	— tr	— tr	— nd	— nd	
Tokyo Bay	Black-tailed gull	Average Max. Min.					— nd	— nd	— tr	— nd	— nd	— nd	— nd	— nd	— nd	— nd	— nd	— nd	
Kabushima	Black-tailed gull	Average Max. Min.															— nd	— nd	— nd

**Table E-6 trans-Chlordane (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.						— nd nd												
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.						0.001 nd	— nd nd	— nd nd	— nd nd	0.001 nd	— nd nd	— nd nd	0.001 nd	0.001 nd	0.001 nd	0.001 nd		
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.						— nd nd												
Offshore of Joban	Pacific saury	Average Max. Min.						— nd nd	— nd nd	— tr tr	— nd nd									
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.						— nd nd												
Tokyo Bay	Sea bass	Average Max. Min.						0.003 0.004 0.002	0.003 0.004 0.002	0.005 0.006 0.004	0.002 0.003 0.001	0.004 0.006 0.003	0.003 0.006 0.001	0.007 0.009 0.005	0.001 0.002 0.001	0.003 0.003 0.002	0.003 0.004 0.002	0.001 0.001 0.001		
Osaka Bay	Sea bass	Average Max. Min.						0.008 0.011 0.005	0.009 0.014 0.002	0.007 0.008 0.006	0.010 0.012 0.008	0.007 0.010 0.006	0.007 0.009 0.005	0.011 0.014 0.009	0.008 0.011 0.006	0.007 0.013 0.004	0.004 0.004 0.004	0.005 0.006 0.003		
Seto Inland Sea	Sea bass	Average Max. Min.						0.002 0.002 0.001	— 0.001 nd	0.002 0.004 0.001	— 0.004 nd	— 0.002 tr	0.003 0.004 0.001	0.003 0.004 0.001	— nd nd	— nd nd	— nd nd	— nd nd		
Offshore of Sanin	Sea bass	Average Max. Min.						— 0.004 nd	0.006 0.007 0.005	0.003 0.004 0.002	0.002 0.003 0.002	0.001 0.004 0.001	0.002 0.002 0.001	— nd nd	— nd nd	0.002 0.002 0.001	— nd tr	— nd nd		
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.						— 0.003 nd	— 0.002 nd	— tr tr	— 0.001 nd	— tr nd	— tr tr	— tr nd	— nd nd	— nd nd	— nd tr	— tr tr		
Surrounding of Shugen Island	Sea bass	Average Max. Min.						— nd nd	0.002 nd											
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.						— 0.001 nd	0.005 0.009 0.002	0.003 0.004 0.002	0.003 0.006 0.001	— nd nd	— 0.003 nd	— nd nd	— 0.001 nd	— tr nd	— nd nd	— nd nd		
Nakagusuku Bay, Okinawa Pref.	Black porgy	Average Max. Min.						— nd nd	— 0.001 nd	— tr tr	— tr tr	— tr tr	— tr tr	— nd nd	— nd nd	— nd nd	— tr nd	0.008 nd		
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.						0.005 0.007 0.004	0.007 0.007 0.006	0.008 0.010 0.007	0.008 0.009 0.002	0.004 0.006 0.007	0.018 0.024 0.011	0.010 0.011 0.009	0.013 0.016 0.016	0.009 0.010 0.011	0.014 0.016 0.012	0.003 0.006 0.001		

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.						— nd nd										
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.						0.017 0.018 0.016	0.016 0.018 0.015	0.019 0.020 0.018	0.009 0.010 0.008	0.005 0.006 0.005	0.006 0.007 0.005	0.005 0.005 0.004	0.002 0.002 0.020	0.002 0.003 0.002	0.002 0.002 0.001	0.003 0.003 0.002
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.						— nd nd	— 0.001 nd	— 0.001 nd	— 0.002 nd	— 0.001 nd	— 0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
Ise Bay	Common mussel	Average Max. Min.						— nd nd	— nd nd	— 0.001 nd	— 0.001 nd	— 0.001 nd	— nd nd	— nd nd	— 0.003 0.004	0.005 0.006	0.002 0.002	0.001 0.001
Shimane Peninsula	Common mussel	Average Max. Min.						— nd nd	0.001 0.001 0.001	— tr tr	0.001 0.001 0.001	0.001 0.001 0.003						
Naruto	Asiatic mussel	Average Max. Min.						0.010 0.011 0.010	0.013 0.013 0.012	0.018 0.022 0.015	0.015 0.024 0.003	0.016 0.021 0.008	0.016 0.022 0.002	— nd nd	0.009 0.023 0.010	0.014 0.011 0.012	0.008 0.017 0.007	0.007 0.010 0.006

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
Tokyo Bay	Black-tailed gull	Average Max. Min.						0.001 0.002 0.001	0.001 0.001 0.001	0.001 0.001 0.001	0.001 0.001 0.001	— nd nd						
Kabushima	Black-tailed gull	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd

**Table E-7 cis-Chlordane (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd			
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.						0.001 nd	0.002 nd	nd	0.002 nd	0.004 0.002 nd	0.002 nd	0.002 nd	0.003 0.001	0.004 0.002	0.002 0.001	0.008 0.005	0.003 0.002		
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd			
Offshore of Joban	Pacific saury	Average Max. Min.						0.002 0.002 0.002	0.002 0.002 0.001	— tr tr	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd			
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd			
Tokyo Bay	Sea bass	Average Max. Min.						0.007 0.010 0.005	0.007 0.008 0.005	0.015 0.018 0.013	0.007 0.009 0.004	0.016 0.022 0.011	0.009 0.012 0.004	0.025 0.035 0.017	0.004 0.006 0.003	0.008 0.010 0.005	0.005 0.009 0.003	0.009 0.011 0.007	0.003 0.004 0.002		
Osaka Bay	Sea bass	Average Max. Min.						0.019 0.024 0.015	0.027 0.042 0.008	0.016 0.020 0.014	0.017 0.021 0.013	0.015 0.020 0.012	0.013 0.016 0.009	0.015 0.020 0.012	0.012 0.016 0.010	0.008 0.019 0.005	0.006 0.008 0.005	0.013 0.015 0.009	0.007 0.011 0.006		
Seto Inland Sea	Sea bass	Average Max. Min.						0.004 0.006 0.003	— 0.005 nd	0.004 0.007 0.001	0.004 0.010 0.002	0.003 0.005 0.001	0.010 0.022 0.004	0.007 0.010 0.003			0.005 0.007 0.003	0.002 0.003 0.002	0.002 0.004 0.001		
Offshore of Sanin	Sea bass	Average Max. Min.						0.006 0.012 0.002	0.015 0.019 0.012	0.007 0.009 0.005	0.005 0.006 0.004	0.002 0.006 0.003	0.004 0.005 0.003	0.004 0.005 0.003	0.003 0.003 0.002	— 0.003 0.002	0.002 0.003 0.002	0.002 tr tr	— tr tr		
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.						— 0.013 nd	0.004 0.008 0.001	0.002 0.003 0.001	0.002 0.003 0.001	— 0.001 0.002 tr	— 0.001 0.001 tr	— 0.001 0.001 nd	— tr nd	— tr nd	— tr nd	— tr nd	— tr nd		
Surrounding of Shugen Island	Sea bass	Average Max. Min.														— nd nd	0.007 nd nd	— nd nd	— nd nd	— nd nd	
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.						— 0.003 tr	0.009 0.019 0.005	0.007 0.009 0.005	0.004 0.006 0.001	0.001 0.002 0.001	0.003 0.006 0.001	— nd nd	— tr nd	— tr nd	— tr nd	— tr nd	— tr nd		
Nakagusuku Bay Okinawa Pref.	Black porgy	Average Max. Min.									— 0.005 nd	— 0.002 tr	— 0.003 tr	— 0.005 tr	— 0.001 nd	— 0.001 0.001	— tr tr	— tr nd	— tr nd	— tr nd	— tr nd
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.						0.012 0.015 0.011	0.015 0.016 0.013	0.019 0.023 0.015	0.013 0.015 0.011	0.018 0.026 0.014	0.015 0.021 0.010	0.009 0.012 0.008	0.019 0.022 0.014	0.012 0.013 0.010	0.013 0.015 0.011	0.011 0.017 0.009	0.009 0.008 0.005		

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.						— 0.001 nd	— nd nd	— nd nd	— 0.001 nd	— nd nd	— nd nd	— nd nd	— 0.002 nd	— nd nd	— nd nd	— nd nd	— nd nd		
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.						0.170 0.018 0.016	0.010 0.011 0.010	0.012 0.013 0.011	0.008 0.009 0.007	0.006 0.006 0.005	0.004 0.004 0.004	0.003 0.003 0.003	0.003 0.003 0.002	0.003 0.003 0.001	0.002 0.002 0.002	0.003 0.003 0.002	0.003 0.003 0.002		
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.						— nd nd	0.001 0.001	0.002 0.003	0.002 0.004	0.002 0.001	0.001 0.001	0.001 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Ise Bay	Common mussel	Average Max. Min.													— 0.005 0.009	0.005 0.009	0.007 0.008	0.003 0.003	0.002 0.002	0.002 0.002	
Shimane Peninsula	Common mussel	Average Max. Min.														0.001 0.001 0.001	— tr tr	— 0.001 tr	— tr tr	— 0.001 tr	— 0.001 tr
Naruto	Asiatic mussel	Average Max. Min.						0.019 0.021 0.017	0.026 0.028 0.025	0.028 0.035 0.021	0.021 0.034 0.003	0.028 0.034 0.014	— 0.018 nd	0.024 0.044 0.002	0.039 0.053 0.002	0.023 0.032 0.026	0.032 0.040 0.017	0.029 0.040 0.034	0.031 0.036 0.041		

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.						— nd nd											
Tokyo Bay	Black-tailed gull	Average Max. Min.						0.013 0.017 0.009	0.008 0.010 0.007	0.016 0.017 0.013	0.013 0.021 0.008	0.014 0.018 0.008	0.006 0.008 0.005	0.003 0.008 0.002	0.005 0.008 0.003	0.002 0.004 0.002	0.006 0.009 0.002	0.005 0.007 0.004	
Kabushima	Black-tailed gull	Average Max. Min.																— nd nd	

**Table E-8 trans-Nonachlor (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.001							
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.						— 0.003 nd	— 0.002 nd	— nd nd	0.003 0.005 0.005	0.003 0.007 0.002	— nd nd	— 0.003 nd	0.006 0.005 0.001	0.015 0.010 0.004	0.015 0.009 0.004	0.004 0.018 0.012	0.003 0.007 0.002	
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.						— 0.001 nd	— 0.001 nd	— 0.002 nd	— 0.002 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.001 nd	
Offshore of Joban	Pacific saury	Average Max. Min.						0.002 0.002 0.001	0.001 0.001 0.001	— 0.001 tr	— nd nd	— nd nd	— 0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd								
Tokyo Bay	Sea bass	Average Max. Min.						0.012 0.014 0.009	0.010 0.011 0.008	0.020 0.023 0.016	0.010 0.012 0.007	0.039 0.050 0.031	0.010 0.013 0.008	0.042 0.060 0.024	0.006 0.009 0.005	0.011 0.013 0.006	0.008 0.014 0.004	0.012 0.014 0.008	0.004 0.005 0.002	
Osaka Bay	Sea bass	Average Max. Min.						0.031 0.040 0.024	0.064 0.102 0.018	0.033 0.042 0.029	0.033 0.041 0.026	0.026 0.042 0.019	0.019 0.023 0.015	0.030 0.038 0.023	0.029 0.034 0.025	0.016 0.034 0.010	0.011 0.012 0.009	0.009 0.012 0.006	0.011 0.017 0.008	
Seto Inland Sea	Sea bass	Average Max. Min.						0.005 0.006 0.003	0.005 0.006 0.003	0.010 0.016 0.006	0.007 0.015 0.005	0.005 0.009 0.002	0.015 0.033 0.005	0.013 0.018 0.004			0.007 0.009 0.003	0.003 0.004 0.002	0.008 0.015 0.003	
Offshore of Sanin	Sea bass	Average Max. Min.						0.010 0.021 0.003	0.020 0.025 0.017	0.010 0.015 0.007	0.007 0.005 0.006	0.003 0.004 0.002	0.005 0.007 0.003	0.005 0.007 0.003	0.002 0.005 0.001	0.003 0.006 0.005	0.003 0.004 0.002	0.002 0.002 0.001	0.002 0.002 0.001	
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.						0.016 0.032 0.006	0.011 0.021 0.006	0.007 0.011 0.006	0.007 0.008 0.006	0.004 0.006 0.002	0.003 0.007 0.002	0.004 0.006 0.003	— 0.002 tr	— tr tr	— 0.001 0.025 0.002	— 0.002 0.003 0.001	— 0.002 0.003 0.002	
Surrounding of Shugen Island	Sea bass	Average Max. Min.													— nd nd	— 0.009 0.002	— 0.002 0.002	— nd nd	— nd nd	
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.						0.006 0.009 0.004	0.019 0.038 0.010	0.015 0.019 0.013	0.015 0.029 0.008	0.007 0.012 0.003	0.010 0.016 0.004	— 0.004 tr 0.001	0.003 0.004 0.001	0.001 0.002 0.001	0.002 0.003 0.001	— 0.001 0.003 0.002		
Nakagusuku Bay, Okinawa Pref.	Black porgy	Average Max. Min.													0.012 0.026 0.004	0.007 0.013 0.003	0.015 0.035 0.004	0.011 0.039 0.003	0.004 0.005 0.001	0.005 0.005 0.002
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.						0.016 0.026 0.012	0.023 0.029 0.018	0.020 0.023 0.017	0.014 0.017 0.012	0.031 0.036 0.026	0.029 0.036 0.015	0.014 0.016 0.012	0.033 0.036 0.015	0.014 0.017 0.011	0.015 0.016 0.010	0.016 0.027 0.009		

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.						— 0.001 nd	— nd nd	— nd nd	— 0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.						0.009 0.010 0.009	0.011 0.013 0.010	0.019 0.021 0.018	0.009 0.010 0.009	0.006 0.007 0.006	0.005 0.005 0.005	0.005 0.004 0.004	0.038 0.040 0.030	0.003 0.003 0.003	0.002 0.002 0.002	0.003 0.003 0.002		
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.						— nd nd	0.001 0.001 0.001	0.002 0.002 0.002	0.001 0.001 0.001	— nd nd	— 0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Ise Bay	Common mussel	Average Max. Min.													— 0.004 0.009	0.005 0.009	0.003 0.004	0.003 0.003	0.002 0.002	0.002 0.003
Shimane Peninsula	Common mussel	Average Max. Min.														0.001 0.002 0.001	— tr tr	— tr tr	— nd nd	— 0.002 0.002
Naruto	Asiatic mussel	Average Max. Min.						0.008 0.008 0.007	0.011 0.012 0.008	0.014 0.017 0.012	0.007 0.010 0.003	0.007 0.010 0.004	— 0.006 0.010 0.003	— nd nd	0.001 0.011 0.007	0.005 0.011 0.007	0.007 0.009 0.004	0.004 0.005 0.004		

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.						— 0.001 nd	— 0.002 nd	— 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.001 nd	— nd nd	— nd nd
Tokyo Bay	Black-tailed gull	Average Max. Min.						0.107 0.120 0.094	0.166 0.200 0.130	0.130 0.150 0.100	0.174 0.260 0.120	0.318 0.470 0.160	0.108 0.130 0.070	0.051 0.078 0.038	0.058 0.078 0.025	0.034 0.046 0.045	0.061 0.100 0.045	0.043 0.056 0.037
Kabushima	Black-tailed gull	Average Max. Min.																0.013 0.022 0.007

**Table E-9 cis-Nonachlor (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd								
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	0.002 nd	0.003 nd	0.001 nd	
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd								
Offshore of Joban	Pacific saury	Average Max. Min.						— nd nd	— nd nd	— tr tr	— tr tr	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd								
Tokyo Bay	Sea bass	Average Max. Min.						0.004 0.006 0.003	0.004 0.005 0.003	0.006 0.007 0.006	0.004 0.006 0.003	0.009 0.012 0.007	0.004 0.005 0.004	0.017 0.026 0.010	0.003 0.004 0.002	0.005 0.007 0.003	0.004 0.007 0.002	0.006 0.007 0.004	0.002 0.003 0.001	
Osaka Bay	Sea bass	Average Max. Min.						0.011 0.013 0.009	0.017 0.027 0.006	0.010 0.012 0.008	0.011 0.014 0.009	0.009 0.015 0.007	0.007 0.012 0.005	0.010 0.012 0.008	0.008 0.010 0.002	0.005 0.013 0.003	0.004 0.009 0.004	0.007 0.009 0.003	0.004 0.006 0.003	
Seto Inland Sea	Sea bass	Average Max. Min.						— 0.002 nd	— 0.002 nd	— 0.006 nd	— 0.004 nd	— 0.004 nd	— 0.004 nd	— 0.007 nd	0.006 nd	— 0.003 nd	— 0.005 nd	— 0.002 nd	— 0.002 nd	
Offshore of Sanin	Sea bass	Average Max. Min.						— 0.009 nd	— 0.010 nd	— 0.004 nd	— 0.003 nd	— 0.003 nd	— 0.002 nd	— 0.002 nd	0.002 nd	— nd nd	— 0.003 nd	— 0.003 nd	— tr nd	
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.						— 0.006 nd	— 0.003 nd	— 0.006 nd	— 0.002 nd	— 0.002 nd	— 0.002 nd	— 0.001 nd	— 0.001 nd	— tr nd	— tr nd	— tr nd	— tr nd	
Surrounding of Shugen Island	Sea bass	Average Max. Min.						— nd	— nd	— nd	— nd	— nd	— nd							
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.						0.003 0.006 0.001	0.007 0.016 0.003	0.006 0.007 0.005	0.007 0.013 0.004	0.003 0.005 0.002	0.004 0.006 0.002	— 0.002 0.002 0.001	— 0.001 0.001	— 0.001 0.001	— 0.001 0.001	— 0.001 0.001	— 0.001 0.001	
Nakagusuku Bay, Okinawa Pref.	Black porgy	Average Max. Min.						— nd	— nd	— nd	— nd	— nd	— nd							
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.						0.008 0.010 0.006	0.008 0.009 0.007	0.008 0.010 0.005	0.006 0.007 0.007	0.009 0.012 0.007	0.012 0.015 0.005	0.006 0.007 0.005	0.016 0.019 0.012	0.009 0.010 0.008	0.011 0.010 0.011	0.003 0.004 0.005	0.005 0.007 0.008	

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.						— nd nd											
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.						0.007 0.008 0.007	0.006 0.006 0.005	0.007 0.008 0.006	0.003 0.003 0.003	0.003 0.004 0.003	0.002 0.002 0.002	0.002 0.002 0.002	0.001 0.001 0.001	0.002 0.001 0.001	0.001 0.001 0.001	0.001 0.002 0.001	0.001 0.001 0.001
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.						— nd nd											
Ise Bay	Common mussel	Average Max. Min.						— nd											
Shimane Peninsula	Common mussel	Average Max. Min.						— nd											
Naruto	Asiatic mussel	Average Max. Min.						0.002 0.003 0.002	0.003 0.003 0.002	0.003 0.004 0.003	0.002 0.003 0.001	0.002 0.004 0.001	0.002 0.002 0.001	0.001 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.						— nd nd	— 0.001 nd	— nd nd									
Tokyo Bay	Black-tailed gull	Average Max. Min.						0.029 0.036 0.024	0.041 0.057 0.035	0.038 0.054 0.027	0.050 0.080 0.030	0.065 0.110 0.033	0.040 0.050 0.025	0.012 0.028 0.006	0.020 0.027 0.013	0.012 0.016 0.010	0.027 0.016 0.017	0.016 0.023 0.011	
Kabushima	Black-tailed gull	Average Max. Min.						— nd	— 0.003 nd										

**Table E-10 Oxychlordane (Fiscal Year 1978–1995)**

(Fishes)

(Unit: ppm)

Sampling spot	Species	Classification	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95		
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd				
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	0.001 nd	— nd nd	0.001 nd	— nd nd	0.001 nd	— nd nd	0.003 0.004 0.002				
Yamada Bay, Iwase Pref.	Greenling	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd				
Offshore of Joban	Pacific saury	Average Max. Min.						— nd nd	— nd nd	— tr nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd				
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd				
Tokyo Bay	Sea bass	Average Max. Min.						0.001 0.002 0.001	0.001 0.001 0.001	0.002 0.002 0.001	— 0.002 tr 0.001	0.002 0.002 0.001	— 0.001 nd 0.001	0.001 0.003 0.001	— nd nd	— 0.002 0.001	— nd nd	— nd nd	— nd nd			
Osaka Bay	Sea bass	Average Max. Min.						0.003 0.004 0.003	0.005 0.007 0.002	0.003 0.004 0.003	0.004 0.004 0.003	0.002 0.003 0.001	0.001 0.002 0.002	0.002 0.002 0.002	— 0.001 tr nd	— 0.001 0.001 0.001	— 0.001 0.001 0.001	— tr tr	— tr tr			
Seto Inland Sea	Sea bass	Average Max. Min.						— nd nd	— 0.002 nd	0.001 0.002 0.001	— nd nd	— tr nd	— 0.002 tr	0.002 nd	— nd nd	— nd nd	— nd nd	— nd nd	0.002			
Offshore of Sanin	Sea bass	Average Max. Min.						— 0.002 nd	— 0.003 nd	— 0.002 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd				
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.						— nd nd	— 0.002 nd	— 0.001 tr	— 0.001 tr	— 0.001 tr	— tr tr	— tr tr	— tr nd	— tr tr	— tr nd	— tr tr	— tr tr			
Surrounding of Shugen Island	Sea bass	Average Max. Min.														— nd nd	— 0.003 nd	— nd nd	— nd nd	— nd nd		
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.						— 0.001 tr	0.003 0.001	0.004 0.005	0.002 0.004	0.001 tr	0.002 tr	0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd			
Nakagusuku Bay, Okinawa Pref.	Black porgy	Average Max. Min.										0.006 0.013 0.002	— 0.006 0.005 tr 0.001	0.004 0.007 0.001	0.003 0.002 0.001	0.001 nd tr	— 0.003 0.002 tr	— 0.002 0.002 tr	— 0.002 0.002 nd	— 0.002 0.002 nd	— 0.002 0.002 nd	— 0.002 0.002 nd
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.						0.002 0.003 0.001	0.003 0.003 0.002	— 0.001 nd	0.001 0.004	0.003 0.003	0.002 0.002	0.003 0.002	0.003 0.002	0.001 0.004	0.001 0.002	— nd nd	— nd nd			

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Miura Peninsula, Kanagawa Pref.	Common mussel	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd		
Ise Bay	Common mussel	Average Max. Min.													— tr tr	— nd nd	— nd nd	— nd nd	— nd nd	
Shimane Peninsula	Common mussel	Average Max. Min.														0.001 0.001 0.001	— tr tr	— nd nd	— nd nd	— nd nd
Naruto	Asiatic mussel	Average Max. Min.						0.004 0.004 0.003	0.005 0.005 0.005	0.007 0.008 0.005	— 0.006 0.006 0.002	0.004 0.006 0.002	— 0.002 0.004 nd	0.005 0.006 0.004	0.010 0.011 0.003	0.006 0.007 0.003	0.009 0.016 0.006	0.006 0.006 0.005		

(Birds)

Suburbs of Morioka Iwate Pref.	Gray starling	Average Max. Min.						— 0.002 nd	0.002 0.002 0.001	0.001 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	0.002 0.003 0.002	0.002 0.003 0.002	— nd nd	— nd nd
Tokyo Bay	Black-tailed gull	Average Max. Min.						0.036 0.049 0.029	0.038 0.049 0.023	0.034 0.046 0.021	0.041 0.055 0.035	0.055 0.079 0.030	0.030 0.040 0.014	0.018 0.023 0.013	0.014 0.019 0.011	0.010 0.023 0.008	0.015 0.019 0.011	0.013 0.016 0.012	
Kabushima	Black-tailed gull	Average Max. Min.																0.006 0.011 0.003	