

## **Appendix E**

### **Trend of Major Pollutant Levels in Wildlife Monitoring (Fiscal Year 1978–1998)**

## Appendix E

### Trend of Major Pollutant Levels in Wildlife Monitoring (Fiscal Year 1978–1998)

Table E-1	Polychlorinated biphenyls (PCB).....
Table E-2	p,p'-Dichlorodiphenyltrichloroethane (p,p'-DDT).....
Table E-3	p,p'-Dichlorodiphenylethylene (p,p'-DDE).....
Table E-4	p,p'-Dichlorodiphenyldichloroethane (p,p'-DDD).....
Table E-5	trans-Chlordane.....
Table E-6	cis-Chlordane.....
Table E-7	trans-Nonachlor.....
Table E-8	cis-Nonachlor.....
Table E-9	Oxychlordane.....

**Table E-1 PCB (Fiscal Year 1978–98)**

## (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	'96	'97	'98							
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.	— 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	0.04 0.03 0.03	0.05 0.06 0.03	0.02 0.04 0.02	0.05 0.06 0.03	0.06 0.08 0.04	0.11 0.12 0.07	0.04 0.04 0.03	0.05 0.06 0.04	0.02 0.03 0.02	0.03 0.04 0.01	0.01 0.02 0.01													
Yamada Bay, □ Iwate Pref.	Greenling	Average Max. Min.			— nd nd	— 0.02 nd	— 0.02 nd	— 0.03 nd	— tr tr	— 0.02 tr	— 0.03 0.02	— tr nd	— 0.01 tr	— 0.01 nd	— tr nd	— 0.01 nd	— tr nd	— 0.01 nd	— tr nd	— 0.01 nd	— tr nd	— 0.01 nd	— nd nd							
Offshore of □ Joban □	Pacific saury	Average Max. Min.	0.02 0.02 0.01	0.01 0.01 0.01	— nd nd	0.14 0.25 0.07	0.01 0.02 0.01	— 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 0.01	0.02 0.04 0.02	— 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 1.03 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 0.08 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 0.77 0.55	0.26 0.38 0.16	0.25 0.29 0.21	0.22 0.27 0.18	0.06 0.08 0.04	0.12 0.14 0.08	0.26 0.37 0.21	0.14 0.16 0.13							
Osaka Bay	Sea bass	Average Max. Min.			0.68 1.00 0.20	1.30 1.80 1.10	0.08 0.70 0.43	0.62 0.77 0.26	0.58 0.19 0.15	0.18 0.23 0.09	0.15 0.40 0.13	0.21 0.15 0.08	0.12 0.48 0.40	0.48 0.59 0.41	0.59 0.25 0.41	0.25 0.47 0.11	0.47 0.55 0.42	0.55 0.42 0.15	0.24 0.33 0.19	0.19 0.33 0.14	0.27 0.35 0.21	0.23 0.28 0.18	0.25 0.35 0.20							
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	1.33 2.10 0.27	0.49 0.99 0.13	0.68 1.00 0.34	0.87 1.40 0.57	0.46 1.00 0.10	0.20 0.37 0.14	0.35 0.53 0.13	0.09 0.13 0.02			0.07 0.09 0.04	0.11 0.20 0.03	0.04 0.05 0.02	0.06 0.11 0.03	0.21 0.45 0.03	0.07 0.10 0.04	0.04 0.04 0.03						
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 0.13 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 0.03	0.02 0.03 0.01	0.02 0.03 0.02	0.04 0.05 0.03	0.03 0.03 0.02	0.03 0.03 0.02					
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	— 0.02 tr	— 0.02 tr	— 0.04 nd	— tr tr	— tr tr	— tr tr	— tr tr	— tr tr	— 0.01 nd	— nd 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	— 0.01 tr	0.03 0.04 0.02	— 0.01 tr	0.03 0.04 0.01	— 0.01 tr	0.02 0.03 0.02	0.05 0.07 0.04	— 0.01 tr	0.02 0.03 0.02	0.05 0.07 0.04	— 0.01 tr	0.02 0.03 0.02
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 0.01	0.02 0.04 0.02	0.03 0.05 0.01	0.01 0.02 0.01	— tr tr	— tr tr	— 0.01 tr	— 0.01 tr										
Nakagusuku Bay □ Okinawa Pref.	Black porgy	Average Max. Min.														— 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 0.03	0.05 0.13 0.09	0.02 0.11 0.02	0.11 0.04 0.09	0.04 0.04 0.03	0.02 0.02 0.02	0.08 0.07 0.03	0.05 0.04 0.04	0.07 0.08 0.03	0.06 0.08 0.05	0.04 0.07 0.03	0.03 0.04 0.02	0.04 0.05 0.03	0.03 0.05 0.02	0.05 0.05 0.04	0.03 0.03 0.02							

## (Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.	0.01 0.01 0.01	0.02 0.02 0.01	0.01 nd nd	— 0.01 nd	— tr nd	— tr tr	— nd nd	— tr tr	— tr tr	— tr tr	— nd nd	— nd nd	— tr tr	— tr nd	— nd nd	— nd nd	— nd nd	— nd nd	— tr tr	— 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 0.05 0.04	0.05 0.05 0.04	0.03 0.04 0.03	0.03 0.04 0.03	0.02 0.03 0.01	0.02 0.02 0.03	0.04 0.04 0.03	0.02 0.02 0.02	0.02 0.02 0.02	0.01 0.02 0.01	0.02 0.02 0.01	0.01 0.01 0.01	0.01 0.01 0.01	0.02 0.02 0.01	— nd nd	— nd nd				
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.				— nd nd																				
Ise Bay	Common mussel	Average Max. Min.												— 0.11 0.11	0.07 0.07 0.06	0.06 0.06 0.05	0.02 0.02 0.02	0.01 0.02 0.01	0.02 0.02 0.02	0.03 0.03 0.02	0.02 0.02 0.02	0.02 0.02 0.02	0.02 0.02 0.02	0.02 0.02 0.02		
Shimane Peninsula	Common mussel	Average Max. Min.													0.04 0.05 0.02	— tr nd	— 0.02 tr	0.01 0.02 0.01	0.10 0.11 0.09	0.03 0.04 0.02	0.03 0.03 0.02	0.02 0.02 0.02	0.02 0.02 0.02	0.02 0.02 0.02	0.02 0.02 0.02	0.08 0.09 0.07
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 0.10 0.07	0.08 0.09 0.07	0.06 0.09 0.03	0.05 0.09 0.02	0.03 0.06 0.02	0.04 0.05 0.02	0.05 0.07 0.03	0.04 0.05 0.02	0.05 0.06 0.03	0.03 0.04 0.02	0.02 0.03 0.01	— nd nd	— nd nd	— nd nd	— nd nd				

## (Birds)

Suburbs of Morioka Iwa te Pref.	Gray starling	Average Max. Min.	0.01 0.02 nd	0.02 0.03 nd	0.03 0.05 0.02	0.02 0.03 0.02	— 0.01 nd	— tr tr	— 0.01 tr	— 0.01 tr	— 0.02 0.01	0.01 0.01 tr	— 0.01 tr	— tr nd	— tr tr	— tr tr	— tr nd	— nd nd	— 0.01 tr	— tr nd	— nd nd	
Tokyo Bay	Black-tailed gull	Average Max. Min.					— 8.90 2.90	1.86 2.60 1.20	1.96 2.30 1.60	1.68 2.10 1.40	1.20 1.50 1.00	2.00 2.80 1.40	2.84 3.60 1.80	1.40 1.90 1.10	1.56 2.00 1.00	2.56 3.30 2.00	1.15 1.40 0.79	0.77 0.87 0.66				
Kabushima	Black-tailed gull	Average Max. Min.																0.34 0.67 0.14	0.03 0.05 0.02	0.02 0.02 0.02	0.02 0.02 0.01	

(Note) nd : not detected, tr : trace

The sample picking area of Angry rockfish was changed from Offshore of Nemuro Hokkaido to Offshore of Kushiro Hokkaido from the fiscal year 1998.

**Table E-2 p,p'-DDT (Fiscal Year 1978–1998)**

## (Fishes)

(Unit: ppm)

## (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	— 0.001 nd	0.002 0.001 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 nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
Miura Peninsula, Kana gawa 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	— nd nd	0.001 0.001 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd
Noto Peninsula, Ishik awa 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	0.001 0.001 0.001	0.001 0.001 0.001	— nd nd	— 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	— nd nd	— nd nd	— nd nd
Shimane Penins ula	Common mussel	Average Max. Min.											— nd nd	— nd nd	— nd nd	— 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 nd 0.002	— nd nd	0.008 0.010 0.007	0.003 0.003 0.003	0.003 0.004 0.002	0.002 0.003 0.002	0.001 0.002 0.001	0.002 0.002 0.001	— nd nd	0.002 0.002 0.002	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd

## (Birds)

Suburbs of Morioka Iwa te Pref.	Gray starling	Average Max. Min.	0.003 0.007 nd	— nd nd	0.007 0.013 0.002	— 0.006 nd	— 0.002 nd	0.004 0.005 0.004	— 0.001 nd	— 0.001 tr	— 0.004 tr	0.002 0.006 0.001	0.001 0.002 0.001	— tr nd	— 0.001 nd	— 0.001 tr	— 0.001 nd	— 0.001 0.001	0.001 0.001 0.001	— 0.001 nd	— nd	— tr nd	0.001 0.002 0.001
Tokyo Bay	Black-tailed gull	Average Max. Min.						— nd nd	— 0.001 nd	— nd nd	0.011 0.043 0.001	— 0.001 nd	— nd nd	— nd nd	— nd nd	— 0.002 nd	0.003 0.005 0.002	— nd nd	— nd nd				
Kabushima	Black-tailed gull	Average Max. Min.																	— nd nd	— nd nd	— nd nd	— nd nd	0.001 nd

(Note) nd : not detected, tr : trace

The sample picking area of Angry rockfish was changed from Offshore of Nemuro Hokkaido to Offshore of Kushiro Hokkaido from the fiscal year 1998.

**Table E-3 p,p'-DDE (Fiscal Year 1978-1998)**

(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	'96	'97	'98												
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.	0.002 0.002 0.002	0.001 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— 0.001 nd	0.002 nd	0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	0.002 0.001 0.001	0.001 0.002 0.002	— 0.002 0.001	— 0.001 0.001	— 0.001 0.001	— 0.001 0.001	— nd nd												
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.	0.024 0.039 0.012	0.009 0.013 0.005	0.022 0.039 0.008	0.013 0.015 0.010	0.020 0.031 0.011	0.013 0.017 0.006	0.014 0.016 0.012	0.011 0.016 0.007	0.027 0.040 0.011	0.027 0.046 0.014	0.020 0.024 0.016	0.022 0.044 0.008	0.029 0.043 0.014	0.030 0.039 0.016	0.060 0.077 0.023	0.026 0.030 0.046	0.016 0.030 0.020	0.019 0.025 0.017	0.019 0.028 0.011	0.008 0.010 0.006													
Yamada Bay, Iwate Pref.	Greenling	Average Max. Min.			0.003 0.005 0.003	0.003 0.006 0.002	0.004 0.006 0.002	0.006 0.008 0.003	0.002 0.003 0.001	— 0.004 0.003	0.005 0.009 0.003	0.004 0.007 0.003	— 0.003 0.001	0.003 0.004 0.002	0.002 0.002 0.001	0.002 0.003 0.001	0.002 0.003 0.001	0.002 0.003 0.002	0.002 0.003 0.001	0.004 0.005 0.002	0.002 0.003 0.001	0.002 0.003 0.001													
Offshore of Joban	Pacific saury	Average Max. Min.	0.003 0.003 0.003	0.003 0.003 0.002	0.002 0.002 0.001	0.001 0.001 0.001	0.002 0.002 0.001	— tr tr	— nd nd	0.001 0.001 0.001	— tr tr	— nd nd	— nd nd	0.001 0.001 0.001	— nd nd	0.002 0.002 0.001																			
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.			0.005 0.009 0.004	0.003 0.004 0.002	0.003 0.006 0.002	0.001 0.002 0.001	0.003 0.004 0.001	0.002 0.002 0.003	— nd nd																								
Tokyo Bay	Sea bass	Average Max. Min.	0.029 0.042 0.011	0.022 0.033 0.018	0.052 0.069 0.029	0.043 0.086 0.012	0.014 0.022 0.009	0.009 0.011 0.006	0.009 0.011 0.008	0.011 0.014 0.009	0.006 0.013 0.005	0.011 0.016 0.009	0.027 0.042 0.017	0.009 0.011 0.008	0.030 0.041 0.019	0.021 0.049 0.009	0.053 0.070 0.032	0.018 0.026 0.013	0.006 0.008 0.004	0.009 0.012 0.005	0.018 0.033 0.010	0.016 0.021 0.010													
Osaka Bay	Sea bass	Average Max. Min.			0.059 0.138 0.022	0.129 0.180 0.075	0.037 0.069 0.014	0.028 0.039 0.014	0.026 0.042 0.010	0.011 0.014 0.009	0.012 0.015 0.009	0.012 0.019 0.009	0.010 0.023 0.007	0.023 0.030 0.020	0.019 0.029 0.015	0.010 0.018 0.005	0.014 0.023 0.009	0.011 0.017 0.008	0.009 0.013 0.007	0.009 0.015 0.005	0.007 0.016 0.002	0.007 0.015 0.001	0.007 0.015 0.002												
Seto Inland Sea	Sea bass	Average Max. Min.			0.037 0.048 0.028	0.035 0.043 0.027	0.052 0.130 0.006	0.238 0.360 0.032	0.033 0.054 0.010	0.031 0.038 0.019	0.039 0.048 0.023	0.057 0.013 0.029	0.014 0.028 0.008	0.094 0.230 0.020	0.028 0.035 0.009			0.006 0.007 0.004	0.005 0.010 0.005	0.010 0.018 0.003	0.031 0.044 0.006	0.008 0.017 0.003	0.004 0.017 0.003	0.004 0.005 0.003											
Offshore of Sanin	Sea bass	Average Max. Min.						0.028 0.037 0.022	0.024 0.038 0.016	0.017 0.019 0.007	0.009 0.011 0.006	0.009 0.014 0.006	0.011 0.012 0.009	0.004 0.004 0.003	0.005 0.007 0.004	0.008 0.006 0.006	0.007 0.009 0.002	0.003 0.008 0.001	0.004 0.005 0.002	0.005 0.007 0.003	0.006 0.007 0.003	0.003 0.004 0.003	0.003 0.004 0.003												
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.								0.088 0.200 0.022	0.042 0.154 0.009	0.012 0.021 0.004	0.012 0.019 0.007	0.005 0.008 0.003	0.004 0.018 0.011	0.013 0.004 0.011	0.002 0.005 0.001	0.001 0.001 0.001	— — —	0.002 0.002 0.001															
Surrounding of Shugen Island	Sea bass	Average Max. Min.															0.002 0.005 0.001	0.007 0.014 0.004	0.005 0.008 0.003	0.001 0.003 0.001	0.007 0.018 0.001	0.002 0.003 0.001	0.001 0.001 0.001	0.007 0.018 0.001	0.003 0.005 0.002	0.003 0.005 0.001	0.003 0.005 0.002	0.003 0.005 0.001	0.003 0.005 0.002	0.003 0.005 0.001					
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.								0.014 0.037 0.007	0.023 0.038 0.011	0.011 0.013 0.009	0.009 0.010 0.008	0.005 0.008 0.003	0.015 0.039 0.006	0.002 0.004 0.001	0.007 0.009 0.005	0.004 0.005 0.003	0.003 0.005 0.002	0.003 0.005 0.001	0.003 0.008 0.002	0.003 0.005 0.001	0.002 0.002 0.001	— — —	0.001 0.002 0.001										
Nakagusuku Bay, Okinawa Pref.	Black gorgy	Average Max. Min.															0.007 0.018 0.001	0.006 0.016 0.002	0.008 0.016 0.002	— 0.007 tr	0.002 0.003 0.002	0.003 0.006 0.001	0.003 0.005 0.002	0.002 0.003 0.001	0.002 0.005 0.002	0.002 0.003 0.001	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	0.002 0.002 tr
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.			0.030 0.038 0.022	0.041 0.049 0.034	0.028 0.045 0.021	0.037 0.045 0.026	0.091 0.125 0.041	0.034 0.039 0.029	0.036 0.053 0.027	0.030 0.035 0.026	0.025 0.028 0.018	0.016 0.020 0.010	0.034 0.045 0.028	0.040 0.049 0.028	0.022 0.039 0.015	0.045 0.051 0.016	0.016 0.019 0.014	0.015 0.018 0.011	0.010 0.016 0.008	0.010 0.012 0.009	0.010 0.011 0.009												

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.	0.002 0.003 0.002	0.001 0.001 0.001	0.001 0.002 0.001	0.001 0.001 0.001	— tr tr	0.001 0.001 0.001	— tr tr	0.002 0.002 0.002	0.002 0.002 0.001	— tr tr	— tr tr</td
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**Table E-4 p, p'-DDD (Fiscal Year 1978-98)**

(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	'96	'97	'98						
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.	0.002 0.002 0.002	0.001 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— 0.001 nd	— 0.002 nd	— 0.001 nd	— nd nd																	
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.	0.024 0.039 0.012	0.009 0.013 0.005	0.022 0.039 0.008	0.013 0.015 0.011	0.020 0.031 0.006	0.013 0.017 0.012	0.014 0.016 0.007	0.011 0.016 0.011	0.027 0.040 0.014	0.027 0.046 0.014	0.020 0.024 0.016	0.022 0.044 0.008	0.029 0.043 0.014	0.030 0.039 0.016	0.060 0.077 0.023	0.026 0.077 0.046	0.016 0.030 0.020	0.019 0.025 0.011	0.019 0.028 0.011	0.008 0.010 0.006							
Yamada Bay, Iwate Pref.	Greenling	Average Max. Min.			0.003 0.005 0.003	0.003 0.006 0.002	0.004 0.006 0.002	0.006 0.008 0.003	0.002 0.004 0.001	— 0.005 0.003	0.004 0.007 0.003	— 0.003 0.003	— 0.001 0.002	0.003 0.004 0.002	0.002 0.002 0.001	0.002 0.003 0.001	0.002 0.003 0.001	0.002 0.002 0.002	0.002 0.003 0.002	0.004 0.005 0.003	0.002 0.003 0.001								
Offshore of Joban	Pacific saury	Average Max. Min.	0.003 0.003 0.003	0.003 0.003 0.002	0.002 0.002 0.001	0.001 0.001 0.001	0.002 0.002 0.001	— tr tr	— nd nd	0.001 0.001 0.001	— tr tr	— nd nd	— nd nd	0.001 0.001 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	0.002 0.002 0.001								
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.			0.005 0.009 0.004	0.003 0.004 0.002	0.003 0.006 0.002	0.001 0.002 0.001	0.003 0.004 0.002	0.002 0.002 0.001	— 0.003 nd	— 0.003 nd	— 0.001 nd	— 0.002 nd	— 0.003 nd	— 0.005 nd	— 0.002 nd	— 0.001 nd	— 0.001 nd	— 0.002 nd	— 0.002 nd	— 0.002 nd							
Tokyo Bay	Sea bass	Average Max. Min.	0.029 0.042 0.011	0.022 0.033 0.018	0.052 0.069 0.029	0.043 0.086 0.012	0.014 0.022 0.009	0.009 0.015 0.006	0.009 0.011 0.008	0.011 0.014 0.009	0.006 0.009 0.009	0.011 0.014 0.009	0.011 0.013 0.017	0.027 0.042 0.017	0.009 0.016 0.008	0.030 0.041 0.019	0.021 0.049 0.009	0.053 0.070 0.032	0.018 0.026 0.013	0.006 0.008 0.004	0.009 0.012 0.005	0.018 0.021 0.010							
Osaka Bay	Sea bass	Average Max. Min.			0.059 0.138 0.022	0.129 0.180 0.075	0.037 0.069 0.014	0.028 0.039 0.014	0.026 0.042 0.010	0.011 0.014 0.009	0.012 0.015 0.009	0.012 0.019 0.009	0.010 0.012 0.007	0.023 0.030 0.020	0.019 0.029 0.015	0.010 0.018 0.005	0.010 0.023 0.009	0.014 0.023 0.008	0.011 0.017 0.007	0.009 0.013 0.005	0.015 0.021 0.012	0.007 0.013 0.016							
Seto Inland Sea	Sea bass	Average Max. Min.	0.037 0.048 0.028	0.035 0.043 0.027	0.052 0.130 0.006	0.238 0.360 0.032	0.033 0.054 0.010	0.031 0.038 0.019	0.039 0.048 0.023	0.057 0.013 0.029	0.014 0.028 0.008	0.094 0.230 0.020	0.028 0.035 0.009				0.006 0.007 0.004	0.005 0.010 0.003	0.010 0.018 0.004	0.031 0.044 0.006	0.008 0.017 0.003	0.004 0.017 0.003							
Offshore of Sanin	Sea bass	Average Max. Min.						0.028 0.037 0.022	0.024 0.038 0.016	0.017 0.019 0.012	0.009 0.011 0.007	0.009 0.010 0.006	0.009 0.014 0.006	0.011 0.012 0.009	0.004 0.004 0.003	0.005 0.006 0.004	0.008 0.009 0.007	0.007 0.008 0.006	0.003 0.004 0.002	0.005 0.007 0.003	0.006 0.007 0.003	0.003 0.004 0.003							
Mouth of the Riv. Shimanto	Sea bass	Average Max. Min.							0.088 0.200 0.022	0.042 0.154 0.009	0.012 0.021 0.004	0.012 0.019 0.007	0.005 0.008 0.003	0.004 0.018 0.011	0.013 0.018 0.011	0.002 0.004 0.001	0.001 0.001 0.001	— 0.005 tr	— 0.006 nd	— 0.002 0.001	— 0.002 nd	— 0.001	— 0.001	— 0.001					
Surrounding of Shugen Island	Sea bass	Average Max. Min.														0.002 0.005 0.001	0.007 0.014 0.004	0.005 0.008 0.003	0.002 0.003 0.001	0.007 0.018 0.001	0.001 0.002 0.001	0.001 0.001 0.001	0.002 0.004 0.001	0.003 0.005 0.002	0.003 0.005 0.001				
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.							0.014 0.037 0.007	0.023 0.038 0.011	0.011 0.013 0.009	0.009 0.010 0.008	0.005 0.008 0.003	0.015 0.039 0.006	0.002 0.004 0.001	0.007 0.009 0.005	0.004 0.005 0.003	0.003 0.005 0.002	0.004 0.006 0.001	0.003 0.002 0.001	0.002 0.002 0.001	— 0.002 nd	0.001 0.001						
Nakagusuku Bay, Okinawa Pref.	Black porgy	Average Max. Min.														0.007 0.018 0.001	0.006 0.016 0.001	0.008 0.016 0.002	— 0.007 tr	0.002 0.003 0.002	0.003 0.006 0.001	0.003 0.005 0.002	0.002 0.003 0.001	— 0.005 nd	— 0.002 tr	— 0.001 nd	— 0.001 0.002	— 0.002 nd	— 0.002 tr
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.	0.030 0.038 0.022	0.041 0.049 0.034	0.028 0.045 0.021	0.037 0.045 0.026	0.091 0.125 0.041	0.034 0.039 0.029	0.036 0.053 0.027	0.030 0.035 0.026	0.025 0.028 0.018	0.016 0.020 0.010	0.034 0.045 0.028	0.040 0.049 0.018	0.022 0.027 0.015	0.022 0.039 0.016	0.045 0.051 0.016	0.016 0.019 0.014	0.015 0.018 0.011	0.010 0.016 0.008	0.010 0.012 0.009								

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.	0.002 0.003 0.002	0.001 0.001 0.001	0.001 0.002 0.001	0.001 0.001 0.001	— tr tr	0.001 0.001 0.001	— tr tr	0.002 0.002 0.002	0.002 0.002 0.001	— tr tr	— tr tr	— tr tr	0.001 0.001 0.001	— tr tr	— tr tr	— tr tr	— nd nd
Miura Peninsula, Kaga Pref.	Common mussel	Average Max. Min.	0.005 0.006 0.005	0.004 0.005 0.004	0.002 0.003 0.002	0.005 0.003 0.002	0.003 0.003 0.002	0.002 0.002 0.002	0.001 0.001 0.001	0.002 0.002 0.002	0.002 0.003 0.002	0.001 0.0							

**Table E-5 trans-Chlordane (Fiscal Year 1978-98)**

(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	'96	'97	'98
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								
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.						— 0.001 nd	— nd nd	— nd nd	— 0.001 nd	— nd nd	— nd nd	— 0.001 nd	— 0.001 nd	— nd nd	— 0.001 nd	— 0.001 nd	— nd nd	— nd nd	— nd nd		
Yamada Bay, Iwate Pref.	Greenling	Average Max. Min.						— 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 tr	— nd nd	— 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.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 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 0.004 0.001	0.007 0.009 0.005	0.001 0.002 0.003	0.003 0.003 0.002	— 0.003 0.004	0.001 0.001 0.001	— 0.002 0.002	0.003 0.004	0.003 0.004	0.003 0.004	
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 0.005	0.004 0.004 0.004	0.005 0.006 0.004	0.002 0.003 0.003	0.007 0.011 0.003	0.001 0.001 0.001	0.004 0.004 0.003	
Seto Inland Sea	Sea bass	Average Max. Min.						0.002 0.002 0.001	— 0.001 0.001	0.002 0.004 0.001	— 0.002 0.002	0.003 0.004 0.001	0.003 0.008 0.001	0.003 0.004 0.001	— 0.003 0.003	— nd nd	— nd nd	— nd nd	— nd nd	— 0.002 0.003 0.001	— 0.002 0.002	— nd nd	
Offshore of Sanin	Sea bass	Average Max. Min.						— 0.004 0.005	0.006 0.007 0.002	0.003 0.004 0.002	0.002 0.003 0.001	0.001 0.002 0.001	0.002 0.004 0.001	— 0.002 0.002 0.001	— nd nd	— 0.002 0.001	— nd nd	— tr tr	— tr tr	— tr tr	— tr 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	— 0.002 tr	— tr nd	— nd nd	— nd nd	— nd nd	— tr nd	— tr nd	— tr nd	— nd nd	— nd nd	
Surrounding of Shugen Island	Sea bass	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 0.002 nd	— nd 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	— 0.001 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	— 0.001 nd	— tr tr	— 0.001 nd	— tr tr	— 0.001 nd	— nd nd	— nd nd	— nd nd	— nd nd	— tr nd	— 0.008 nd	— 0.005 nd	— tr nd	— nd nd	
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.						0.050 0.070 0.004	0.007 0.007 0.006	0.008 0.010 0.006	0.008 0.009 0.007	0.004 0.006 0.002	0.018 0.024 0.011	0.010 0.011 0.009	0.013 0.016 0.009	0.009 0.016 0.008	0.009 0.011 0.007	0.014 0.016 0.012	0.003 0.006 0.001	0.002 0.004 0.001	— 0.001 nd	0.003 0.003	

(Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.						— nd nd														
Miura Peninsula, Kaga 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 0.002	0.002 0.003 0.001	0.002 0.002 0.002	0.003 0.003 0.002	0.002 0.002 0.002	0.002 0.003 0.002	0.002 0.002 0.002	
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.						— nd nd	— 0.001 nd	— 0.001 nd	— 0.002 0.001	0.001 — nd	— 0.001 nd	— nd nd								
Ise Bay	Common mussel	Average Max. Min.						— nd nd														
Shimane Peninsula	Common mussel	Average Max. Min.						— nd nd														
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	— 0.008 nd	0.012 0.022 0.010	0.016 0.023 0.011	0.009 0.011 0.007	0.014 0.017 0.012	0.008 0.017 0.012	0.008 0.010 0.008	0.007 0.010 0.007	0.004 0.005 0.004	0.003 0.004 0.003

(Birds)

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

# Table E-6 cis-Chlordane (Fiscal Year 1978-98)

(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	'96	'97	'98			
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.						— nd nd																		
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.						— 0.001 nd	— 0.002 nd	— 0.002 nd	0.003 0.004 0.002	— 0.002 nd	0.002 0.003 0.001	0.002 0.004 0.002	0.002 0.004 0.001	0.008 0.010 0.005	0.003 0.010 0.001	— nd nd	— nd nd	0.002 nd	0.003 nd	0.002 nd				
Yamada Bay, Iwate Pref.	Greenling	Average Max. Min.						— nd nd																		
Offshore of Joban	Pacific saury	Average Max. Min.						0.002 0.002 0.002	0.002 0.002 0.001	— tr tr	— tr tr	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	0.001 0.001 0.001	— nd nd	— nd nd	— nd nd	0.001 0.001 0.001	— nd nd				
Offshore of Tohoku, Sea of Japan	Cod	Average Max. Min.						— 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	0.002 0.003 0.002	— 0.002 tr	0.004 0.005 0.004				
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 0.005 0.005	0.006 0.019 0.005	0.013 0.015 0.009	0.007 0.011 0.006	0.006 0.006 0.005	0.016 0.027 0.008	0.003 0.004 0.002	0.009 0.010 0.007			
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 0.001	0.002 0.002 0.002	0.003 0.004 0.001	0.006 0.010 0.002	— nd nd	0.002 0.002 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 0.004 0.002	0.004 0.006 0.003	0.004 0.005 0.003	0.003 0.003 0.002	— 0.003 nd	0.003 0.002 0.002	0.002 0.001 0.001	— tr tr	— tr tr	— nd nd	— nd nd	— nd nd			
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 tr	— 0.002 tr	0.001 0.001 0.001	— 0.001 nd	— tr nd	— 0.002 nd	— 0.001 tr	— tr nd	— nd nd	— tr nd	— nd nd	— nd nd			
Surrounding of Shugen Island	Sea bass	Average Max. Min.															— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— tr 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	— 0.002 nd	— 0.003 tr	— 0.002 nd	— tr nd	— 0.001 nd	— tr nd	— nd nd	— tr nd	— nd nd	— nd 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	— tr nd	— 0.001 tr	— 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 0.019 0.014	0.019 0.022 0.013	0.012 0.015 0.010	0.013 0.015 0.011	0.011 0.012 0.009	0.009 0.017 0.004	0.007 0.008 0.005	0.006 0.008 0.006	0.006 0.009 0.004	0.007 0.009 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	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd									
Miura Peninsula, Kaga Pref.	Common mussel	Average Max. Min.						0.017 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	0.002 0.003 0.001	0.003 0.003 0.002	0.003 0.003 0.002	0.002 0.003 0.003	0.003 0.004 0.003	0.002 0.003 0.002	0.002 0.003 0.002									
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.						— nd nd	0.001 0.001 0.001	0.002 0.003 0.002	0.002 0.004 0.001	0.002 0.001 0.001	0.001 0.001 0.001	— 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.													— 0.009 0.006 0.009	0.005 0.006 0.005	0.003 0.003 0.005	0.007 0.008 0.005	0.003 0.003 0.003	0.002 0.002 0.002	0.002 0.002 0.002	0.003 0.004 0.002	0.002 0.002 0.002	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	0.001 0.001 0.001		
Shimane Peninsula	Common mussel	Average Max. Min.															0.001 0.001 0.001	— tr tr	— tr tr	— tr tr	— tr tr	— nd nd	— nd nd	— nd nd							
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 0.014	0.028 0.034 0.018	— nd	0.024 0.044 0.002	0.039 0.053 0.026	0.023 0.032 0.017	0.032 0.040 0.024	0.029 0.034 0.026	0.031 0.036 0.028	0.037 0.041 0.033	0.023 0.025 0.020	0.018 0.023 0.016	0.								

**Table E-7 trans-Nonachlor (Fiscal Year 1978-98)**

(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	'96	'97	'98							
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.						— nd nd	— nd nd	— nd nd	— nd nd																			
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.						— 0.003 nd	— 0.002 nd	0.003 0.005 0.002	0.003 0.005 0.002	— 0.007 nd	0.003 0.005 0.001	0.006 0.010 0.004	0.006 0.009 0.004	0.015 0.018 0.012	0.004 0.018 0.002	0.003 0.007 0.002	0.003 0.004 0.002	0.004 0.006 0.002	0.002 0.003 0.001									
Yamada Bay, Iwate 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															
Offshore of Joban	Pacific saury	Average Max. Min.						— 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																			
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 0.004	0.003 0.004 0.003	— 0.006 0.008 0.005									
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 0.012 0.010	0.011 0.012 0.009	0.009 0.011 0.006	0.011 0.017 0.008	0.007 0.007 0.006	0.019 0.030 0.009	0.005 0.007 0.004								
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 0.005	0.005 0.033 0.002	0.015 0.018 0.004	— — —	— — —	0.007 0.009 0.003	0.003 0.004 0.002	0.003 0.003 0.003	0.008 0.015 0.003	0.019 0.033 0.001	0.004 0.011 0.002								
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 0.010 0.006	0.003 0.005 0.002	0.003 0.007 0.004	0.005 0.007 0.003	0.004 0.005 0.003	0.002 0.002 0.001	0.005 0.006 0.005	0.003 0.004 0.002	0.002 0.002 0.001	— 0.003 0.002	0.003 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 0.002	0.004 0.006 0.002	0.003 0.006 0.002	0.003 0.006 0.003	0.004 0.006 0.003	— 0.002 0.001	— 0.007 tr	— 0.002 tr	— 0.004 tr	0.002 0.003 0.002	— 0.001 nd	— 0.001 tr	0.001 0.002 0.001							
Surrounding of Shugen Island	Sea bass	Average Max. Min.														— 0.009 0.001	0.002 0.025 0.002	— 0.002 0.003 0.001	0.002 0.003 0.001	— 0.010 nd	— 0.002 tr	— 0.001 nd	— 0.002 tr	— 0.002 tr						
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 0.003 0.003	0.010 0.012 0.003	— 0.004 tr	0.003 0.004 0.001	0.001 0.002 0.001	0.002 0.003 0.001	— 0.002 tr	— 0.001 nd	— 0.002 tr	— 0.002 tr	— nd nd								
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 0.008 0.003	0.005 0.008 0.001	0.003 0.006 0.002	0.002 0.004 0.001	— tr	— tr	— tr	— tr	— nd	— nd	— nd
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 0.041 0.023	0.014 0.017 0.011	0.015 0.023 0.010	0.016 0.027 0.013	0.008 0.011 0.009	0.007 0.011 0.003	0.006 0.008 0.005	0.006 0.007 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	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd								
Miura Peninsula, Kana gawa 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 0.006 0.006	0.005 0.006 0.005	0.005 0.005 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	0.002 0.002 0.002	0.004 0.004 0.003	0.003 0.003 0.002	0.002 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 0.002 0.001	0.001 0.002 0.001	— 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.													— 0.004 0.005 0.009	0.004 0.005 0.004	0.005 0.003 0.003	0.003 0.003 0.003	0.002 0.002 0.002	0.002 0.002 0.002	0.003 0.004 0.003	0.002 0.002 0.002	0.002 0.002 0.001	0.002 0.002 0.001	0.002 0.002 0.001	0.002 0.002 0.001	0.002 0.002 0.001	0.002 0.002 0.001		
Shimane Peninsula	Common mussel	Average Max. Min.															0.001 0.002 0.001	— tr tr	— nd nd	— tr tr	— nd nd	— nd nd	— nd nd							
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 0.004	0.007 0.010 0.003	— 0.005 nd	0.006 0.011 0.003	0.011 0.014 0.0															

**Table E-8 cis-Nonachlor (Fiscal Year 1978-98)**

## (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	'96	'97	'98										
Offshore of Kushiro, Hokkaido	Chum salmon	Average Max. Min.						—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—										
Offshore of □Nemuro, □Hokkaido	Angry rockfish	Average Max. Min.						—	—	—	—	—	—	—	—	—	—	0.002	—	—	—	—	—										
Yamada Bay, □Iwate Pref.	Greenling	Average Max. Min.						—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—										
Offshore of □Joban □	Pacific saury	Average Max. Min.						—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—										
Offshore of □Tohoku, □Sea of Japan	Cod	Average Max. Min.						—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—										
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 0.002	0.001 0.002 0.001	— 0.002 nd	— 0.002 tr	0.003 0.004 0.003										
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 0.009 0.005	0.010 0.012 0.008	0.008 0.010 0.007	0.005 0.013 0.002	0.004 0.004 0.003	0.007 0.009 0.004	0.004 0.006 0.003	0.003 0.004 0.003	0.009 0.015 0.006	0.003 0.003 0.002	0.006 0.003 0.005										
Seto Inland □Sea	Sea bass	Average Max. Min.						— 0.002	— 0.002	— nd	0.004 0.006 0.002	— 0.004	— 0.014	0.007 0.008 0.003	0.006 0.008 0.002				0.003 0.005 0.001	— 0.002	0.003 0.005 0.001	0.006 0.013 0.002	— 0.004 nd	— 0.001 nd									
Offshore of □Sanin	Sea bass	Average Max. Min.						— 0.009	— 0.009	— nd	0.010 0.012 0.008	0.004 0.006 0.003	0.003 0.002 0.002	0.001 0.003 0.001	0.002 0.003 0.002	0.002 0.003 0.002	— nd	0.003 0.003 0.002	0.002 0.002 0.002	— tr	— nd	— 0.001	— tr	— nd	— tr	— nd							
Mouth of the □Riv. Shimanto	Sea bass	Average Max. Min.						— 0.006	— 0.006	— nd	0.003 0.006 0.001	0.001 0.002 0.001	0.002 0.003 0.002	0.002 0.003 0.002	— nd	0.001 0.002 0.001	— tr	— nd	0.002 0.001	0.001 0.001	— tr	— nd	— tr	— nd	— tr	— nd							
Surrounding of □Shugen Island	Sea bass	Average Max. Min.														— 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	0.006 0.013 0.004	0.007 0.005 0.002	0.003 0.006 0.002	0.004 0.004 0.001	— 0.002 tr	0.002 0.004 0.001	0.002 — tr	— nd	— nd	— nd	— tr	— nd	— nd	— tr	— nd								
Nakagusuku Bay □Okinawa Pref.	Black porgy	Average Max. Min.														0.004 0.010 0.001	0.003 0.010 0.001	0.005 0.005 0.001	0.003 0.012 0.001	0.001 0.012 0.001	— 0.004	— 0.004	0.002 tr	— nd	— nd	— nd	— tr	— nd	— nd	— tr	— nd	— tr	— 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 0.007	0.006 0.012 0.015	0.009 0.012 0.007	0.012 0.015 0.007	0.006 0.019 0.012	0.016 0.019 0.014	0.009 0.010 0.014	0.011 0.011 0.012	0.011 0.011 0.012	0.003 0.003 0.007	0.005 0.005 0.008	0.004 0.005 0.005	0.004 0.005 0.003	0.002 0.002 0.001	0.001 0.001 tr	0.002 0.002 tr								

## (Shellfishes)

Yamada Bay, Iwate Pref.	Common mussel	Average Max. Min.						— 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 0.003 0.002	0.002 0.002 0.002	0.001 0.001 0.001	0.002 0.002 0.001	0.001 0.001 0.001	0.001 0.002 0.001	0.001 0.001 0.001	0.001 0.002 0.001	— nd	0.001 0.001 0.001	0.001 0.001 0.001				
Noto Peninsula, Ishikawa Pref.	Common mussel	Average Max. Min.						— nd																			
Ise Bay	Common mussel	Average Max. Min.												— 0.003 0.003	0.001 0.001 0.001	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 0.001	0.001 0.001 0.001	— nd	0.002 0.002 0.002	— nd	0.002 0.002 0.002	— nd	0.002 0.002 0.002
Shimane Peninsula	Common mussel	Average Max. Min.													— nd	— tr nd	— 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 nd	— 0.001 nd	— 0.002 nd	0.001 0.002 0.001	— nd	0.002 0.003 0.002	— nd	0.002 0.003 0.002	— nd	0.002 0.003 0.001	— nd	0.001 nd	— nd	0.001 nd		

## (Birds)

(Note) nd : not detected, tr : trace

The sample picking area of Angry rockfish was changed from Offshore of Nemuro Hokkaido to Offshore of Kushiro Hokkaido from the fiscal year 1998.

# Table E-9 Oxychlordane (Fiscal Year 1978-98)

(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	'96	'97	'98			
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											
Offshore of Nemuro, Hokkaido	Angry rockfish	Average Max. Min.						— nd nd	— nd nd	— nd nd	0.003 0.004 0.002	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd										
Yamada Bay, Iwate Pref.	Greenling	Average Max. Min.						— 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	— 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											
Tokyo Bay	Sea bass	Average Max. Min.						0.001 0.002 0.001	0.001 0.001 0.001	0.002 0.002 0.002	0.002 0.002 0.001	— nd nd	0.001 0.003 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— 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	— nd nd	0.001 0.001 0.001	0.001 0.001 0.001	0.001 0.001 0.001	0.002 0.009 0.001	— nd nd	0.001 0.001 0.001	— nd nd				
Seto Inland Sea	Sea bass	Average Max. Min.						— nd nd	0.001 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd	— nd nd					
Offshore of Sanin	Sea bass	Average Max. Min.						— nd nd	0.002 0.003 0.002	— nd nd	— nd nd	— nd nd	— nd 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	— 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	— nd nd				
West Coast of Satsuma Peninsula	Sea bass	Average Max. Min.						— 0.001 tr	0.003 0.005 0.001	0.004 0.005 0.003	0.002 0.004 0.001	0.002 0.001 tr	— 0.001 tr	0.002 0.001 tr	— 0.001 nd	— nd nd	— nd 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 0.006 tr	0.004 0.005 0.001	0.003 0.007 0.002	0.001 0.001 0.001	— 0.003 nd	— 0.002 tr	— 0.002 nd	— 0.001 tr	— 0.002 nd	— 0.001 tr	— 0.002 nd	— 0.001 tr	— 0.002 nd
Lake Biwa, Shiga Pref.	Dace	Average Max. Min.						0.002 0.003 0.001	0.003 0.003 0.002	— 0.002 nd	0.001 0.001 0.001	0.002 0.004 0.003	0.003 0.003 0.002	0.002 0.004 0.003	0.003 0.003 0.002	0.001 0.002 0.001	— 0.002 nd	— 0.002 nd	— 0.002 nd	— 0.002 nd	— 0.002 nd	— 0.002 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	— nd nd	— nd nd	— nd nd		
Miura Peninsula, Kaga 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		
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		
Ise Bay	Common mussel	Average Max. Min.													— nd nd								
Shimane Peninsula	Common mussel	Average Max. Min.													0.001 0.001 0.001	— tr tr	— nd nd	— nd nd	— nd nd	— nd nd	— 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 nd	0.004 0.006 0.002	— 0.004 nd	0.005 0.006 0.004	0.004 0.006 0.003	0.010 0.011 0.008	0.006 0.007 0.005	0.009 0.016 0.006	0.006 0.007 0.005	0.004 0.004 0.004	0.003 0.003 0.003	0.003 0.003 0.002	

(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 0.002 0.002	— nd nd	— nd nd	— nd nd	— 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 0.018 0.011	0.010 0.014 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	0.002 0.002 0.001	— nd nd	— nd nd	— nd nd	— nd nd	— nd 