

FY2013 Tokyo Metropolis Survey Results

[Survey Results]

(1) Water

Rivers

Radioactive cesium (Cs-134, Cs-137): Not detectable at any location

Coastal areas

Radioactive cesium (Cs-134, Cs-137): Not detectable at any location

(2) Sediments

Rivers

Cs-134: 25 - 140 Bq/kg (dry)

Cs-137: 50 - 320 Bq/kg (dry)

Coastal areas

Cs-134: 7.3 - 210 Bq/kg (dry)

Cs-137: 12 - 570 Bq/kg (dry)

(3) Surrounding Environment

(a) Soil

Rivers

Cs-134: 110 - 420 Bq/kg (dry)

Cs-137: 250 - 860 Bq/kg (dry)

(b) Ambient dose rate

Rivers

0.04 - 0.11 μ Sv/h

Tokyo River (Water) 1/1

	Location				Sampling Date	Weather	Air temperature (°C)	Water depth (m)	Water										Remarks
	No.	Water area	Location	Municipality					General items							Activity concentration(Bq/L)			
									Water temperature (°C)	Sampling depth (m)	Color	Odor	Transparency (cm)	Electrical conductivity (mS/m)	SS (mg/L)	Turbidity (FNU)	Cs-134	Cs-137	
R i v e r s	50	Arakawa River System	Arakawa River Lower Reaches	Kasai Bridge	Koto City/Edogawa City	2013/6/7	Sunny	23.7	2.3	22.9	0.0	Dull yellow green	None	30	3,200.0	12	5.1	<0.74	<0.68
						2013/8/20	Sunny	29.6	1.4	29.6	0.0	Deep greenish yellow	None	26	1,256.0	9	3.2	<0.46	<0.60
						2013/11/26	Sunny	16.4	2.4	15.6	0.0	Dull yellow green	faint sewage	82	1,950.0	5	3.1	<0.48	<0.62
						2014/1/31	Sunny	14.1	1.6	10.6	0.0	Dull yellow	None	30	2,840.0	29	10	<0.51	<0.52
						2013/6/11	Light rain	20.2	2.1	23.8	0.0	Dark grayish greenish yellow	faint sewage	39	1,630.0	1	2.6	<0.65	<0.58
	51	Sumida River	Ryogoku Bridge	Chuo City	2013/8/27	Cloudy	26.9	3.0	26.9	0.0	Dull yellow green	faint sewage	50	1,041.0	10	3.6	<0.60	<0.55	
					2013/11/26	Sunny	17.9	2.8	17.5	0.0	Dark yellow green	faint sewage	55	1,896.0	5	3.9	<0.56	<0.59	
					2014/1/31	Sunny	15.2	2.2	12.3	0.0	Dusky greenish yellow	faint sewage	62	2,460.0	7	3.4	<0.54	<0.55	

Tokyo River (Sediment) 1/1

No.	Location			Sampling Date	Weather	Air temperature (C)	Water depth (m)	Sediment																	Remarks						
	Water area	Location	Municipality					Sediment temperature (C)	Sample length (cm)	Color	Odor	General items										Activity concentration (Bq/kg(dry))									
												Coarse gravel	Medium gravel	Fine gravel	Grain size distribution(%)		Fine sand	Silt	Clay	Sediment content (%)	Density (g/cm ³)	Property	Radioactive cesium								
															Coarse sand	Medium sand							Co-134	Co-137		Total					
R i v e r s	50	Arakawa River System	Arakawa River Lower Reaches	Kasai Bridge	Koto City/Eidogawa City	2013/6/7	Sunny	23.7	2.3	22.5	5	Black	Faint drain	0.0	0.0	1.8	1.1	3.7	7.0	39.4	46.9	38.9	2.587	Silt	78	170	248				
						2013/8/20	Sunny	29.6	1.4	29.2	7	Black	Faint sewage	0.0	4.3	3.3	2.4	5.1	6.7	36.4	41.6	38.6	2.590	Silt	25	50	75				
						2013/11/26	Sunny	16.4	2.4	16.1	7	Faint hydrogen sulfide	faint sewage	0.0	4.8	2.7	0.8	3.1	4.3	40.4	43.8	36.3	2.668	Silt	96	220	316				
						2014/1/31	Sunny	14.1	1.6	11.5	7	Faint hydrogen sulfide	Faint drain	0.0	5.9	1.3	0.4	1.4	2.2	35.5	53.4	33.1	2.536	Silt	130	320	450				
						2013/6/11	Light rain	20.2	2.1	23.5	5	Black	Dirt yellow	0.0	0.0	0.2	0.8	6.7	22.9	41.7	27.8	35.0	2.524	Silt	140	310	450				
						2013/8/23	Cloudy	26.9	3.0	26.7	5	Black	-----	0.0	9.6	2.9	0.4	11.2	47.3	10.2	18.3	49.3	2.638	Silt	140	320	460				
						2013/11/26	Sunny	17.9	2.8	17.6	4	Black	-----	0.0	5.8	1.8	0.3	19.6	50.7	11.4	10.4	45.1	2.661	Sand/silt	73	210	283				
						2014/1/31	Sunny	15.2	2.2	12.3	5	Black	-----	0.0	0.0	0.4	0.4	21.4	49.2	8.5	20.1	49.6	2.608	Silt	68	210	278				
						51	Sumida River	Ryogoku Bridge	Chuo City	2013/8/23	Cloudy	26.9	3.0	26.7	5	Black	-----	0.0	9.6	2.9	0.4	11.2	47.3	10.2	18.3	49.3	2.638	Silt	140	320	460
										2013/11/26	Sunny	17.9	2.8	17.6	4	Black	-----	0.0	5.8	1.8	0.3	19.6	50.7	11.4	10.4	45.1	2.661	Sand/silt	73	210	283

Tokyo Coastal (Water) 1/1

Location				Sampling Date	Weather	Air temperature (°C)	Water depth (m)	Water										Remarks		
No.	Water area		Surface layer					General items						Activity concentration(Bq/L)						
								Water temperature (°C)	Sampling depth (m)	Color	Odor	Secchi disk depth (m)	Salinity (‰)	SS (mg/L)	Turbidity (FNU)	Radioactive cesium				
													Cs-134	Cs-137						
65	Approx. 1 km offshore of Kyuedogawa River Estuary	Offshore of Kyu-Edogawa River Estuary	Surface layer	2013/6/13	Light rain	21.8	7.6	22.4	0.5	Dark grayish yellow	None	1.4	22.2	6	5.0	<0.52	<0.49			
			Deep layer					21.9	6.6	-	None		26.7	8	5.8	<0.52	<0.52			
			Surface layer	2013/7/18	Sunny	31.2	8.3	28.1	0.5	Deep greenish yellow	None	0.8	18.4	11	7.5	<0.51	<0.59			
			Deep layer					26.8	7.3	-	None		22.3	4	3.4	<0.52	<0.45			
			Surface layer	2013/8/15	Sunny	35.4	8.4	31.6	0.5	Dark yellow	None	0.6	18.7	9	16	<0.75	<0.69			
			Deep layer					27.9	7.4	-	None		25.8	5	4.4	<0.63	<0.69			
			Surface layer	2013/9/12	Sunny	32.8	8.2	27.2	0.5	Dull yellow green	None	0.8	11.6	6	7.4	<0.52	<0.63			
			Deep layer					26.3	7.2	-	Dim yellow		25.6	4	3.6	<0.65	<0.65			
			Surface layer	2013/10/10	Cloudy	28.9	8.2	23.6	0.5	Dark yellow green	None	1.5	26.9	4	5.5	<0.91	<0.59			
			Deep layer					23.3	7.2	-	None		27.5	3	4.3	<0.57	<0.63			
			Surface layer	2013/11/6	Cloudy	17.5	7.7	19.4	0.5	Dull yellow green	None	1.9	23.9	5	2.2	<0.59	<0.62			
			Deep layer					19.5	6.7	-	None		28.7	4	1.4	<0.48	<0.56			
			Surface layer	2014/2/13	Cloudy	7.2	6.3	9.4	0.5	Deep yellow green	faint sewage	2.5	28.1	4	2.2	<0.63	<0.52			
			Deep layer					9.3	5.3	-	faint sewage		28.4	6	2.9	<0.63	<0.62			
			66	St-8	Offshore of Arakawa River/ Kyu-Edogawa River Estuaries	Surface layer	2013/6/13	Light rain	21.8	4.8	22.6	0.5	Grayish greenish yellow	None	0.7	17.8	12	7.6	<0.67	<0.55
						Deep layer					22.3	3.8	-	None		21.1	13	7.2	<0.52	<0.63
						Surface layer	2013/7/18	Cloudy	30.9	5.3	27.0	0.5	Soft yellow green	None	0.7	23.1	13	8.7	<0.56	<0.70
						Deep layer					25.4	4.3	-	None		25.6	5	3.8	<0.36	<0.59
Surface layer	2013/8/15	Sunny				35.6	6.0	31.6	0.5	Dark yellow	None	0.7	15.4	10	16	<0.69	<0.59			
Deep layer								29.3	5.0	-	None		22.6	6	5.9	<0.66	<0.64			
Surface layer	2013/9/12	Sunny				33.0	5.8	28.5	0.5	Dull yellow green	None	0.6	16.3	12	13	<0.70	<0.52			
Deep layer								27.0	4.8	-	None		23.1	8	6.1	<0.70	<0.65			
Surface layer	2013/10/10	Cloudy				29.0	5.8	24.4	0.5	Dull yellow green	None	1.0	18.1	7	7.7	<0.58	<0.47			
Deep layer								23.3	4.8	-	None		27.6	4	4.1	<0.93	<0.59			
Surface layer	2013/11/6	Cloudy				18.0	5.7	19.5	0.5	Dull yellow green	None	1.5	25.3	7	3.1	<0.45	<0.65			
Deep layer								19.4	4.7	-	None		26.7	4	1.9	<0.61	<0.59			
Surface layer	2014/2/13	Cloudy				7.0	6.0	9.1	0.5	Dull bluish green	Faint mold	2.0	27.7	6	3.1	<0.54	<0.62			
Deep layer								9.2	5.0	-	None		28.2	6	2.8	<0.67	<0.65			
67	Southwestern area of Toyosu Wharf	Offshore of Sumida River Estuary				Surface layer	2013/6/13	Light rain	22.0	10.2	22.0	0.5	Dark grayish greenish yellow	None	1.7	23.6	2	2.6	<0.84	<0.65
						Deep layer					21.1	9.2	-	None		26.8	2	1.9	<0.70	<0.70
						Surface layer	2013/8/15	Sunny	36.0	10.9	30.5	0.5	Dark yellow	None	0.6	19.2	10	9.1	<0.59	<0.52
						Deep layer					24.3	9.9	-	Dim yellow		28.2	3	2.3	<0.81	<0.77
			Surface layer	2013/11/6	Cloudy	20.6	10.9	20.4	0.5	Dull yellow green	None	2.2	21.4	3	2.2	<0.69	<0.52			
			Deep layer					20.3	9.9	-	None		29.0	4	1.4	<0.45	<0.58			
			Surface layer	2014/2/13	Cloudy	7.0	12.0	11.1	0.5	Deep bluish green	faint sewage	2.5	27.3	4	2.2	<0.51	<0.47			
			Deep layer					10.0	11.0	-	faint sewage		27.5	5	2.7	<0.59	<0.76			

Tokyo Coastal (Sediment) 1/1

Location			Sampling Date	Weather	Air temperature (°C)	Water depth (m)	Sediment																	Activity concentration [Bq/kg(dry)]			Remarks
							General items				Grain size distribution(%)						Sediment content (%)	Density (g/cm ³)	Property	Radioactive cesium							
No.	Water area		Sediment temperature (°C)	Sample length (cm)	Color	Odor	Coarse gravel	Medium gravel	Fine gravel	Coarse sand	Medium sand	Fine sand	Silt	Clay	Cs-134	Cs-137				Total							
C o a s t a l	65	Approx. 1 km offshore of Kyoedogawa River Estuary	Offshore of Kyo-Edogawa River Estuary	2013/6/13	Light rain	21.8	7.6	21.0	6	Black	Dim yellow	0.0	0.0	0.1	0.3	0.9	10.7	46.6	41.4	35.8	2.556	Silt	76	150	226		
				2013/7/18	Sunny	31.2	8.3	26.8	4	Faint hydrogen sulfide	None	0.0	0.0	0.1	0.6	2.2	31.1	34.5	31.5	46.4	2.569	Silt	140	310	450		
				2013/8/15	Sunny	35.4	8.4	25.3	10	Black	None	0.0	0.0	0.0	0.1	0.9	14.0	52.0	35.1	41.6	2.663	Silt	170	380	550		
				2013/9/12	Sunny	32.8	8.2	26.1	7	Faint hydrogen sulfide	Dim yellow	0.0	0.0	0.0	0.0	0.3	10.8	53.8	35.1	35.8	2.568	Silt	180	400	580		
				2013/10/10	Cloudy	28.9	8.2	22.1	4	Black	Dim yellow	0.0	0.0	0.1	0.1	1.1	19.7	44.4	34.7	40.4	2.715	Silt	63	130	193		
				2013/11/6	Cloudy	17.5	7.7	19.5	6	Faint hydrogen sulfide	Faint swamp	0.0	0.0	0.0	0.1	0.8	14.1	60.9	24.0	33.6	2.659	Silt	200	380	580		
	2014/2/13	Cloudy	7.2	6.3	9.7	4	Faint hydrogen sulfide	Faint drain	0.0	1.3	0.3	0.1	0.3	6.4	58.3	33.4	42.5	2.573	Silt	210	570	780					
	2013/6/13	Light rain	21.8	4.8	21.1	6	Black	Faint drain	0.0	0.0	0.0	0.1	0.2	1.3	53.6	44.8	37.6	2.554	Silt	28	69	97					
	2013/7/18	Cloudy	30.9	5.3	24.3	4	Faint hydrogen sulfide	Faint rotten-egg	0.0	0.0	0.0	0.3	0.9	4.6	59.6	34.6	47.9	2.601	Silt	110	220	330					
	2013/8/15	Sunny	35.6	6.0	26.1	6	Black	None	0.0	0.0	0.0	0.1	0.5	3.4	60.0	35.9	46.6	2.641	Silt	100	230	330					
	2013/9/12	Sunny	33.0	5.8	25.5	6	Faint hydrogen sulfide	None	0.0	0.0	0.0	0.2	0.3	2.9	60.0	36.6	45.4	2.618	Silt	92	240	332					
	2013/10/10	Cloudy	29.0	5.8	22.9	6	Black	Faint swamp	0.0	0.0	0.0	0.1	0.5	1.4	59.3	38.8	42.3	2.690	Silt	110	260	370					
2013/11/6	Cloudy	18.0	5.7	20.1	6	Faint hydrogen sulfide	Faint swamp	0.0	0.0	0.0	0.0	0.4	1.9	53.8	43.9	36.6	2.683	Silt	84	210	294						
2014/2/13	Cloudy	7.0	6.0	9.5	5	Faint hydrogen sulfide	None	0.0	0.0	0.0	0.1	0.9	1.6	64.6	32.8	43.5	2.629	Silt	84	270	354						
2013/6/13	Light rain	22.0	10.2	18.6	6	Black	Dim yellow	0.0	0.9	0.0	0.1	0.3	1.8	31.9	64.9	25.8	2.564	Silt	7.3	12	19.3						
2013/8/15	Sunny	36.0	10.9	23.8	8	Black	Medium hydrogen sulfide	0.0	0.5	1.0	1.0	1.0	2.1	43.9	50.4	24.1	2.655	Silt	35	65	100						
2013/11/6	Cloudy	20.6	10.9	20.9	7	Black	Dim yellow	0.0	0.0	0.0	0.0	0.3	10.6	40.2	48.9	22.8	2.533	Silt	14	16	30						
2014/2/13	Cloudy	7.0	12.0	11.1	8	Black	Medium hydrogen sulfide	0.0	0.0	0.2	0.1	0.3	0.6	54.6	44.2	21.2	2.566	Silt	34	84	118						

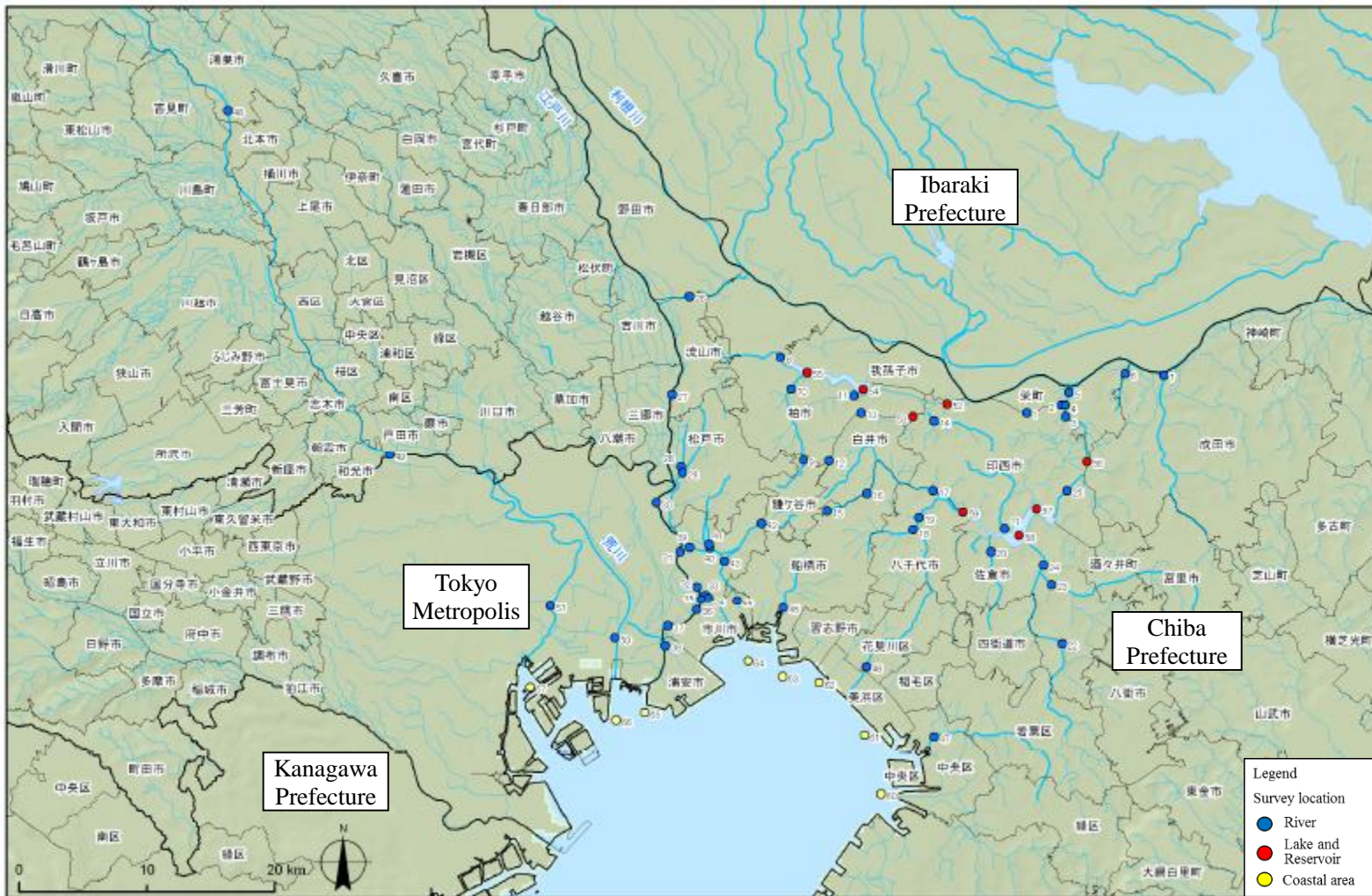


Figure 3.5.8 Survey Locations (Chiba, Saitama, and Tokyo Prefecture)