

FY2014 Iwate Prefecture Survey Results

[Outline of 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: ND - 81 Bq/kg (dry)

Cs-137: 4.8 - 220 Bq/kg (dry)

Coastal areas

Cs-134: ND - 5.1 Bq/kg (dry)

Cs-137: 1.1 - 16 Bq/kg (dry)

(3) Surrounding Environment

(a) Soil

Rivers

Cs-134: ND - 620 Bq/kg (dry)

Cs-137: 11 - 2,000 Bq/kg (dry)

(b) Ambient dose rate

Rivers

0.05 - 0.18 μ Sv/h

Iwate River (Water) 2/2

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)	Radioactive cesium	
													Cs-134	Cs-137				
R i v e r s	15	Sokei River	Unada Bridge	Ichinoseki City	2014/5/20	Sunny	24.0	0.2	17.6	0.0	Greenish yellowish white	None	>100	17.1	3	0.8	<0.56 ± 0.12	<0.49 ± 0.097
					2014/8/20	Sunny	30.0	0.3	21.5	0.0	Yellow greenish pale gray	None	>100	17.0	5	1.2	<0.61 ± 0.13	<0.78 ± 0.15
	2014/11/17	Cloudy	7.0	0.3	7.4	0.0	Yellow greenish pale gray	None	>100	17.0	2	1.2	<0.49 ± 0.12	<0.63 ± 0.12				
	16	Sarusawa River	Kannon Bridge	Ichinoseki City	2015/2/12	Sunny	7.0	0.3	5.8	0.0	Yellow greenish pale gray	None	>100	15.2	1	1.4	<0.53 ± 0.12	<0.63 ± 0.12
					2014/5/20	Sunny	25.0	0.5	16.0	0.0	Greenish yellowish white	Faint swamp	>100	24.5	4	0.3	<0.55 ± 0.11	<0.58 ± 0.12
	17	Satetsu River	Oide Bridge	Ichinoseki City	2014/8/20	Sunny	32.0	0.5	19.6	0.0	Yellow greenish pale gray	Faint swamp	>100	26.2	<1	0.3	<0.54 ± 0.12	<0.35 ± 0.10
					2014/11/17	Cloudy	8.0	0.5	8.7	0.0	Yellow greenish pale gray	Faint swamp	>100	26.3	<1	0.3	<0.52 ± 0.096	<0.52 ± 0.086
	18	Kitakami River System	Kanzaki Bridge	Ichinoseki City	2015/2/12	Sunny	2.0	0.5	4.6	0.0	Yellow greenish pale gray	None	>100	22.3	<1	0.6	<0.58 ± 0.11	<0.55 ± 0.12
					2014/5/20	Sunny	22.0	0.2	14.5	0.0	Yellowish pale gray	None	>100	16.7	2	0.6	<0.67 ± 0.17	<0.62 ± 0.12
	19	Sarusawa River Upper Reach	Miyata Bridge	Ichinoseki City	2014/8/20	Sunny	32.0	0.4	19.7	0.0	Reddish yellowish pale gray	None	>100	15.4	2	0.5	<0.56 ± 0.12	<0.62 ± 0.13
					2014/11/17	Cloudy	10.0	0.3	7.4	0.0	Reddish yellowish pale gray	None	>100	13.5	<1	0.3	<0.63 ± 0.14	<0.49 ± 0.097
	20	Kitakami River	Kitakamigawa Bridge	Ichinoseki City	2015/2/12	Sunny	7.0	0.4	6.0	0.0	Reddish yellowish pale gray	None	>100	15.2	<1	0.6	<0.51 ± 0.11	<0.49 ± 0.080
					2014/5/20	Sunny	23.0	0.2	19.4	0.0	Reddish yellowish pale gray	Faint swamp	>100	16.5	3	0.8	<0.68 ± 0.14	<0.55 ± 0.11
	21	Kinomi River	Higuchi Bridge	Ichinoseki City	2014/8/21	Cloudy	26.0	0.3	20.7	0.0	Reddish yellowish pale gray	Faint swamp	>100	16.6	2	0.5	<0.62 ± 0.13	<0.55 ± 0.11
					2014/11/17	Sunny	7.0	0.3	7.8	0.0	Reddish yellowish pale gray	None	>100	17.1	<1	0.4	<0.54 ± 0.11	<0.49 ± 0.080
	22	Kinryu River	Tenjin Bridge	Ichinoseki City	2015/2/12	Sunny	8.0	0.3	6.4	0.0	Reddish yellowish pale gray	None	>100	16.4	<1	0.9	<0.56 ± 0.13	<0.52 ± 0.12
					2014/5/23	Cloudy	13.0	0.6	12.2	0.0	Light grayish yellow green	Faint swamp	47	16.2	13	4.2	<0.63 ± 0.16	<0.65 ± 0.14
	20	Kitakami River	Kitakamigawa Bridge	Ichinoseki City	2014/8/21	Cloudy	28.0	0.4	21.5	0.0	Light grayish yellowish yellow	Faint swamp	51	15.8	8	1.8	<0.57 ± 0.15	<0.63 ± 0.12
					2014/11/19	Sunny	9.0	0.4	8.4	0.0	Greenish yellowish pale gray	None	>100	14.8	<1	0.8	<0.62 ± 0.14	<0.58 ± 0.14
	21	Kinomi River	Higuchi Bridge	Ichinoseki City	2015/2/9	Light snow	-1.0	0.4	3.1	0.0	Greenish yellowish pale gray	None	>100	15.2	1	1.3	<0.56 ± 0.14	<0.59 ± 0.14
					2014/5/23	Sunny	16.0	0.4	12.5	0.0	Light grayish yellow green	Faint swamp	47	8.7	8	4.6	<0.51 ± 0.12	<0.62 ± 0.12
	22	Kinryu River	Tenjin Bridge	Ichinoseki City	2014/8/18	Sunny	32.0	0.4	20.3	0.0	Yellowish pale gray	Faint swamp	34	9.9	11	2.4	<0.58 ± 0.12	<0.55 ± 0.10
					2014/11/19	Sunny	9.0	0.4	8.2	0.0	Yellowish pale gray	None	85	11.5	3	2.7	<0.62 ± 0.13	<0.68 ± 0.14
	21	Kinomi River	Higuchi Bridge	Ichinoseki City	2015/2/9	Cloudy	-1.0	0.3	3.1	0.0	Yellowish pale gray	None	>100	13.9	2	1.4	<0.41 ± 0.092	<0.51 ± 0.11
					2014/5/23	Sunny	16.5	0.3	14.7	0.0	Light grayish greenish yellow	Faint swamp	67	15.7	7	3.1	<0.65 ± 0.14	<0.55 ± 0.12
	22	Kinryu River	Tenjin Bridge	Ichinoseki City	2014/8/18	Sunny	32.0	0.4	22.7	0.0	Yellowish pale gray	None	>100	19.8	3	1.0	<0.63 ± 0.15	<0.51 ± 0.11
					2014/11/6	Sunny	18.0	0.4	10.9	0.0	Yellowish pale gray	None	>100	20.2	2	0.9	<0.48 ± 0.099	<0.58 ± 0.11
	21	Kinomi River	Higuchi Bridge	Ichinoseki City	2015/2/9	Light snow	-2.0	0.4	2.7	0.0	Yellow greenish pale gray	None	81	17.5	4	3.5	<0.56 ± 0.13	<0.51 ± 0.14
					2014/5/23	Sunny	17.0	0.3	18.3	0.0	Grayish yellow	Faint swamp	31	14.8	24	12	<0.51 ± 0.12	<0.57 ± 0.12
	22	Kinryu River	Tenjin Bridge	Ichinoseki City	2014/8/18	Cloudy	28.0	0.4	23.3	0.0	Light grayish yellow	Faint swamp	59	13.7	9	2.1	<0.56 ± 0.13	<0.65 ± 0.13
					2014/11/6	Sunny	16.0	0.4	9.8	0.0	Greenish yellowish pale gray	Faint swamp	>100	14.5	2	1.4	<0.62 ± 0.11	<0.45 ± 0.12
	22	Kinryu River	Tenjin Bridge	Ichinoseki City	2015/2/13	Sunny	5.0	0.4	4.1	0.0	Light grayish yellow	Faint swamp	56	14.5	6	6.4	<0.50 ± 0.11	<0.60 ± 0.12

Iwate River (Surrounding Environment) 2/2

Location				Sampling Date	Weather	Air temperature (°C)	Surrounding Environment(Soil,Air dose)														Remarks			
No.	Water area	Location	Municipality				Left bank			Right bank			Air Dose (μSv/h)	Color	Odor	Property	Activity concentration [Bq/kg(dry)]			Air Dose (μSv/h)				
							Color	Odor	Property	Radioactive cesium							Color	Odor	Property			Radioactive cesium		
										Cs-134	Cs-137	Total										Cs-134	Cs-137	Total
R i v e r s	15	Sokei River	Unada Bridge	Ichinoseki City	2014/5/20	Sunny	24.0	Dark brown	faint earth	Loamy	230 ± 17	700 ± 30	930	0.10	Dim yellowish brown	Faint grass	Loamy	110 ± 11	360 ± 20	470	0.10			
					2014/8/20	Sunny	30.0	Blackish brown	Faint grass	Loamy	120 ± 12	410 ± 21	530	0.09	Brown	Faint grass	Loamy	130 ± 10	410 ± 19	540	0.09			
					2014/11/17	Cloudy	7.0	Blackish brown	Faint grass	Loamy	96 ± 11	350 ± 22	446	0.09	Dim yellowish brown	Faint grass	Loamy	130 ± 13	430 ± 22	560	0.09			
	16	Sarusawa River	Kannon Bridge	Ichinoseki City	2015/2/12	Sunny	7.0	Blackish brown	Faint grass	Loamy	68 ± 9.4	250 ± 17	318	0.07	Dark brown	Faint grass	Loamy	24 ± 5.2	110 ± 10	134	0.09			
					2014/5/20	Sunny	25.0	Dim yellowish brown	Faint grass	Loamy	140 ± 12	330 ± 19	470	0.12	Dark brown	Faint grass	Loamy	230 ± 18	610 ± 29	840	0.10			
					2014/8/20	Sunny	32.0	Blackish brown	Faint grass	Loamy	270 ± 15	800 ± 26	1,070	0.11	Dim yellowish brown	Faint grass	Loamy	310 ± 18	860 ± 29	1,170	0.10			
	17	Satetsu River	Oide Bridge	Ichinoseki City	2014/11/17	Cloudy	8.0	Blackish brown	Faint grass	Loamy	190 ± 15	510 ± 25	700	0.12	Dim yellowish brown	Faint grass	Loamy	290 ± 20	930 ± 37	1,220	0.10			
					2015/2/12	Sunny	2.0	-	-	-	-	-	-	-	Dim yellowish brown	Faint grass	Loamy	120 ± 11	410 ± 21	530	0.10	Left bank: Unable to collect samples due to snow on the ground		
					2014/5/20	Sunny	22.0	Dim yellowish brown	Faint grass	Loamy	150 ± 12	510 ± 22	660	0.09	Brown	faint earth	Sandy	290 ± 18	810 ± 30	1,100	0.07			
	18	Kitakami River System	Kanzaki Bridge	Ichinoseki City	2014/8/20	Sunny	32.0	Dim yellowish brown	Faint grass	Loamy	120 ± 9.2	380 ± 17	500	0.08	Dark brown	Faint grass	Loamy	180 ± 13	490 ± 22	670	0.09			
					2014/11/17	Cloudy	10.0	Dim yellowish brown	Faint grass	Loamy	120 ± 11	360 ± 19	480	0.07	Dark brown	Faint grass	Loamy	140 ± 13	550 ± 26	690	0.09			
					2015/2/12	Sunny	7.0	Dim yellowish brown	Faint grass	Loamy	64 ± 7.1	210 ± 13	274	0.07	Dark brown	Faint grass	Loamy	130 ± 11	480 ± 21	610	0.08			
	19	Senmaya River Upper Reaches	Miyata Bridge	Ichinoseki City	2014/5/20	Sunny	23.0	Brownish gray	Faint grass	Loamy	450 ± 22	1,300 ± 38	1,750	0.18	Dim yellowish brown	faint earth	Loamy	250 ± 19	590 ± 29	840	0.18			
					2014/8/21	Cloudy	26.0	Dim yellowish brown	Faint grass	Loamy	280 ± 14	840 ± 25	1,120	0.17	Dark brown	faint earth	Loamy	48 ± 6.3	160 ± 11	208	0.11			
					2014/11/17	Sunny	7.0	Brown	Faint grass	Loamy	620 ± 27	2,000 ± 50	2,620	0.17	Dark brown	Faint grass	Loamy	260 ± 22	890 ± 41	1,150	0.15			
	20	Kitakami River	Kitakamigawa Bridge	Ichinoseki City	2015/2/12	Sunny	8.0	Blackish brown	Faint grass	Loamy	190 ± 12	660 ± 22	850	0.16	Dark brown	Faint grass	Loamy	160 ± 13	560 ± 24	720	0.14			
					2014/5/23	Cloudy	13.0	Blackish brown	Faint grass	Loamy	280 ± 18	800 ± 31	1,080	0.17	Dim yellowish brown	Faint grass	Loamy	87 ± 9.7	190 ± 15	277	0.15			
					2014/8/21	Cloudy	28.0	Dark grayish yellow	Faint grass	Loamy	190 ± 14	530 ± 22	720	0.15	Dark grayish yellow	Faint grass	Loamy	54 ± 6.8	180 ± 12	234	0.16			
	21	Kinomi River	Higuchi Bridge	Ichinoseki City	2014/11/19	Sunny	9.0	Blackish brown	Faint grass	Loamy	150 ± 12	460 ± 20	610	0.16	Dark grayish yellow	Faint grass	Loamy	44 ± 6.1	110 ± 9.8	154	0.15			
					2015/2/9	Light snow	-1.0	Blackish brown	Faint grass	Loamy	160 ± 14	600 ± 26	760	0.16	Dark grayish yellow	Faint grass	Loamy	120 ± 11	400 ± 20	520	0.15			
					2014/5/23	Sunny	16.0	Dim yellowish brown	Faint grass	Loamy	180 ± 16	480 ± 26	660	0.14	Dark brown	faint earth	Loamy	230 ± 19	640 ± 31	870	0.15			
	22	Kinryu River	Tenjin Bridge	Ichinoseki City	2014/8/18	Sunny	32.0	Dark brown	Faint grass	Loamy	39 ± 6.8	160 ± 12	199	0.09	Blackish brown	faint earth	Loamy	250 ± 15	820 ± 26	1,070	0.11			
					2014/11/19	Sunny	9.0	Dark brown	Faint grass	Loamy	90 ± 10	290 ± 16	380	0.10	Dark brown	Faint grass	Loamy	110 ± 9.9	350 ± 17	460	0.15			
					2015/2/9	Cloudy	-1.0	Dark brown	Faint grass	Loamy	<6.0 ± 1.7	19 ± 2.8	19	0.06	Dark brown	Faint grass	Loamy	130 ± 13	470 ± 24	600	0.13			
	22	Kinryu River	Tenjin Bridge	Ichinoseki City	2014/5/23	Sunny	16.5	Brown	Faint grass	Loamy	70 ± 9.2	200 ± 15	270	0.07	Blackish brown	Faint grass	Loamy	65 ± 9.8	190 ± 16	255	0.06			
					2014/8/18	Sunny	32.0	Brown	Faint grass	Loamy	78 ± 8.3	240 ± 14	318	0.07	Faint grass	Loamy	54 ± 7.4	140 ± 11	194	0.07				
					2014/11/6	Sunny	18.0	Brown	Faint grass	Loamy	23 ± 4.8	77 ± 7.8	100	0.07	Dark brown	Faint grass	Loamy	43 ± 7.2	130 ± 11	173	0.07			
	22	Kinryu River	Tenjin Bridge	Ichinoseki City	2015/2/9	Light snow	-2.0	-	-	-	-	-	-	-	Dark brown	Faint grass	Loamy	30 ± 3.4	110 ± 6.3	140	0.06	Left bank: Unable to collect samples due to snow on the ground		
					2014/5/23	Sunny	17.0	Dark brown	Faint grass	Loamy	290 ± 19	810 ± 31	1,100	0.15	Blackish brown	Faint grass	Loamy	290 ± 20	770 ± 33	1,060	0.18			
					2014/8/18	Cloudy	28.0	Blackish brown	Faint grass	Loamy	490 ± 20	1,500 ± 35	1,990	0.17	Dim yellowish brown	Faint grass	Loamy	190 ± 13	580 ± 22	770	0.17			
22	Kinryu River	Tenjin Bridge	Ichinoseki City	2014/11/6	Sunny	16.0	Blackish brown	Faint grass	Loamy	260 ± 14	830 ± 26	1,090	0.16	Dim yellowish brown	Faint grass	Loamy	150 ± 12	510 ± 21	660	0.17				
				2015/2/13	Sunny	5.0	Blackish brown	Faint grass	Loamy	240 ± 14	850 ± 26	1,090	0.17	Dim yellowish brown	Faint grass	Loamy	130 ± 11	510 ± 21	640	0.16				

Iwate Coastal (Sediment) 1/1

	Location		Sampling Date	Weather	Air temperature (°C)	Water depth (m)	Sediment																	Remarks	
							No.	Water area	General items											Activity concentration [Bq/kg(dry)]					
	Sediment temperature (°C)	Sample length (cm)							Color	Odor	Grain size distribution(%)						Sediment content (%)	Density (g/cm ³)	Property	Radioactive cesium					
											Coarse gravel	Medium gravel	Fine gravel	Coarse sand	Medium sand	Fine sand				Silt	Clay	Cs-134	Cs-137		Total
Coastal areas	23	Ofunato Bay (A)	S-31	2014/5/27	Cloudy	13.6	16.4	9.0	10	Faint hydrogen sulfide	Dim yellow	0.0	0.1	0.3	0.7	8.1	25.0	45.4	20.4	48.6	2.557	Silt	5.1 ± 0.76	1.6 ± 1.3	21.1
				2014/11/28	Sunny	7.2	17.1	13.9	10	Black	None	0.0	0.0	0.2	1.1	9.5	22.0	41.3	25.8	56.4	2.552	Silt/sand	<5.1 ± 1.6	1.3 ± 2.3	1.3
	24	Hirota Bay	S-34	2014/5/27	Cloudy	14.5	10.8	10.6	10	Faint hydrogen sulfide	None	0.0	0.0	0.2	6.4	73.5	15.1	1.6	3.3	82.1	2.722	Sand	<0.91 ± 0.30	1.1 ± 0.34	1.1
				2014/11/28	Sunny	5.9	11.2	14.3	10	Faint hydrogen sulfide	None	0.0	0.5	1.3	14.0	64.3	13.5	2.4	4.0	83.3	2.717	Sand	<0.97 ± 0.32	1.5 ± 0.36	1.5



Figure 3.5.2 Survey Locations (Iwate Prefecture)