

○Results of Radioactive Material Monitoring of Aquatic Organisms (Location D along the Mano River)

<Location D along the Mano River: Samples collected>

Items Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
D-1	○	○	○	○	○	○
D-2	○	○	○	—	○	—
D-3	—	○	—	—	○	—

<Location D along the Mano River: Site measurement item>

Items Locations	Survey date and time		Latitude and longitude of the location		Water	Sediment					Other		
	Water	Sediment	Latitude	Longitude	Water temperature	sediment temperature	Property	Color	Odor	Contaminants	Transparency	Water depth	
D-1	2012/8/22	7:43	8:00	37.7332	140.9254	21.8	21.7	Fine sand	2.5Y-4/3	None	Pebbles	50<	0.2
D-2		8:57	8:48	37.7095	140.9566	22.2	22.1	Sand	2.5Y-4/3	None	Pebbles	50<	0.3
D-3		—	9:25	37.7053	140.9621	—	22.0	Sand/sediment	2.5Y-4/3	None	Plant fragments, pebbles	50<	0.2

<Location D along the Mano River: Analysis items Water>

Items Locations	Survey date and time		Latitude and longitude of the location		pH	BOD	COD	DO	Electrical conductivity	Salinity	TOC	SS	Turbidity	Cs-134	Cs-137	Sr-90
			Latitude	Longitude	-	(mg/L)	(mg/L)	(mg/L)	(mS/m)	-	(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
D-1	2012/8/22	7:43	37.7332	140.9254	7.6	<0.5	2.5	9.6	10.2	0.05	2.1	2	1.2	0.12	0.19	0.0026
D-2		8:57	37.7095	140.9566	7.2	<0.5	2.9	8.1	11.7	0.06	1.8	4	2.2	0.078	0.13	—
D-3		—	37.7053	140.9621	—	—	—	—	—	—	—	—	—	—	—	—

<Location D along the Mano River : Analysis items Sediment>

Items Locations	Survey date and time		Latitude and longitude of the location		pH	Redox potential E <sub>N,H,E</sub> (mV)	Water content (%)	IL (%)	TOC mg/g.dry	Soil particle (g/cm3)	Grain size distribution							Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)	
			Latitude	Longitude							Gravel (2-75mm) (%)	Coarse sand (0.85-2mm) (%)	Medium sand (0.25-0.85mm) (%)	Fine sand (0.075-0.25mm) (%)	Silt (0.005-0.075mm) (%)	Clay (Less than 0.005mm) (%)	Median grain diameter (mm)				Maximum grain diameter (mm)
D-1	2012/8/22	8:00	37.7332	140.9254	7.1	345	31.1	2.9	1	2.718	6.6	8.9	68.0	12.7	1.5	2.3	0.42	19	820	1,300	2.1
D-2		8:48	37.7095	140.9566	7.1	398	20.5	1.5	<1	2.690	30.1	40.1	27.1	1.5	1.2	1.2	1.3	19	570	840	—
D-3		9:25	37.7053	140.9621	6.9	388	25.1	1.9	1	2.693	25.5	15.6	40.7	13.5	1.0	3.7	0.66	19	390	680	—

<Location D along the Mano River: Analysis items Aquatic organisms>

Location	Sampling Date	Latitude and longitude of the location		Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg,wet)	Cs-134 (Bq/kg,wet)	Cs-137 (Bq/kg,wet)	Sr-90 (Bq/kg,wet)	Note	
		Latitude	Longitude												Growth stage	Stomach contents
D-4	2012/8/22	37.7312	140.9090	Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	Rhinogobius	98	0.20	300	460	—	Mature fish	—
				Arthropod	Malacostraca	Decapoda	Procambarus	<i>Procambarus clarkii</i>	Red swamp crawfish	10	0.30	250	410	—	Imago	—
				Arthropod	Malacostraca	Decapoda	Atyidae	<i>Atyidae</i>	Freshwater shrimp	419	0.10	59	88	—	Imago	—
				Arthropod	Malacostraca	Decapoda	Grapsidae	<i>Eriocheir japonica</i>	Japanese mitten crab	4	0.10	150	210	—	Imago	—
				Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	44	0.040	190	290	—	Imago	—
				Arthropod	Insecta	Ephemeroptera	Isonychiidae	<i>Isonychia japonica</i>	Isonychia japonica	223	0.060	180	280	—	Non-adult	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae							
				Arthropod	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	Stylogomphus suzukii							
				Arthropod	Insecta	Odonata	Gomphidae	<i>Gomphidae</i>	Gomphidae							
				Arthropod	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena							
				Arthropod	Insecta	Plecoptera	Perlidae	<i>Kamimurai sp.</i>	Kamimuria tibialis							
				Arthropod	Insecta	Hemiptera	Belostomatidae	<i>Appasus sp.</i>	Ferocious water bug							
				Arthropoda	Insecta	Neuroptera	Corydalidae	<i>Parachauliodes japonicus</i>	Parachauliodes japonicus							
				Arthropod	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	Protohermes grandis							
				Arthropod	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<u>Stenopsyche marmorata</u>							
				Magnoliophyta	Monocotyledoneae	Alismatales	Potamogetonaceae	<i>Potamogeton oxyphyllus</i>	Potamogeton oxyphyllus	—	0.44	40	62	—	—	—
				Bryophyta	—	—	—	<i>Bryophyta</i>	Bryophyte	—	0.086	230	340	—	—	—
Streptophyta	Zygnematomyceae	Zygnematales	Zygnemataceae	<i>Spirogyra sp.</i>	Spirogyra	—	0.37	9.0	14	—	—	—				
—	—	—	—	—	CPOM (litter)	—	0.50	160	260	—	—	—				
D-1 D-2	2012/8/29	37.7332	140.9254	Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	7	0.10	95	140	—	Immature fish	—
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon sp.</i>	Tribolodon	60	0.40	89	140	—	Mature fish	—
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Zacco platypus	11	0.047	48	68	—	Mature fish	—
		Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Gobiidae</i>	Gobiidae	93	0.20	44	67	—	Mature fish	—		
		Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	<i>Plecoglossus altivelis</i>	Sweetfish (stock)	2	0.20	51	84	—	Mature fish	Some (details unknown)		
		Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	<i>Plecoglossus altivelis</i>	Sweetfish (natural upstream)	24	0.60	120	170	—	Mature fish	—		