

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	
			Latitude	Longitude	Water temperature	Sediment temperature	Property	Color	Odor	Contaminants	Transparency	Water depth
D-1	2012/6/5	7:39	37.7332	140.9254	15.1	14.9	Fine sand	2.5Y-4/3	None	Pebbles	>50	0.40
D-2		9:05	37.7095	140.9566	15.2	15.2	Sand gravel	2.5Y-4/3	None	Pebbles	>50	0.55
D-3		9:58	37.7053	140.9621	—	15.3	Sand/sediment	2.5Y-4/3	None	Pebbles	>50	0.63

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

Items Locations	Survey date and time		Latitude and longitude of the location		pH	BOD (mg/L)	COD (mg/L)	DO (mg/L)	Electrical conductivity (mS/m)	Salinity	TOC (mg/L)	SS (mg/L)	Turbidity (FNU)	Cs-134 (Bq/L)	Cs-137 (Bq/L)	Sr-90 (Bq/L)
			Latitude	Longitude												
D-1	2012/6/5	7:39	37.7332	140.9254	7.4	<0.5	3.1	10.3	7.2	0.04	1.5	1	0.8	0.086	0.13	0.0031
D-2		9:05	37.7095	140.9566	7.4	0.6	3.0	10.1	7.5	0.04	1.4	2	1.0	0.071	0.11	—
D-3		9:58	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 _{N,H,E} (mV)	Water content (%)	IL (%)	TOC mg/g.dry	Soil particle density (g/cm ³)	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	2012/6/5	7:39	37.7332	140.9254	7.0	463	26.5	1.9	1	2.691	7.5	16.9	68.4	5.1	1.0	1.1	0.62	19	1,200	1,800	1.9
D-2		9:05	37.7095	140.9566	7.0	471	19.4	1.4	<1	2.687	40.4	37.5	19.3	2.0	0.3	0.5	1.6	19	1,000	1,400	—
D-3		9:58	37.7053	140.9621	6.9	438	25.3	2.4	1	3.677	16.5	16.4	42.0	18.1	2.9	4.1	0.52	19	410	650	—

< 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	2012/6/6	37.7312	140.9090	Chordata	Actinopterygii	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	Freshwater goby	35	0.14	390	580	—	Mature fish	—			
				Arthropoda	Decapoda	Decapoda	Atyidae	<i>Neocaridina denticulata</i>	Freshwater shrimp	411	0.12	93	130	—	Imago	—			
				Mollusca	Sorbeoconcha	Sorbeoconcha	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	104	0.19	72	110	—	Adult / non-adult	—			
				Arthropoda	Insecta	Ephemeropteroidea	Ephemeroptera	<i>Isonychia japonica</i>	Isonychiidae	297	0.12	78	120	—	Non-adult	—			
				Arthropod	Odonata	Odonata	Calopterygidae	<i>Calopteryx cornelia</i>	Calopteryx cornelia										
				Arthropod	Odonata	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	Boyeria maclachlani										
				Arthropod	Odonata	Odonata	Aeshnidae	<i>Planaeschna milnei</i>	Planaeschna milnei										
				Arthropod	Odonata	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius										
				Arthropod	Odonata	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus										
				Arthropod	Odonata	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae										
				Arthropod	Odonata	Odonata	Gomphidae	<i>Sinogomphus flavolimbatus</i>	Sinogomphus flavolimbatus										
				Arthropod	Odonata	Odonata	Gomphidae	<i>Stylogomphus suzuki</i>	Stylogomphus suzuki										
				Arthropod	Odonata	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena										
				Arthropod	Megaloptera	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	Protohermes grandis										
				Arthropod	Megaloptera	Megaloptera	Sialis japonica	<i>Sialis japonica</i>	Sialis japonica										
				Arthropod	Trichoptera	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<u>Stenopsyche marmorata</u>										
				Arthropoda	Diptera	Diptera	Tipulidae	<i>Tipula sp.</i>	Tipula										
Streptophyta	Zygnematales	Zygnematales	Zygnemataceae	<i>Spirogyra sp.</i>	Spirogyra	—	0.13	100	160								—	—	—
—	—	—	—	—	—	—	1.6	580	830								—	—	—
D-1 D-2	2012/6/7	37.7332	140.9254	Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii								1	1.2	190
		37.7095	140.9566	Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	<i>Tribolodon sp.</i>	Tribolodon	3	4.0	86	140	0.22	Mature fish	Some (details unknown)			
	2012/6/8	—	—	Vertebrata	Osmeriformes	Osmeriformes	Osmeridae	<i>Plecoglossus altivelis</i>	Sweetfish (natural upstream)	(Many)	1.6	82	120	1.8	Immature fish	—			