

Report
**Environmental Quality Assessment of
Buyat Bay and Totok Bay**



14 October 2004

Kementerian Lingkungan Hidup

Kantor Kementerian Lingkungan Hidup
Jl. DI Panjaitan Kav 24 Jakarta 13410
www.menlh.go.id



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MAIN FINDINGS AND CONCLUSIONS

1. Field Survey

During the period 28 August to 12 September, 2004, a field team, which is part of the Integrated Team for the Buyat Bay Case visited the Buyat Bay and Totok Bay areas, and the mining site of PTNMR. The field team consisted of fifty seven members from fourteen organizations representing the government, NGOs and research groups. The integrated field team collected data on environmental indicators from various sites in the following areas:

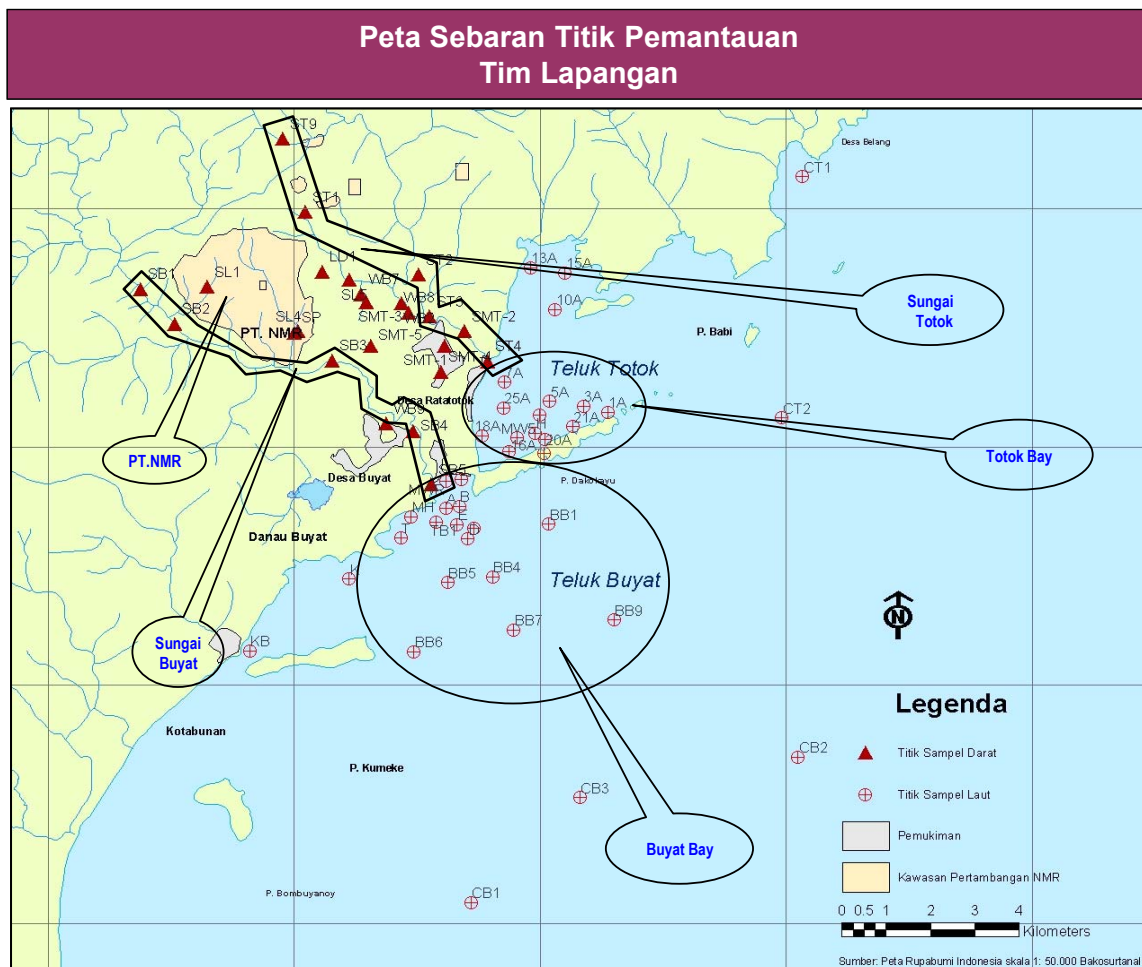
1. Sea	2. Land	3. Rivers	4. Control Points
1.1 Buyat Bay	2.1 Desa Buyat	3.1 Sungai Buyat	4.1 Desa Belang
1.2 Totok Bay	2.2 Desa Ratatotok	3.2 Sungai Ratatotok	4.2 Desa Besaan
	2.3 Dusun Buyat Pante		4.3 Outer Buyat Bay
			4.4 Outer Totok Bay

The field team collected samples from around two hundred monitoring points including the sea, land, water wells, river, sediment and the ambient quality in the study area. These samples were analyzed in six accredited government and private laboratories, and one research laboratory. The analysis of samples included parameters related to the environmental quality in the study area. These laboratory tests generated more than 1700 results on a wide range of environmental parameters. The conclusions presented in this report are based on the analysis of the dataset of these laboratory results.

2. Method of Analysis

To assess whether or not a site was polluted, the data on environmental indicators from a site were compared against the applicable regulatory standards. If the value of environmental indicator did not comply with the standard, it was concluded that the site was polluted. However, if the value of an environmental indicator was within the standard, then the site was considered not polluted.

The results were further analyzed to see if the values of indicators in a tested site were similar or different from the values of the same indicators at control points.



3. Conclusions

The conclusions presented in this report are structured into three groups. The first set of conclusions covers those environmental parameters that have regulatory standards. This includes the quality of the water in Buyat Bay and Totok Bay, the quality of water in rivers, ambient air quality, metals in fish, and the quality of drinking water in the study area. The second set of conclusions is on those environmental parameters that do not have regulatory standards. This includes metals in sediment, and metals in fruit and vegetables growing in the study area. The final set of conclusions highlights the long term environmental risks in the area.



3.1 Conclusions: Set-1:

3.1.1 Data shows that the water in Buyat Bay is not polluted. All the parameters of water quality are well below the standards. Further, the quality of water in Buyat Bay was found to be the same as the quality of water at the control points, and in Totok Bay. This finding is the same as the finding of the KLH-BPPT Study conducted in Sep-Oct 2003. (Exhibit-1)

3.1.2 The data on fish collected by the integrated field team found that total mercury in fish is below the standard prescribed by the World Health Organization. This finding is the same as the finding of the September 2004 study by the joint team from WHO-Indonesia and the National Institute for Minamata Disease, Japan, which was conducted for the Ministry of Health. The data also shows that the level of inorganic arsenic (10% of the total arsenic) in fish is below the standard prescribed by the food standard of Australia and New Zealand. (Exhibit-2)

3.1.3 Data shows that the dissolved metals in River Buyat and River Totok are below the standard for Class-1 water quality. (Exhibit-3)

3.1.4 The data on ambient quality from various locations in the study area show that the total suspended particulate (TSP) is below the standard. (Exhibit-4)

3.1.5 The drinking water wells of Desa Buyat have high arsenic compared to the drinking water quality standard. This finding indicates that arsenic may be naturally high in certain parts of the land around Buyat Bay. Data also shows that manganese in most locations in the study area is higher than the standard for drinking water quality. (Exhibit-5)

3.2 Conclusions: Set-2:

3.2.1 The ambient quality data on the concentration of mercury and arsenic shows that Desa Ratatotok has the highest concentration among the tested locations in the study area. (Exhibit-6)

3.2.2 Several food items like papaya, rice and *keniki* leaves in Desa Ratatotok have higher levels of arsenic and mercury compared to Desa Buyat and Dusun Buyat Pante. (Exhibit-7)

3.2.3 The concentration of total arsenic in the sediment where the tailings are discharged in Buyat Bay is high compared to the sediment in Totok Bay and the control points. However, it appears that the arsenic in the sediment is in a stable form because the level of dissolved arsenic in the water of Buyat Bay is lower than the standard. (Exhibit-8)

3.2.4 The concentration of mercury in the sediment of Totok Bay is high compared to the sediment in Buyat Bay and the control points. The most likely source of the mercury in



the sediment of Totok Bay is the small scale gold mining activities in the study area. (Exhibit-9)

3.2.5 The diversity of organisms in the sediment where the tailings from PTNMR were discharged has lower diversity compared to the other parts of Buyat Bay and Totok Bay. (Exhibit-10)

3.2.6 The sediment in River Totok has higher arsenic and mercury compared to River Buyat. (Exhibit-11)

3.3 Conclusions: Set-3:

3.3.1 Data indicates that certain areas in and around Desa Buyat could be naturally high in arsenic. However, the implications of the potential environmental and health risks from the naturally existing arsenic need further research.

3.3.2 The small scale gold mining activities around River Totok has led to increase in mercury in the sediments of River Totok and Totok Bay. To abate further accumulation of mercury in the sediment, targeted programs of education, technical support and training to the small scale gold mining community are required.

3.3.3 The benthic diversity in the sediment of Buyat Bay in the area of tailings disposal should be monitored to keep track of the trend.

3.3.4 Dissolved arsenic and dissolved mercury in Buyat Bay water should be monitored periodically to observe that arsenic and mercury in the sediment in the tailings disposal area has remained in a stable form.

4. Additional Information

4.1. List of applicable regulations

- 1) Peraturan Pemerintah Nomor: 41 Tahun 1999 Tentang Pengendalian Pencemaran Udara (Lampiran: Baku Mutu Udara Ambien Nasional).
- 2) Peraturan Pemerintah Nomor: 82 Tahun 2001 Tentang Pengelolaan Kualitas Air dan Pengendalian Pencemaran Air (Lampiran: Kriteria Mutu Air Berdasarkan Kelas I).
- 3) Keputusan Menteri Kesehatan Republik Indonesia Nomor: 907/MENKES/SK/VII/2002 Tentang Syarat-syarat dan Pengawasan Kualitas Air Minum (Lampiran I: Persyaratan Kualitas Air Minum).
- 4) Keputusan Menteri Negara Lingkungan Hidup Nomor: 51 Tahun 2004 Tentang Baku Mutu Air Laut (Lampiran III: Baku Mutu untuk Biota Laut).



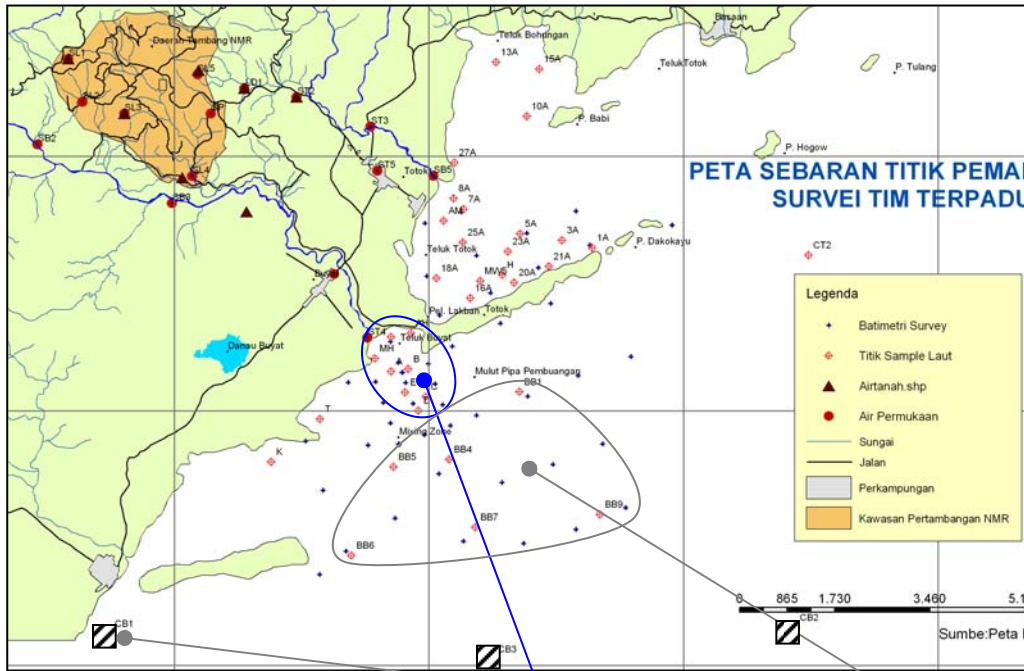
4.2. Members of the integrated field team:

- 1) Kementerian Lingkungan Hidup
- 2) Departemen Energi dan Sumber Daya Mineral
- 3) Departemen Kelautan
- 4) Departemen Kesehatan
- 5) POLRI
- 6) BPPT
- 7) Pemerintah Provinsi Sulut
- 8) Dinas Perikanan DKI Jakarta
- 9) WALHI
- 10) JATAM
- 11) Institut Pertanian Bogor
- 12) Universitas Indonesia
- 13) Universitas Padjajaran
- 14) Universitas Sam Ratulangi

4.3. Laboratories where samples were tested:

- 1) Sarpedal KLH
- 2) ALS Bogor
- 3) Corelab
- 4) Balai Besar Industri Agro
- 5) BATAN
- 6) Dinas Perikanan DKI Jakarta
- 7) UNPAD

Exhibit 1.1: Dissolved Mercury (ppb)-Buyat Bay



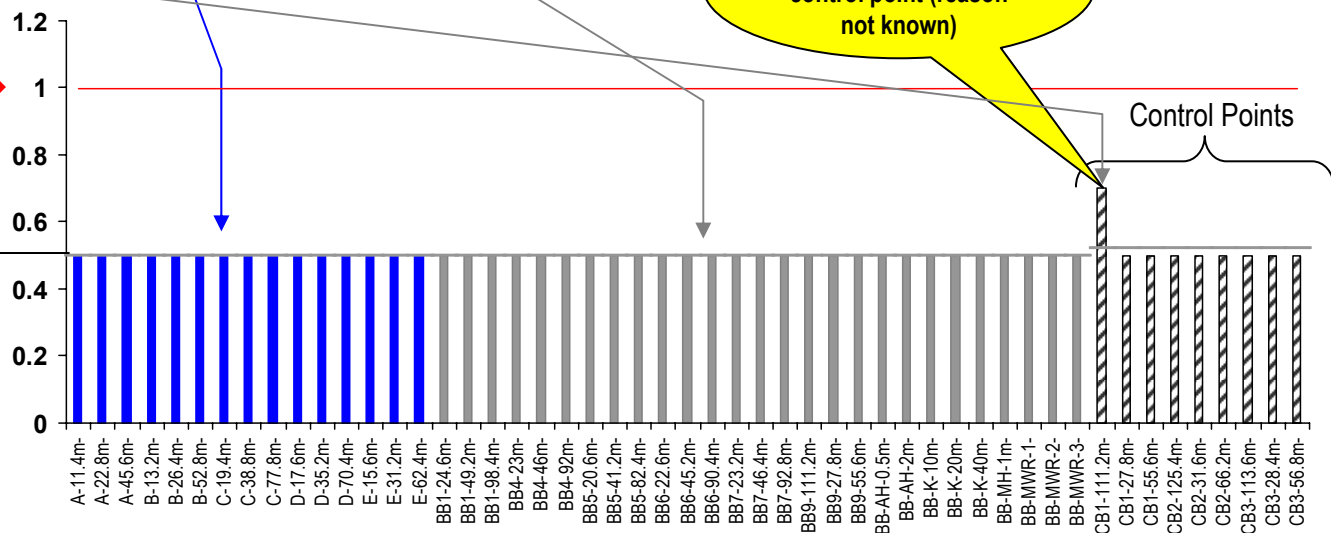
Conclusion:

- Buyat Bay is **not polluted with mercury**.
- All values are below the detection limit.
- Mercury level in the mixing area, outer Buyat Bay and the control points are the same.

▨ Control Points

Standard (ppb) → 1

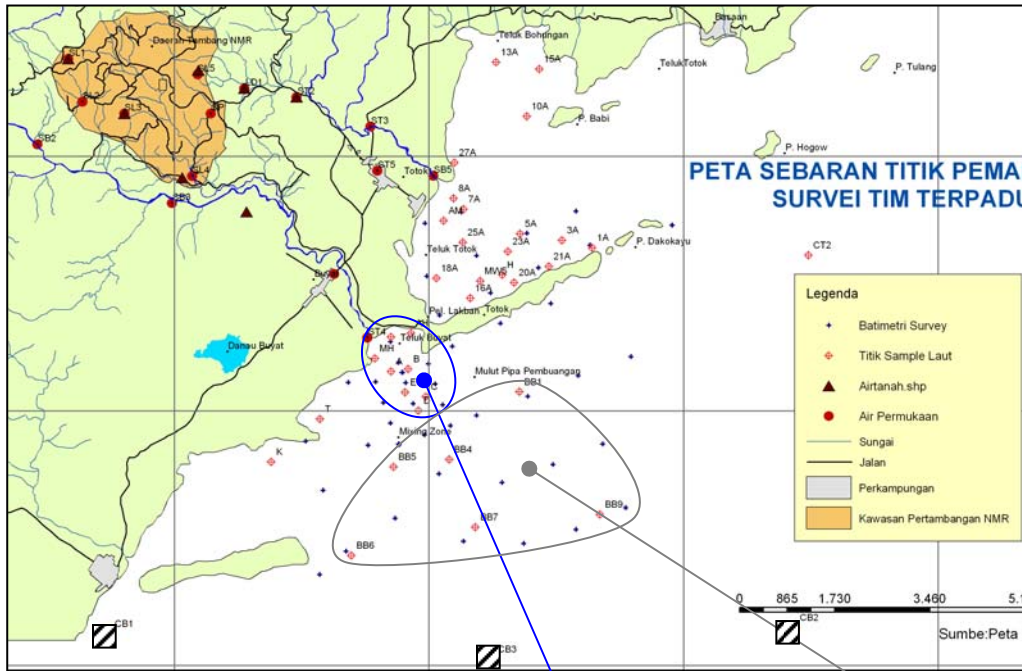
Detection Limit=0.5 ppb



Spike observed at control point (reason not known)

Control Points

Exhibit 1.2: Dissolved Arsenic (ppb)-Buyat Bay



Conclusion:

- Buyat Bay is not polluted with arsenic.
- Arsenic level in the mixing area, outer Buyat Bay and the control points are the same.

Control Points

Standard (ppb) →

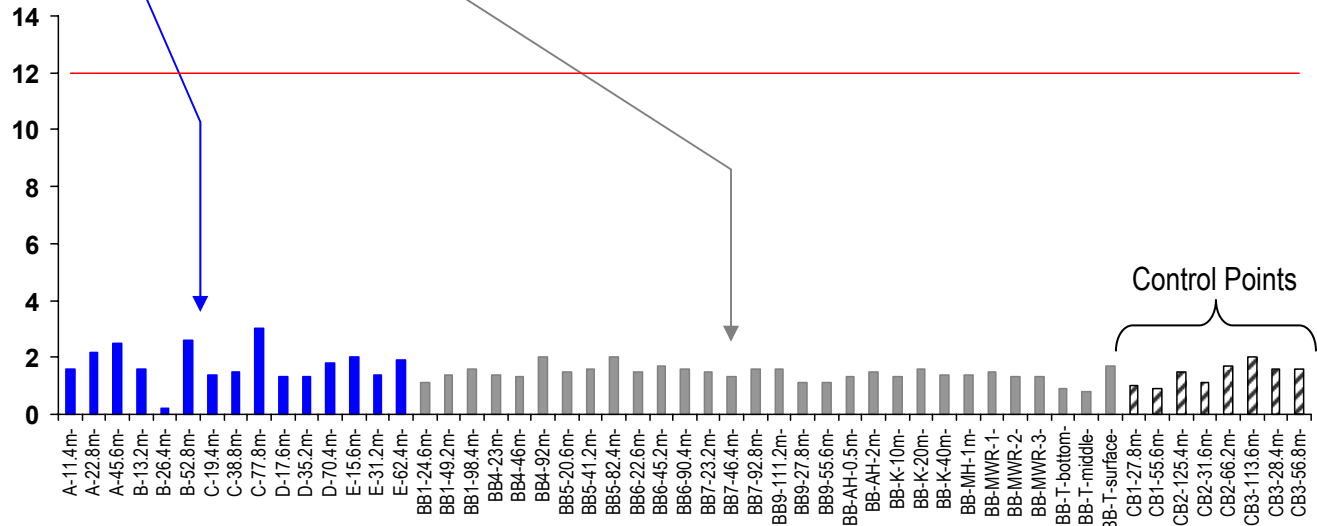
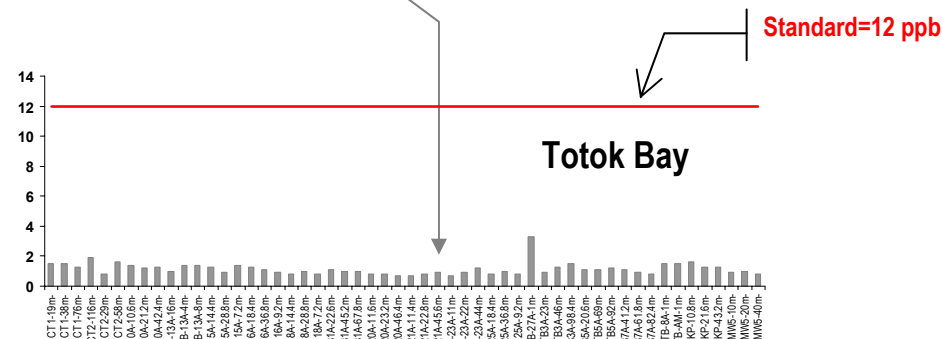
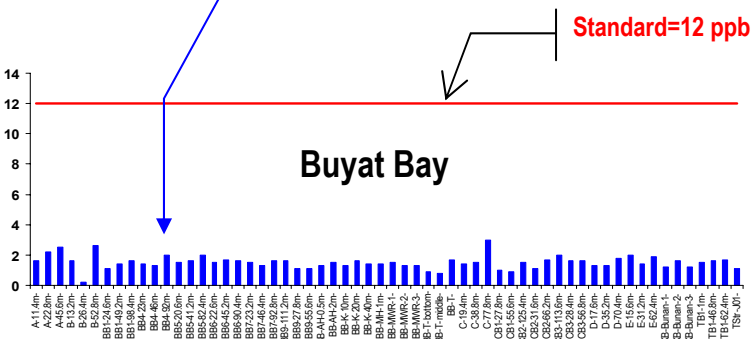
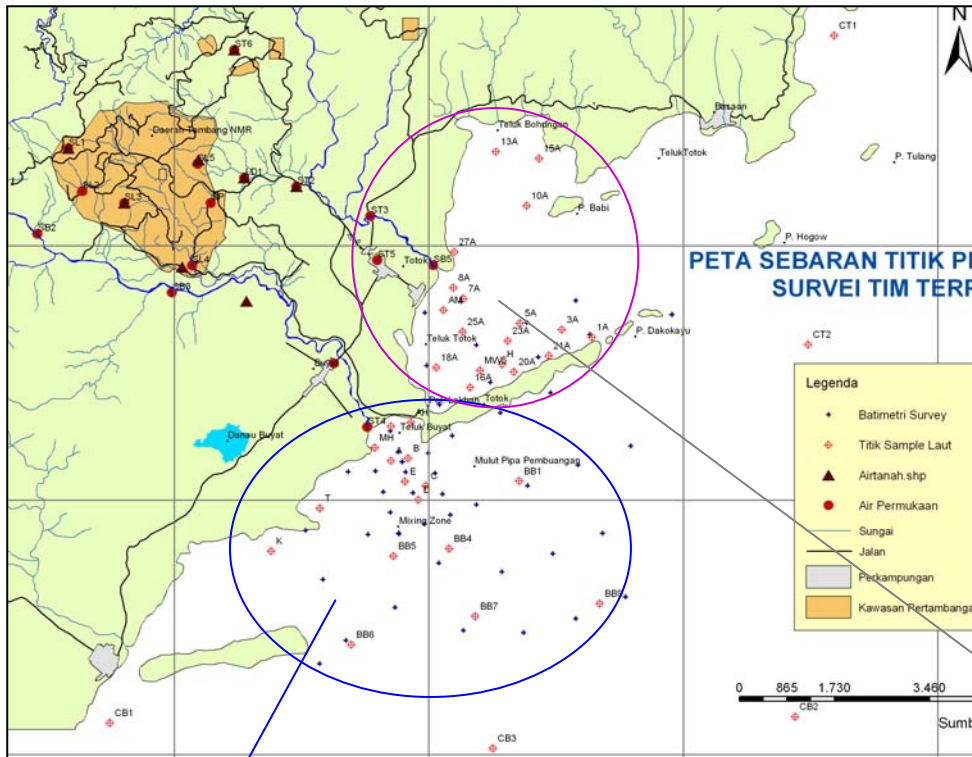


Exhibit 1.4: Dissolved Arsenic (ppb)-Comparison of Buyat Bay and Totok Bay

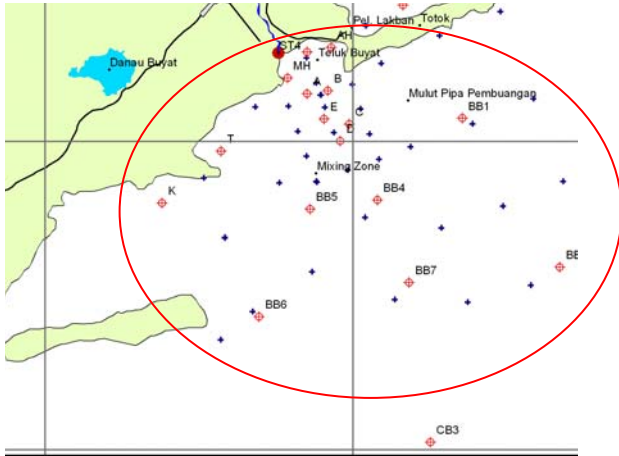
Conclusion:

Both Buyat Bay and Totok Bay are not polluted with arsenic. All values significantly below the standard



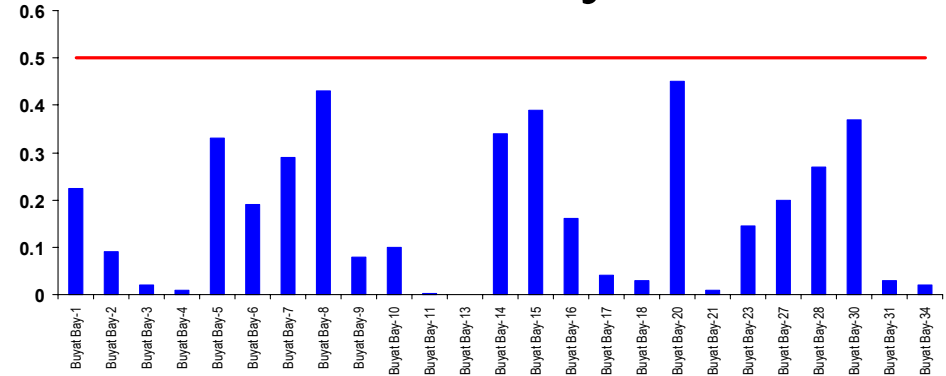
Data Source: Tim Lapangan

Exhibit 2.1: Mercury and Arsenic in Fish-Buyat Bay



Mercury

Standard (ppm) →



Conclusion:

Fish from Buyat Bay are fit for human consumption. Follow advise of DKP.

Inorganic Arsenic

Standard (ppm) →

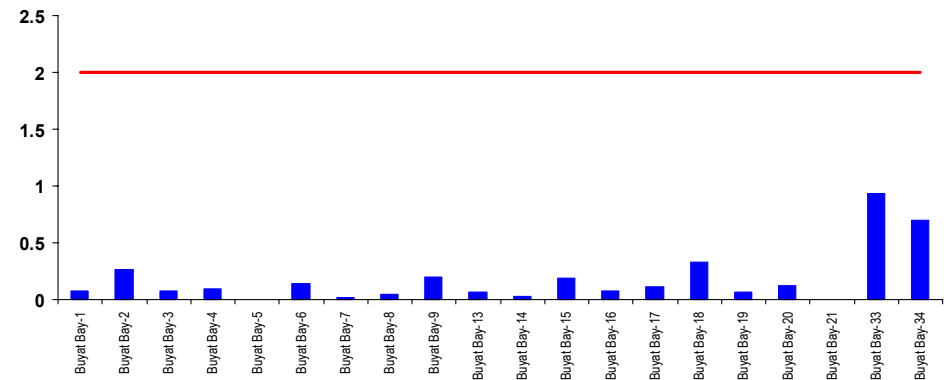
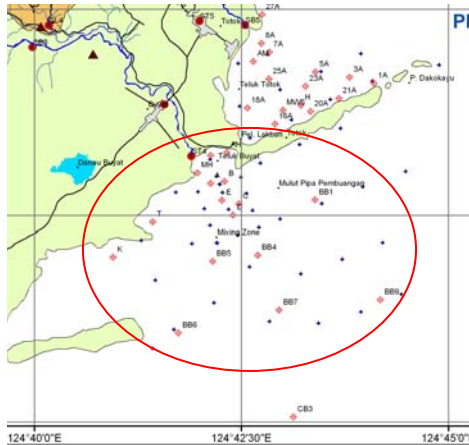


Exhibit 2.2: Mercury in Fish Relative to Minamata Threshold-Buyat Bay



Conclusion:

Eating fish from Buyat Bay does not create any risk of Minamata Disease. This finding is the same as the WHO/Minamata Institute study.

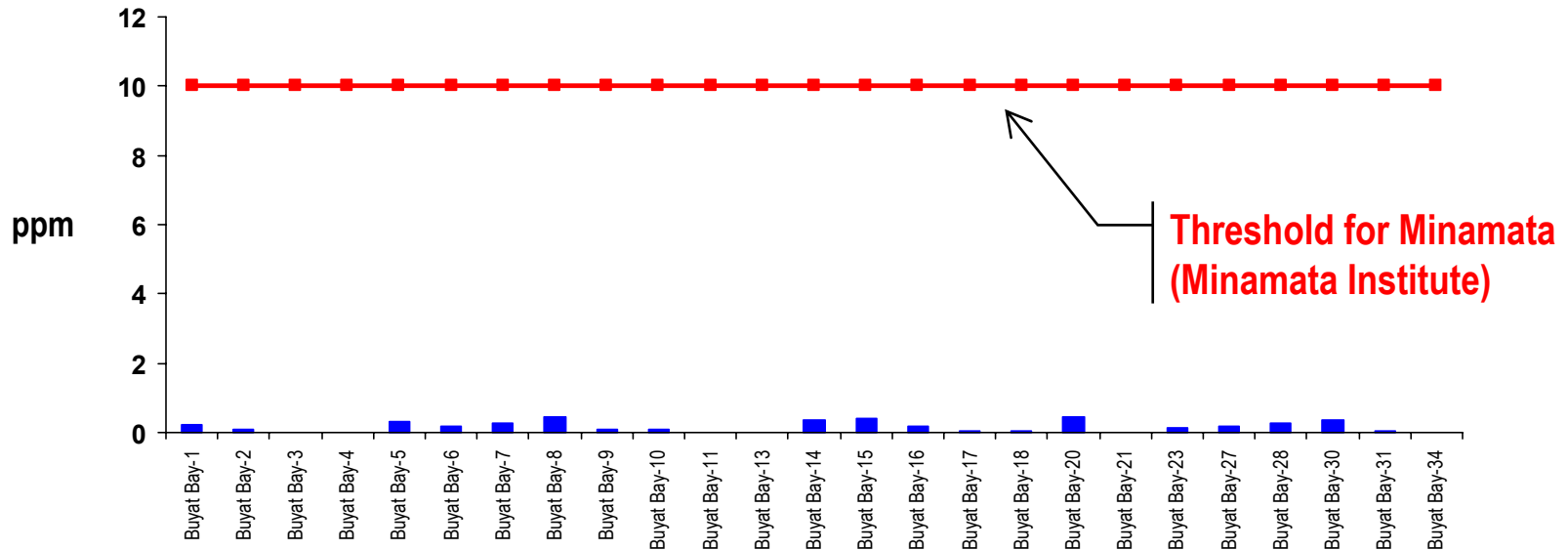
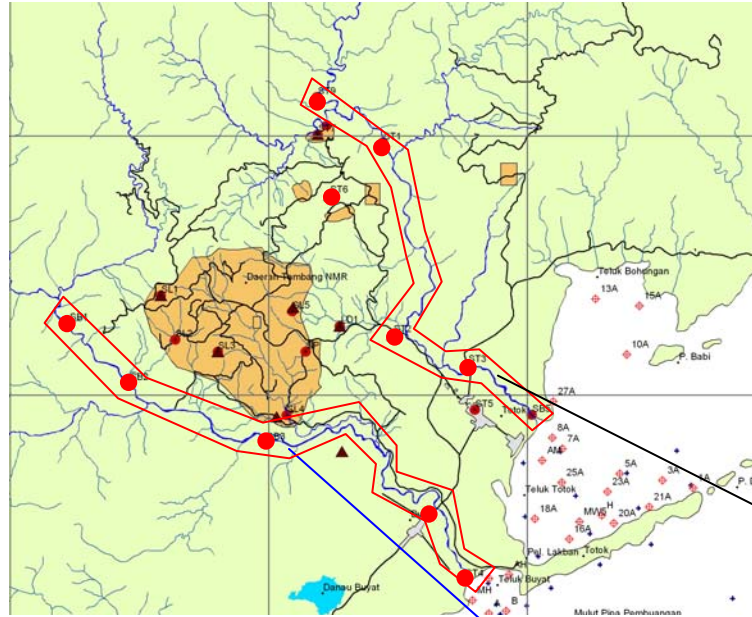


Exhibit 2.3: Fish Quality-Summary Statistics

Buyat Bay

	Indicator	Standard	Average	Minimum	Maximum	Sample #
1	Hg-Fish Tissue (ppm)	0.5000	0.1690	0.0010	0.4500	25
2	Arsenic-Fish Tissue (ppm)	2.0000	0.1759	0.0004	0.9340	20
3	Cu-Fish Tissue (ppm)		3.6347	0.1100	32.2000	15
4	Mn-Fish Tissue (ppm)		2.6233	0.1600	34.6100	35
5	Fe-Fish Tissue (ppm)		74.4115	2.6100	436.9350	34

Exhibit 3.1: Dissolved Arsenic-Sungai Buyat and Sungai Totok



Conclusion:

Sungai Buyat and Sungai Totok are not polluted with arsenic.

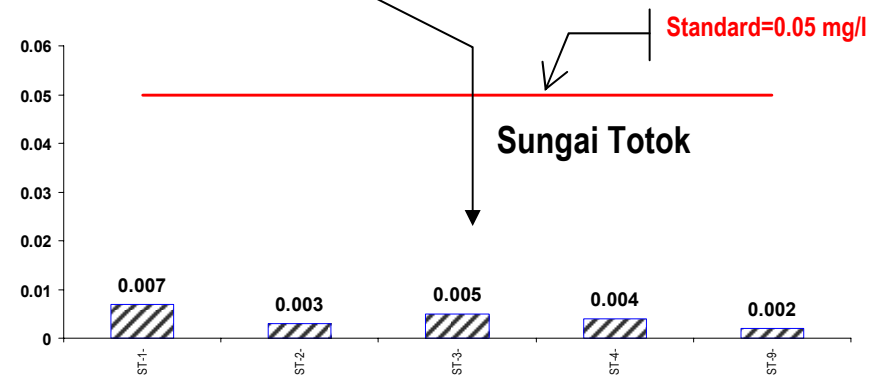
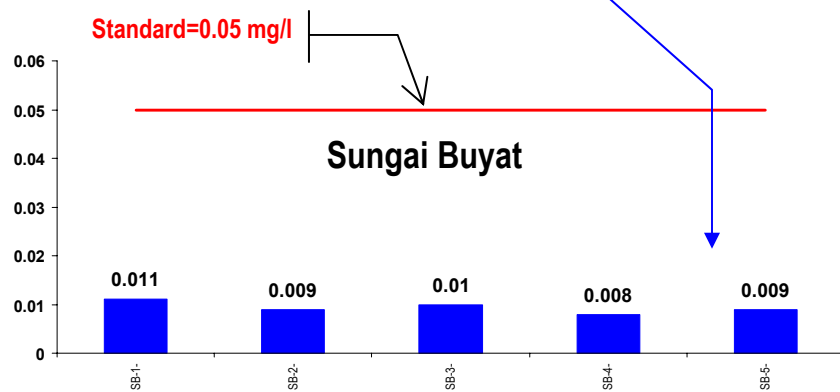
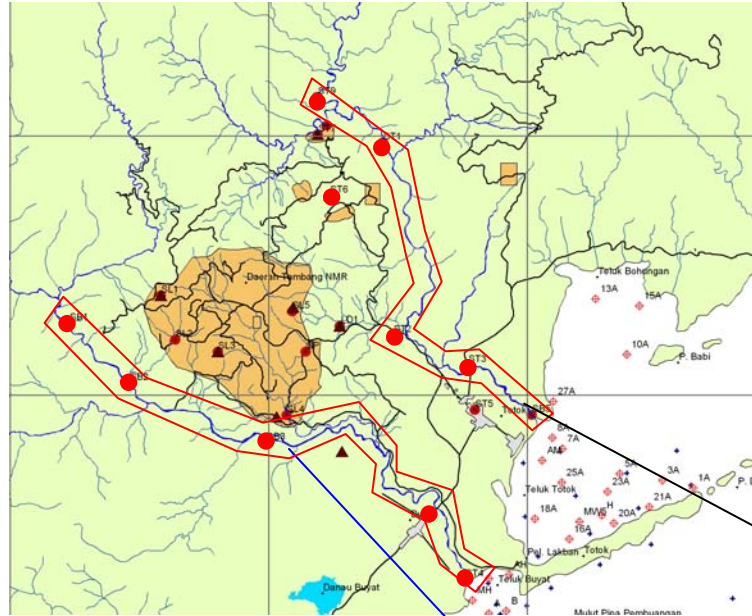


Exhibit 3.2: Dissolved Mercury-Sungai Buyat and Sungai Totok



Conclusion:

Sungai Buyat and Sungai Totok are not polluted with mercury

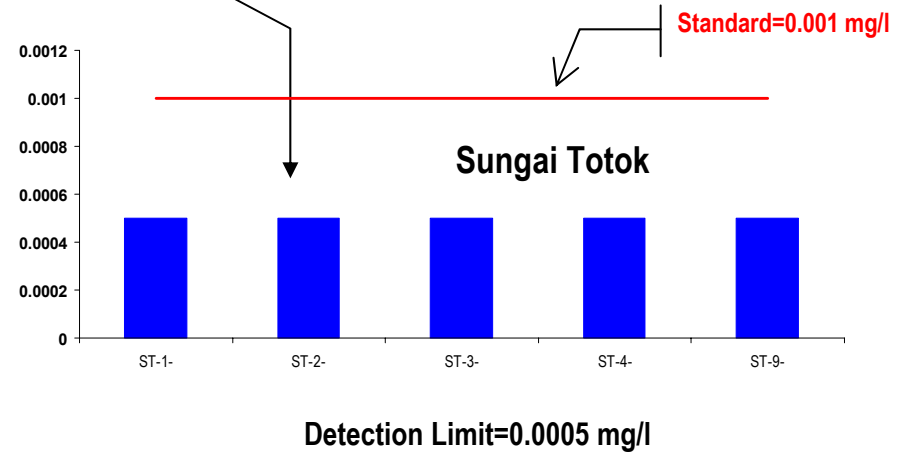
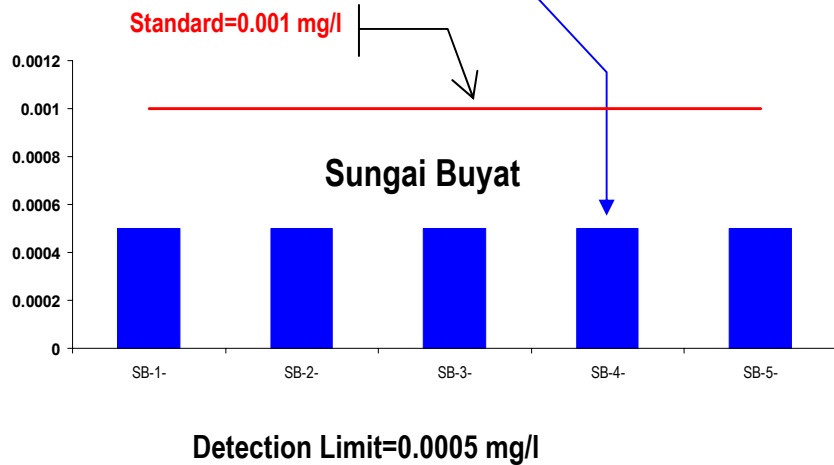


Exhibit 3.3: River Water Quality Analysis-Summary Statistics

Sungai Buyat

	Indicator	Standard	Average	Minimum	Maximum	Sample #
1	TSS (mg/l)	50.0000	13.1800	1.5000	42.2000	5
2	Hg-D (mg/l)	0.0010	0.0005	0.0005	0.0005	5
3	As-D (mg/l)	0.0500	0.0094	0.0080	0.0110	5
4	Cu-D (mg/l)	0.0200	0.0014	0.0008	0.0038	5
5	Fe-D (mg/l)	0.3000	0.0300	0.0300	0.0300	5
6	CN (mg/l)	0.0200	0.0074	0.0040	0.0092	5

Sungai Totok

	Indicator	Standard	Average	Minimum	Maximum	Sample #
1	TSS (mg/l)	50.0000	10.9000	2.0000	27.0000	5
2	Hg-D (mg/l)	0.0010	0.0005	0.0005	0.0005	5
3	As-D (mg/l)	0.0500	0.0042	0.0020	0.0070	5
4	Cu-D (mg/l)	0.0200	0.0010	0.0008	0.0020	5
5	Fe-D (mg/l)	0.3000	0.0262	0.0070	0.0340	5
6	CN (mg/l)	0.0200	0.0074	0.0054	0.0092	5

Conclusion:

- Water of Sungai Buyat and Sungai Totok are not polluted.

Exhibit 4: Total Suspended Solids in the Ambient

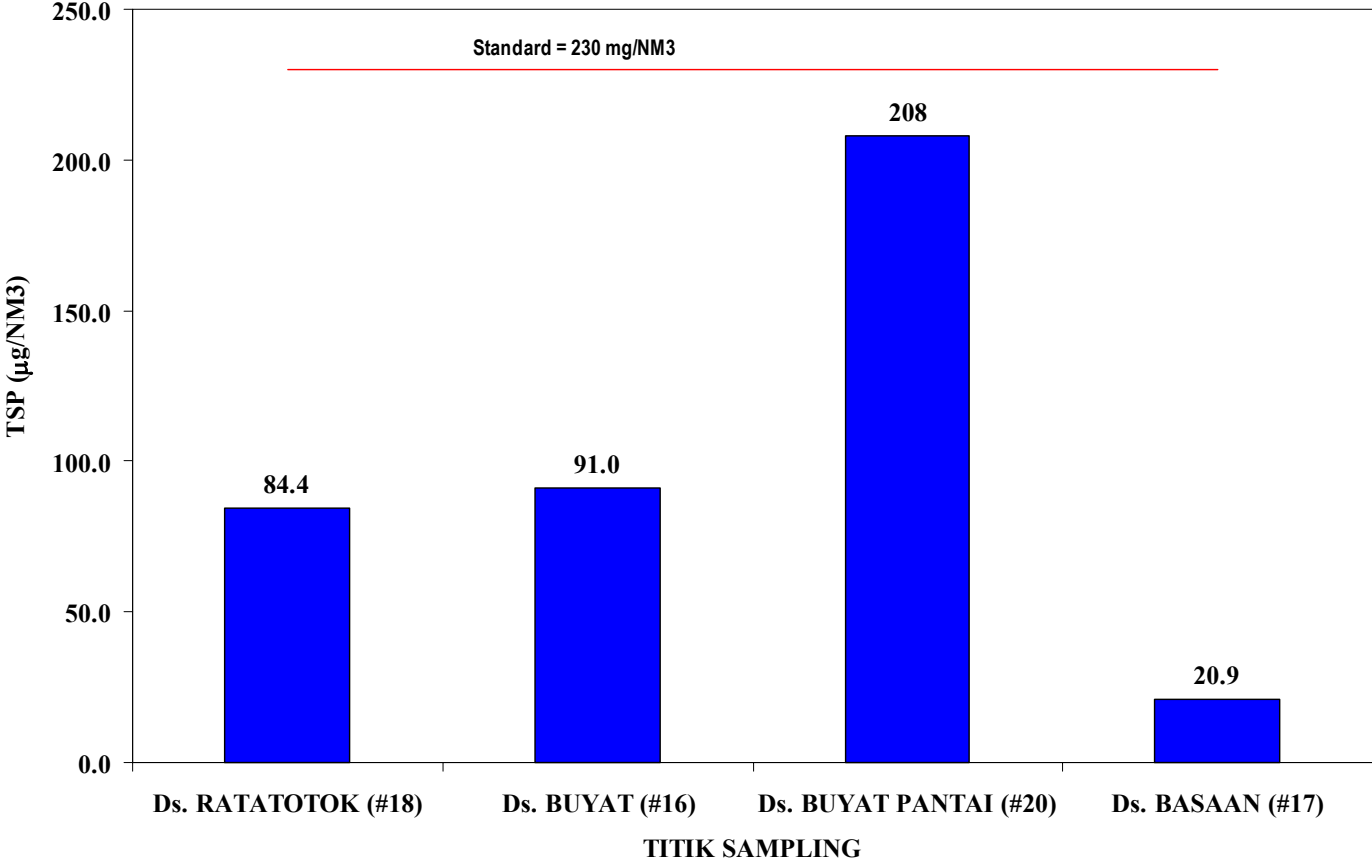
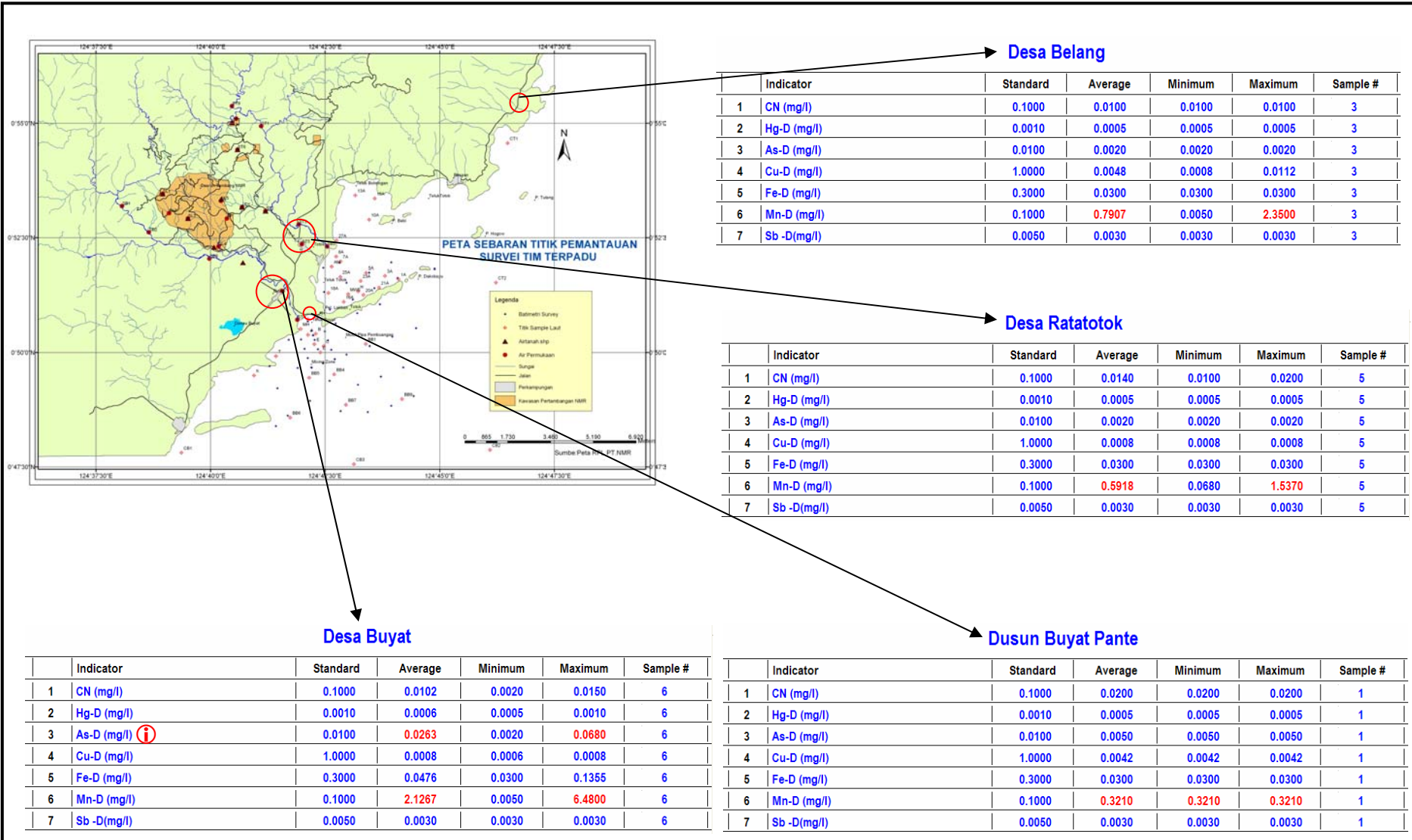


Exhibit 5.1: Drinking Water-Summary Statistics



Desa Belang

	Indicator	Standard	Average	Minimum	Maximum	Sample #
1	CN (mg/l)	0.1000	0.0100	0.0100	0.0100	3
2	Hg-D (mg/l)	0.0010	0.0005	0.0005	0.0005	3
3	As-D (mg/l)	0.0100	0.0020	0.0020	0.0020	3
4	Cu-D (mg/l)	1.0000	0.0048	0.0008	0.0112	3
5	Fe-D (mg/l)	0.3000	0.0300	0.0300	0.0300	3
6	Mn-D (mg/l)	0.1000	0.7907	0.0050	2.3500	3
7	Sb -D(mg/l)	0.0050	0.0030	0.0030	0.0030	3

Desa Ratatotok

	Indicator	Standard	Average	Minimum	Maximum	Sample #
1	CN (mg/l)	0.1000	0.0140	0.0100	0.0200	5
2	Hg-D (mg/l)	0.0010	0.0005	0.0005	0.0005	5
3	As-D (mg/l)	0.0100	0.0020	0.0020	0.0020	5
4	Cu-D (mg/l)	1.0000	0.0008	0.0008	0.0008	5
5	Fe-D (mg/l)	0.3000	0.0300	0.0300	0.0300	5
6	Mn-D (mg/l)	0.1000	0.5918	0.0680	1.5370	5
7	Sb -D(mg/l)	0.0050	0.0030	0.0030	0.0030	5

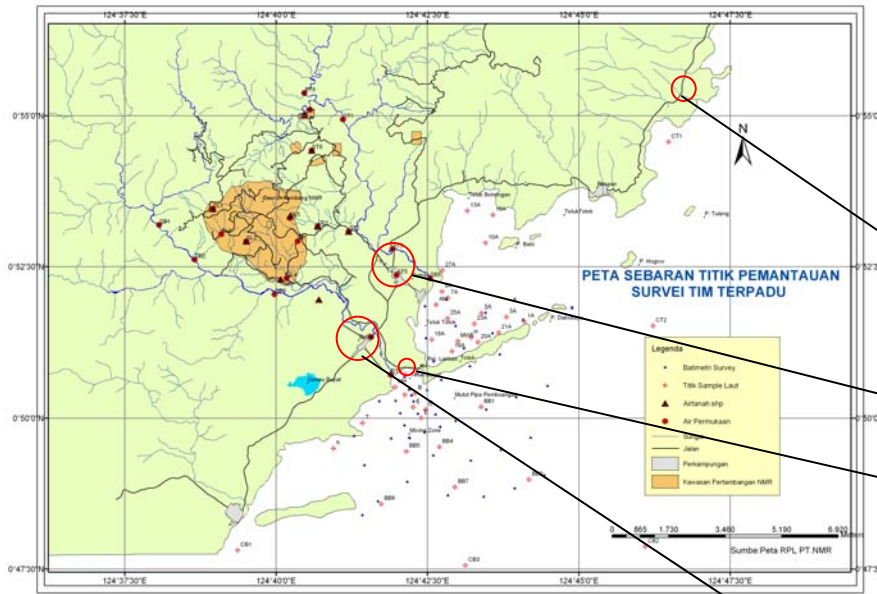
Desa Buyat

	Indicator	Standard	Average	Minimum	Maximum	Sample #
1	CN (mg/l)	0.1000	0.0102	0.0020	0.0150	6
2	Hg-D (mg/l)	0.0010	0.0006	0.0005	0.0010	6
3	As-D (mg/l)	0.0100	0.0263	0.0020	0.0680	6
4	Cu-D (mg/l)	1.0000	0.0008	0.0006	0.0008	6
5	Fe-D (mg/l)	0.3000	0.0476	0.0300	0.1355	6
6	Mn-D (mg/l)	0.1000	2.1267	0.0050	6.4800	6
7	Sb -D(mg/l)	0.0050	0.0030	0.0030	0.0030	6

Dusun Buyat Pante

	Indicator	Standard	Average	Minimum	Maximum	Sample #
1	CN (mg/l)	0.1000	0.0200	0.0200	0.0200	1
2	Hg-D (mg/l)	0.0010	0.0005	0.0005	0.0005	1
3	As-D (mg/l)	0.0100	0.0050	0.0050	0.0050	1
4	Cu-D (mg/l)	1.0000	0.0042	0.0042	0.0042	1
5	Fe-D (mg/l)	0.3000	0.0300	0.0300	0.0300	1
6	Mn-D (mg/l)	0.1000	0.3210	0.3210	0.3210	1
7	Sb -D(mg/l)	0.0050	0.0030	0.0030	0.0030	1

Exhibit 5.2: Analysis of Arsenic in Drinking Water Wells



Conclusion:

- High Arsenic in the drinking water wells of Desa Buyat

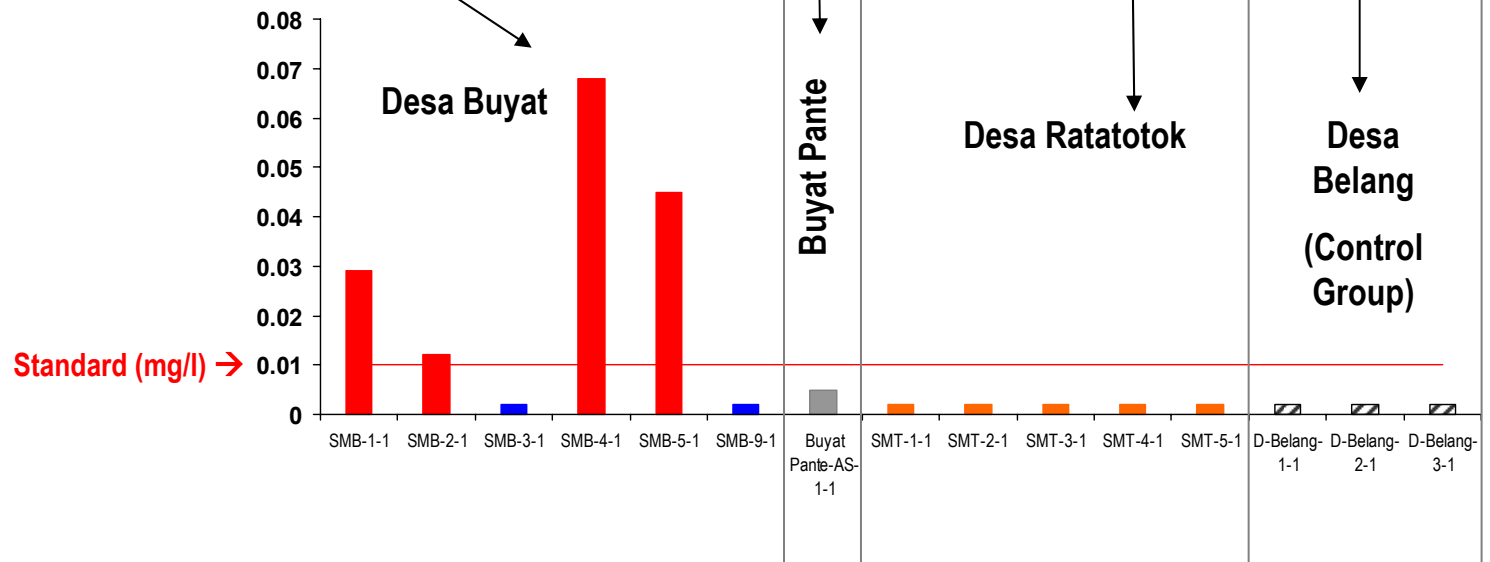


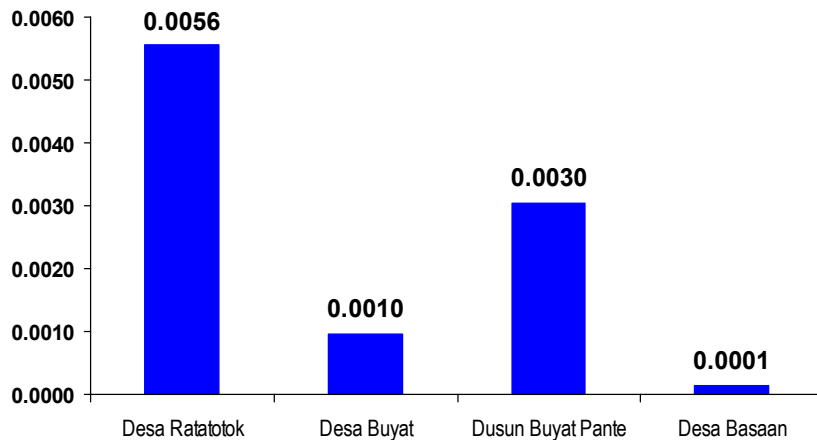
Exhibit 5.3: Drinking Water-Detailed Data for Desa Buyat

	CN (mg/l)	Hg-D (mg/l)	As-D (mg/l)	Cu-D (mg/l)	Fe-D (mg/l)	Mn-D (mg/l)	Sb -D(mg/l)
Monitoring Pt.	Std. 0.1	0.001	0.01	1	0.3	0.1	0.005
SM-1-1	0.002	<0.0005	0.029	<0.0008	<0.03	1.26	<0.003
SM-2-1	0.009	<0.0005	0.012	<0.0008	<0.03	1.89	<0.003
SM-3-1	0.015	<0.0005	<0.002	<0.0006	<0.03	0.195	<0.003
SM-4-1	0.015	<0.0005	0.068	<0.0008	0.1355	6.48	<0.003
SM-5-1	0.01	0.001	0.045	<0.0008	<0.03	2.93	<0.003
SM-9-1	0.01	<0.0005	<0.002	<0.0008	<0.03	<0.005	<0.003

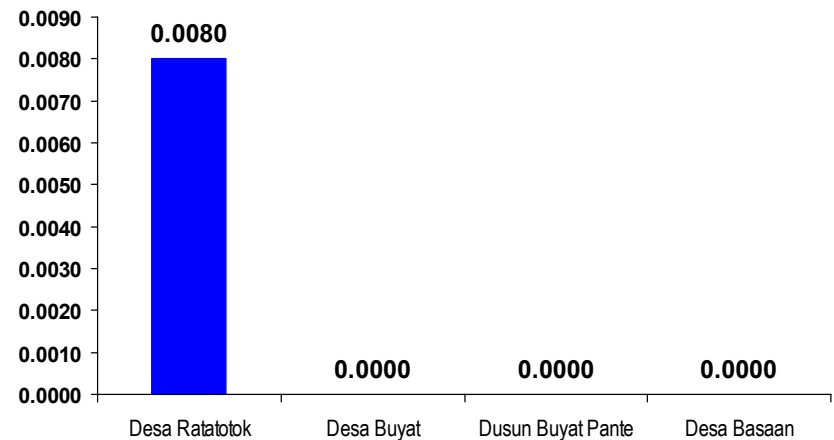
6. Arsenic and Mercury in the Ambient

No Ambient Quality Standard Exists for Metals

Arsenic (ug/Nm³)



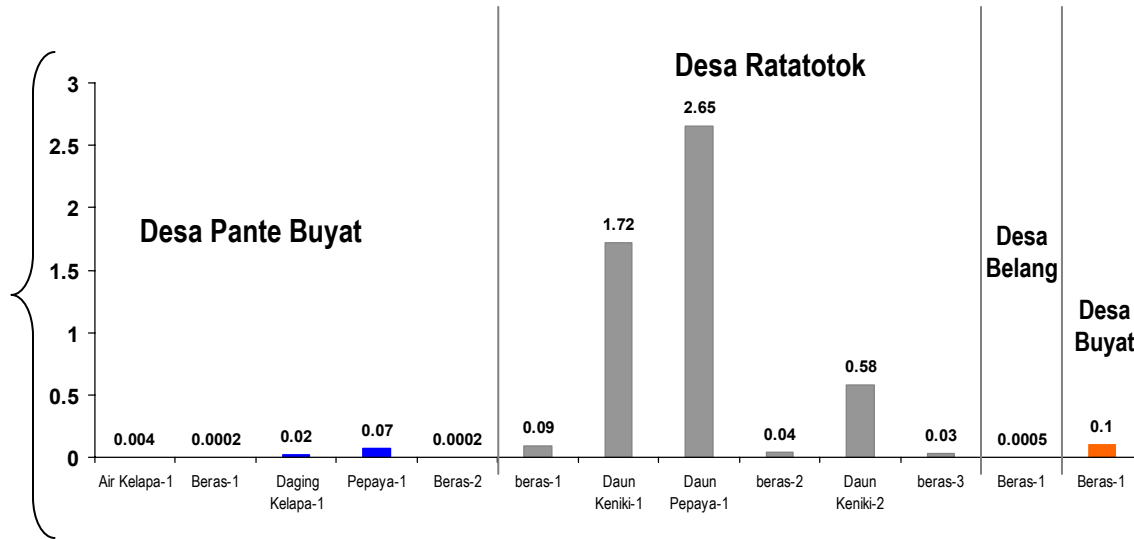
Mercury (ug/Nm³)



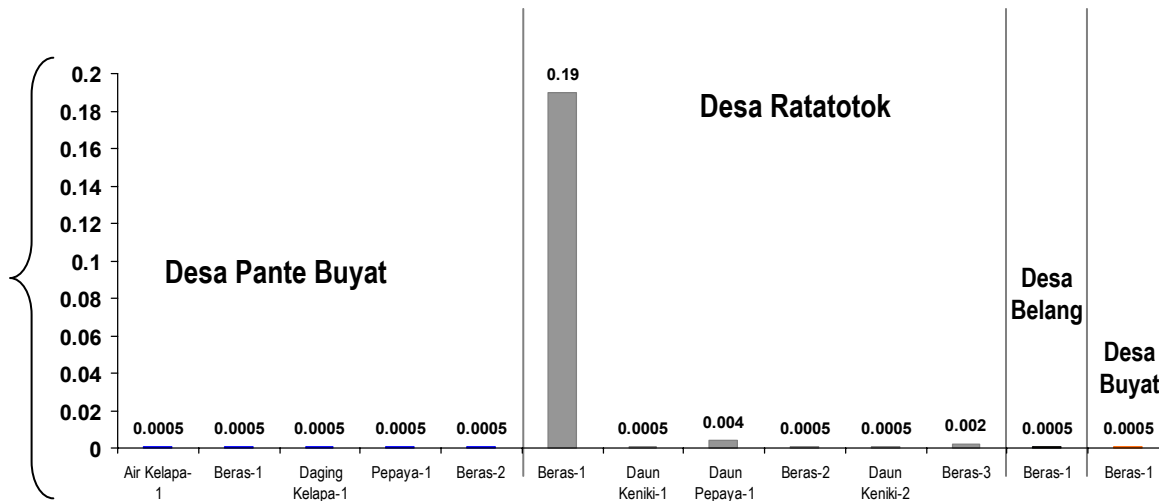
Arsenic and mercury is higher in the ambient in Desa Ratatotok compared to other locations in the study area.

7. Arsenic and Mercury in Food Items

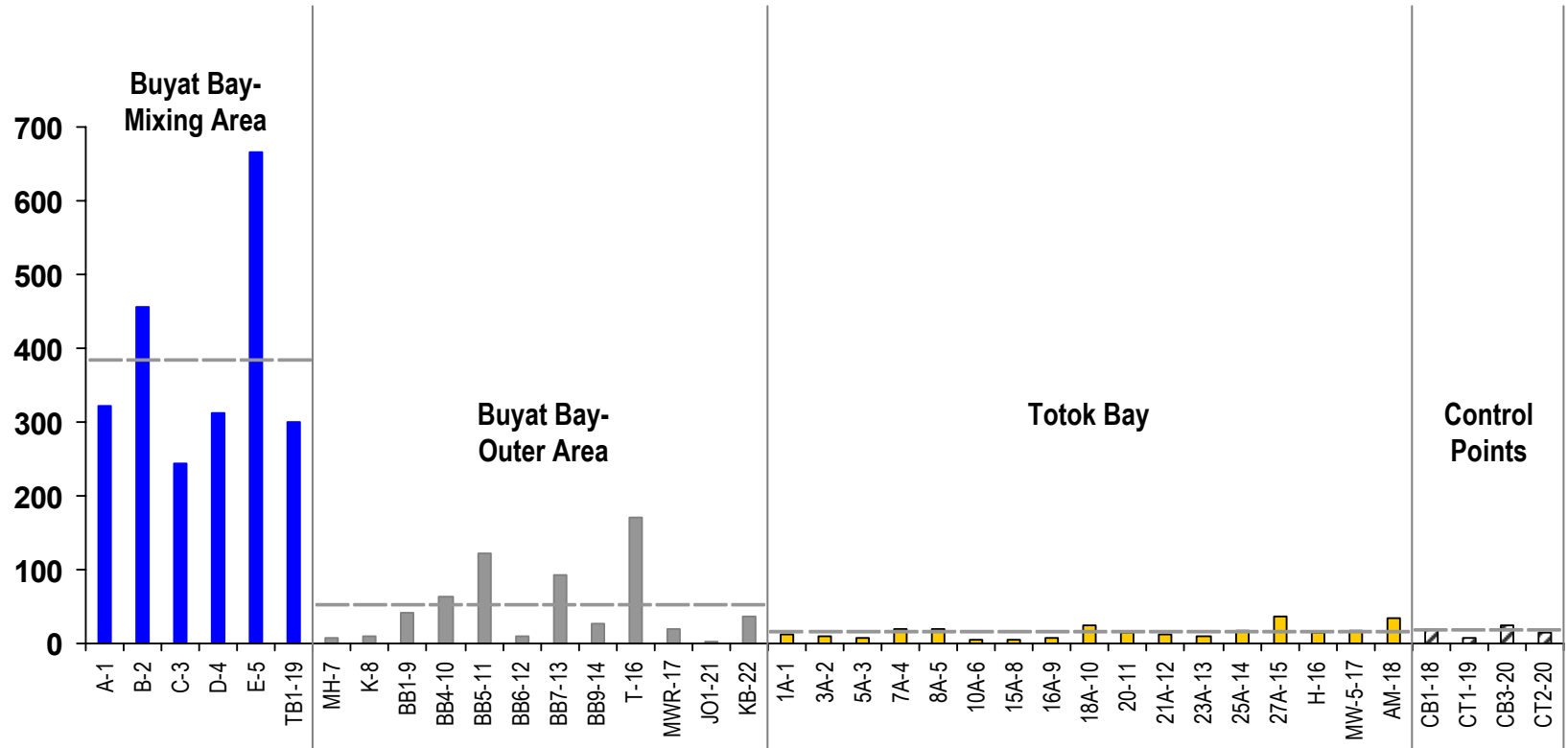
Arsenic
(mg/kg)



Mercury
(mg/kg)



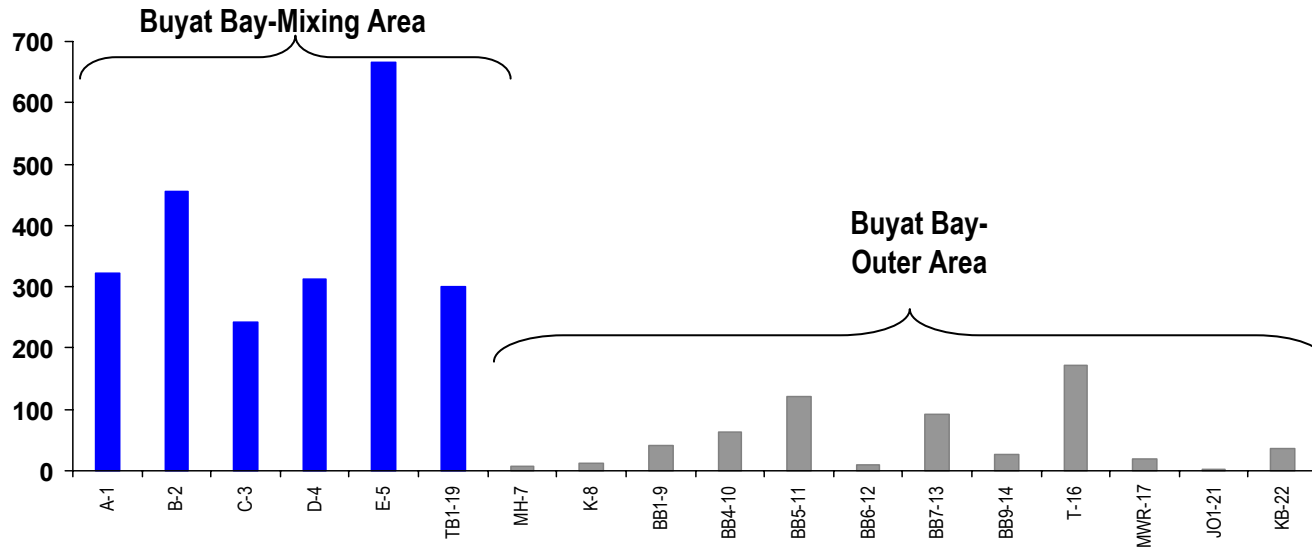
8.1 Arsenic in Marine Sediment



There is no regulation or standard for metals in sediment. Therefore, only comparative analysis of the level of metal concentrations can be done.

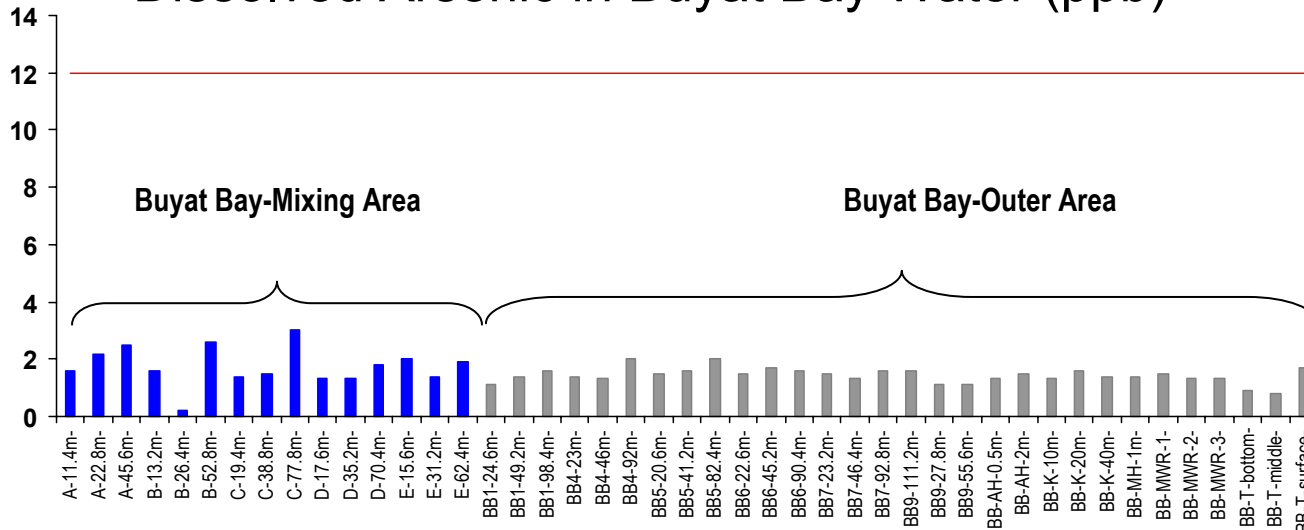
8.2 Arsenic in Buyat Bay Sediment is Stable

Arsenic in Buyat Bay Sediment (mg/kg)

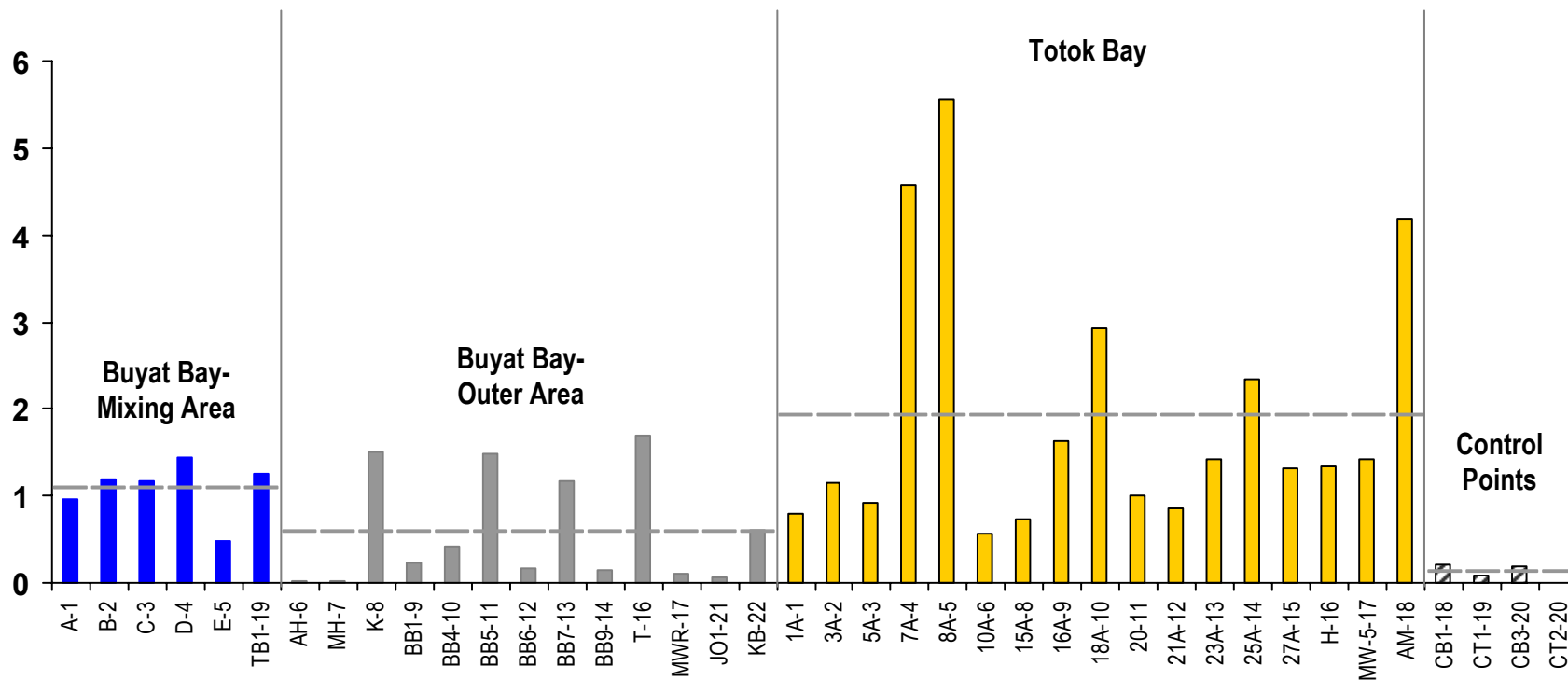


Arsenic in the sediment of the mixing area of Buyat Bay is stable because there is no correlation between arsenic in sediment, and the dissolved arsenic in the water of Buyat Bay.

Dissolved Arsenic in Buyat Bay Water (ppb)

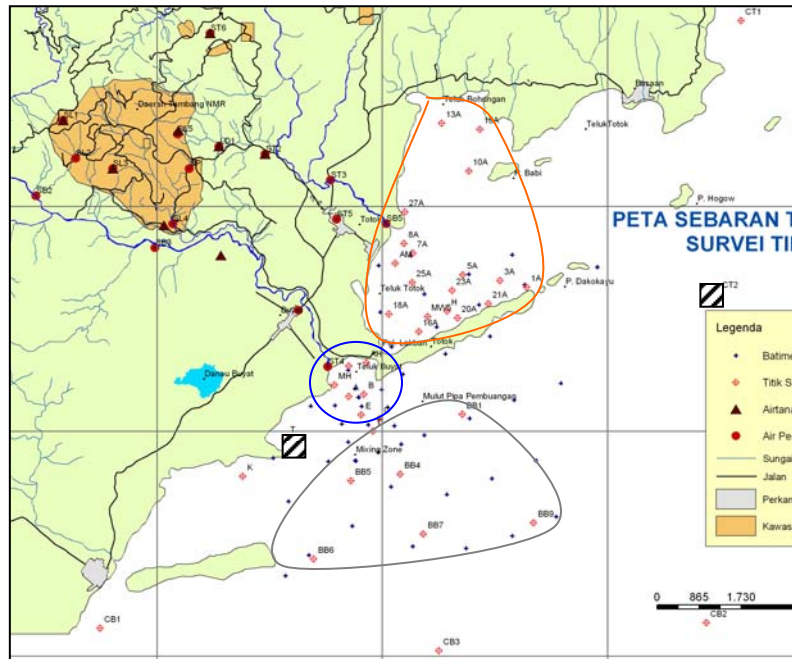


9. Mercury in Marine Sediment



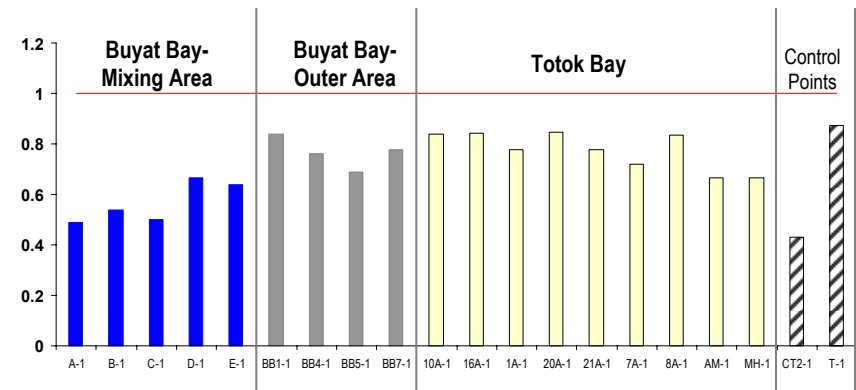
There is no regulation or standard for metals in sediment. Therefore, only comparative analysis of the level of metal concentrations can be done.

10. Diversity of Benthic Organisms in Sediment-Based on Simpson Index and Shannon-Wiener Index

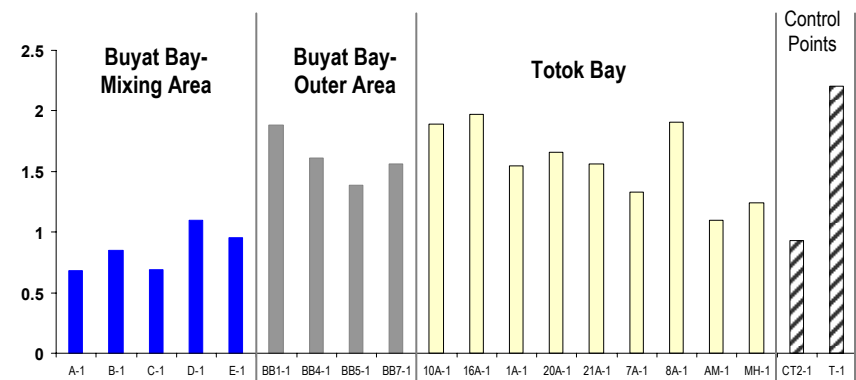


Control Points

Simpson Index of Diversity



Shannon-Wiener Index of Diversity



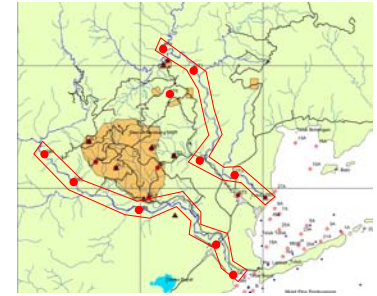
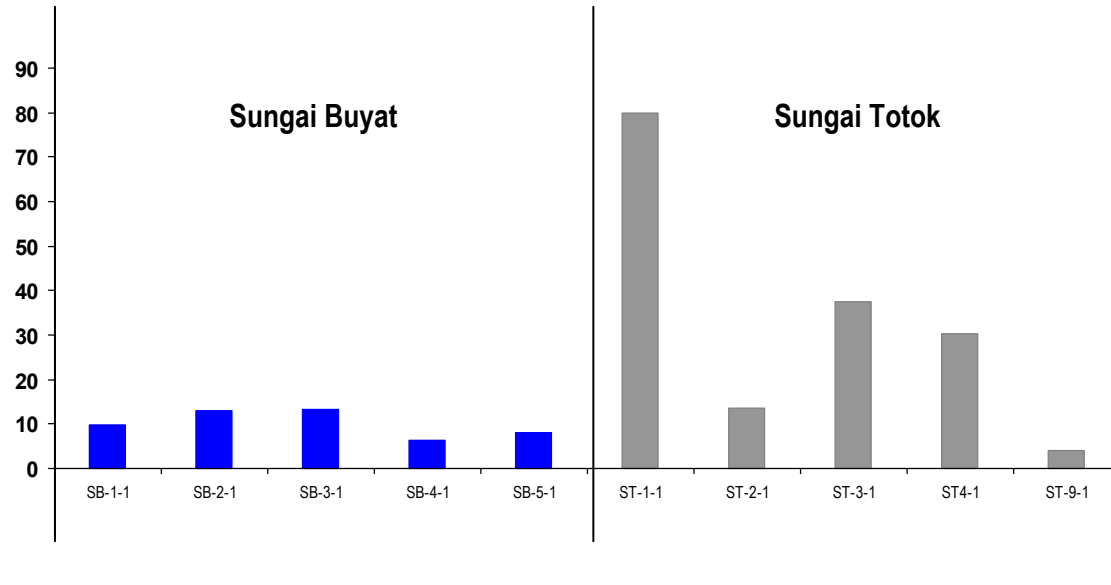
Data Source: Tim Lapangan

Conclusion:

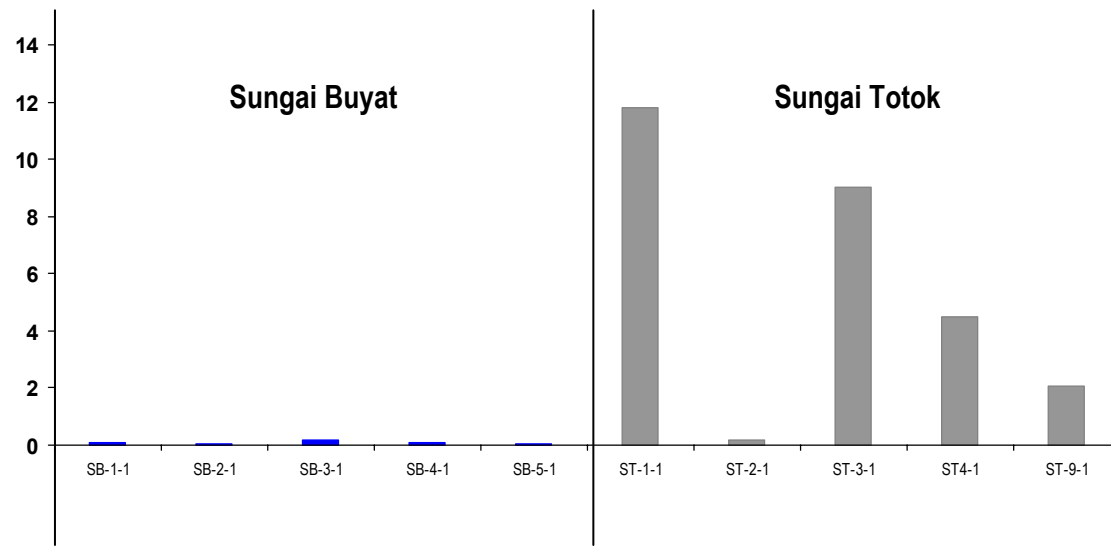
- Mixing area in Buyat Bay has low diversity of organisms in the sediment compared to Totok Bay.
- However, there is considerable variation in species diversity in Buyat and Totok Bays. Diversity is low at one control point also.

Exhibit 11: Mercury and Arsenic in River Sediment

Arsenic
(mg/kg)



Mercury
(mg/kg)



There is no regulation or standard for sediments. Therefore, only comparative analysis of levels can be done.

Sungai Totok has comparatively high level of both mercury and arsenic.



Data Tabel

**Periode Pengambilan Data Lapangan:
28 Agt-12 Sep 2004**

Criteria for Sea Water / Buyat Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg-D (ppb)	Cu-D (ppb)	CN (ppm)	As-D (ppb)	TSS (ppm)	Ag-D (ppb)	Mn (ppm)	Fe (ppm)
Monitoring Pt.	Std. 1	8	0.5	12	20			
A-11.4m-1	<0.5	<5	<0.002	1.6	<0.1	<5	<0.005	<0.03
A-22.8m-1	<0.5	<5	0.0034	2.2	<0.1	<5	<0.005	<0.03
A-45.6m-1	<0.5	<5	<0.002	2.5	<0.1	<5	<0.005	<0.03
B-13.2m-1	<0.5	<5	<0.002	1.6	<0.1	<5	<0.005	<0.03
B-26.4m-1	<0.5	<5	0.0028	0.2	<0.1	<5	<0.005	<0.03
B-52.8m-1	<0.5	<5	<0.002	2.6	<0.1	<5	<0.005	<0.03
BB1-24.6m-1	<0.5	<5	<0.002	1.1	<0.1	<5	<0.005	<0.03
BB1-49.2m-1	<0.5	<5	<0.002	1.4	<0.1	<5	<0.005	<0.03
BB1-98.4m-1	<0.5	<5	0.004	1.6	<0.1	<5	<0.005	<0.03
BB4-23m-1	<0.5	<5	<0.002	1.4	3	<5	<0.005	<0.03
BB4-46m-1	<0.5	<5	<0.002	1.3	1	<5	<0.005	<0.03
BB4-92m-1	<0.5	<5	<0.002	2	<0.1	<5	0.005	<0.03
BB5-20.6m-1	<0.5	<5	<0.0022	1.5	<0.1	<5	<0.005	<0.03
BB5-41.2m-1	<0.5	<5	<0.002	1.6	<0.1	<5	<0.005	<0.03
BB5-82.4m-1	<0.5	<5	<0.002	2	2.5	<5	<0.005	<0.03
BB6-22.6m-1	<0.5	<5	<0.002	1.5	<0.1	<5	<0.005	<0.03
BB6-45.2m-1	<0.5	<5	<0.0021	1.7	<0.1	<5	<0.005	<0.03
BB6-90.4m-1	<0.5	<5	<0.002	1.6	<0.1	<5	<0.005	<0.03
BB7-23.2m-1	<0.5	<5	<0.002	1.5	<0.1	<5	<0.005	<0.03
BB7-46.4m-1	<0.5	<5	<0.002	1.3	1	<5	<0.005	<0.03
BB7-92.8m-1	<0.5	<5	<0.002	1.6	1	<5	<0.005	<0.03
BB9-111.2m-1	<0.5	<5	<0.002	1.6	1	<5	<0.005	<0.03
BB9-27.8m-1	<0.5	<5	<0.002	1.1	<0.1	<5	<0.005	<0.03
BB9-55.6m-1	<0.5	<5	<0.002	1.1	<0.1	<5	<0.005	<0.03
BB-AH-0.5m-1	<0.5	<5	0.0036	1.3	5	<5	<0.005	<0.03
BB-AH-2m-1	<0.5	<5	0.0034	1.5	7	<5	<0.005	<0.03
BB-K-10m-1	<0.5	<5	<0.002	1.3	<0.1	<5	<0.005	<0.03
BB-K-20m-1	<0.5	<5	<0.002	1.6	<0.1	<5	<0.005	<0.03
BB-K-40m-1	<0.5	<5	<0.002	1.4	<0.1	<5	<0.005	<0.03
BB-MH-1m-1	<0.5	<5	0.0032	1.4	<0.1	<5	<0.005	<0.03
BB-MWR-1-1	<0.5	<5	<0.002	1.5	<0.1	<5	<0.005	<0.03
BB-MWR-2-1	<0.5	<5	<0.002	1.3	1	<5	<0.005	<0.03
BB-MWR-3-1	<0.5	<5	0.0032	1.3	1	<5	<0.005	<0.03
BB-T-bottom-1	<0.5	<5	0.0032	0.9	6	<5	<0.005	<0.03

Criteria for Sea Water / Buyat Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg-D (ppb)	Cu-D (ppb)	CN (ppm)	As-D (ppb)	TSS (ppm)	Ag-D (ppb)	Mn (ppm)	Fe (ppm)
Monitoring Pt.	Std. 1	8	0.5	12	20			
BB-T-middle-1	<0.5	<5	0.004	0.8	5.5	<5	<0.005	<0.03
BB-T-surface-1	<0.5	<5	<0.002	1.7	4	<5	<0.005	<0.03
C-19.4m-1	<0.5	<5	0.005	1.4	<0.1	<5	<0.005	<0.03
C-38.8m-1	<0.5	<5	0.027	1.5	<0.1	<5	<0.005	<0.03
C-77.8m-1	<0.5	<5	0.004	3	<0.1	<5	<0.005	<0.03
CB1-111.2m-1	0.7	<5	0.0032	1.2	<0.1	<5	<0.005	<0.03
CB1-27.8m-1	<0.5	<5	0.004	1	<0.1	<5	<0.005	<0.03
CB1-55.6m-1	<0.5	<5	0.0034	0.9	<0.1	<5	<0.005	<0.03
CB2-125.4m-1	<0.5	<5	0.008	1.5	<0.1	<5	<0.005	<0.03
CB2-31.6m-1	<0.5	<5	0.0057	1.1	<0.1	<5	<0.005	<0.03
CB2-66.2m-1	<0.5	<5	0.005	1.7	<0.1	<5	<0.005	<0.03
CB3-113.6m-1	<0.5	<5	0.0034	2	<0.1	<5	<0.005	<0.03
CB3-28.4m-1	<0.5	<5	<0.0021	1.6	<0.1	<5	<0.005	<0.03
CB3-56.8m-1	<0.5	<5	<0.002	1.6	<0.1	<5	<0.005	<0.03
D-17.6m-1	<0.5	<5	<0.002	1.3	<0.1	<5	<0.005	<0.03
D-35.2m-1	<0.5	<5	<0.002	1.3	<0.1	<5	<0.005	<0.03
D-70.4m-1	<0.5	<5	0.012	1.8	2	<5	<0.005	<0.03
E-15.6m-1	<0.5	<5	0.003	2	<0.1	<5	<0.005	<0.03
E-31.2m-1	<0.5	<5	<0.002	1.4	<0.1	<5	0.0541	<0.03
E-62.4m-1	<0.5	<5	<0.002	1.9	1	<5	<0.005	<0.03
KB-Bunan-1-1	<0.5	<5	<0.002	1.2	<0.1	<5	<0.005	<0.03
KB-Bunan-2-1	<0.5	<5	<0.002	1.6	<0.1	<5	<0.005	<0.03
KB-Bunan-3-1	<0.5	<5	<0.002	1.2	<0.1	<5	<0.005	<0.03
TB1-1m-1	<0.5	<5	<0.002	1.5	4	<5	<0.005	<0.03
TB1-46.8m-1	<0.5	<5	<0.002	1.6	5	<5	<0.005	<0.03
TB1-62.4m-1	<0.5	<5	<0.002	1.7	6	<5	0.0237	<0.03
TStr-J01-1	<0.5	<5	0.0049	1.1		<5	<0.005	<0.03

Criteria for Sea Water / Totok Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg-D (ppb)	Cu-D (ppb)	CN (ppm)	As-D (ppb)	TSS (ppm)	Ag-D (ppb)	Mn (ppm)	Fe (ppm)
Monitoring Pt.	Std. 1	8	0.5	12	20			
CT1-19m-1	<0.5	<5	<0.002	1.5	<0.1	<5	<0.005	<0.03
CT1-38m-1	<0.5	<5	<0.002	1.5	<0.1	<5	<0.005	<0.03
CT1-76m-1	<0.5	<5	<0.002	1.3	2	<5	<0.005	<0.03
CT2-116m-1	<0.5	<5	<0.002	1.9	3	<5	<0.005	<0.03
CT2-29m-1	<0.5	<5	<0.002	0.8	<0.1	<5	<0.005	<0.03
CT2-58m-1	<0.5	<5	<0.002	1.6	<0.1	<5	<0.005	<0.03
TB-10A-10.6m-1	<0.5	<5	0.0034	1.4	<0.1	<5	<0.005	<0.03
TB-10A-21.2m-1	<0.5	<5	0.0036	1.2	<0.1	<5	<0.005	<0.03
TB-10A-42.4m-1	<0.5	<5	0.0033	1.3	<0.1	<5	<0.005	<0.03
TB-13A-16m-1	<0.5	<5	0.0048	1	<0.1	<5	<0.005	<0.03
TB-13A-4m-1	<0.5	<5	0.0039	1.4	2	<5	<0.005	<0.03
TB-13A-8m-1	<0.5	<5	0.0053	1.4	1	<5	<0.005	<0.03
TB-15A-14.4m-1	<0.5	<5	0.0032	1.3	5	<5	<0.005	<0.03
TB-15A-28.8m-1	<0.5	<5	<0.0021	0.9	5.5	<5	<0.005	<0.03
TB-15A-7.2m-1	<0.5	<5	0.0073	1.4	4	<5	<0.005	<0.03
TB-16A-18.4m-1	<0.5	<5	0.0028	1.3	<0.1	<5	<0.005	<0.03
TB-16A-36.8m-1	<0.5	<5	<0.002	1.1	<0.1	<5	<0.005	<0.03
TB-16A-9.2m-1	<0.5	<5	0.005	0.9	<0.1	<5	<0.005	<0.03
TB-18A-14.4m-1	<0.5	<5	<0.002	0.8	2	<5	<0.005	<0.03
TB-18A-28.8m-1	<0.5	<5	<0.002	1	3	<5	<0.005	<0.03
TB-18A-7.2m-1	<0.5	<5	<0.002	0.8	2	<5	<0.005	<0.03
TB1A-22.6m-1	<0.5	<5	<0.002	1.1	5	<5	<0.005	<0.03
TB1A-45.2m-1	<0.5	<5	<0.002	1	<0.1	<5	<0.005	<0.03
TB1A-67.8m-1	<0.5	<5	<0.002	1	<0.1	<5	<0.005	<0.03
TB-20A-11.6m-1	<0.5	<5	<0.002	0.8	<0.1	<5	<0.005	<0.03
TB-20A-23.2m-1	<0.5	<5	<0.002	0.8	5	<5	<0.005	<0.03
TB-20A-46.4m-1	<0.5	<5	<0.002	0.7	<0.1	<5	<0.005	<0.03
TB-21A-11.4m-1	<0.5	<5	0.0036	0.7	5	<5	<0.005	<0.03
TB-21A-22.8m-1	<0.5	<5	<0.0022	0.8	5	<5	<0.005	<0.03
TB-21A-45.6m-1	<0.5	<5	0.0028	0.9	5.5	<5	<0.005	<0.03
TB-23A-11m-1	0.6	<5	0.0028	0.7	<0.1	<5	<0.005	<0.03
TB-23A-22m-1	<0.5	<5	0.0026	0.9	<0.1	<5	<0.005	<0.03
TB-23A-44m-1	<0.5	<5	<0.0022	1.2	<0.1	<5	<0.005	<0.03
TB-25A-18.4m-1	<0.5	<5	0.0028	0.8	<0.1	<5	<0.005	<0.03

Criteria for Sea Water / Totok Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg-D (ppb)	Cu-D (ppb)	CN (ppm)	As-D (ppb)	TSS (ppm)	Ag-D (ppb)	Mn (ppm)	Fe (ppm)
Monitoring Pt.	Std. 1	8	0.5	12	20			
TB-25A-36.8m-1	<0.5	<5	0.0028	1	1	<5	<0.005	<0.03
TB-25A-9.2m-1	<0.5	<5	0.0028	0.8	<0.1	<5	<0.005	<0.03
TB-27A-1m-1	<0.5	<5	<0.002	3.3	<0.1	<5	<0.005	<0.03
TB3A-23m-1	<0.5	<5	<0.0021	0.9	3	<5	<0.005	<0.03
TB3A-46m-1	<0.5	<5	<0.002	1.3	3	<5	<0.005	<0.03
TB3A-98.4m-1	<0.5	<5	<0.0021	1.5	4	<5	<0.005	<0.03
TB5A-20.6m-1	<0.5	<5	<0.002	1.1	<0.1	<5	<0.005	<0.03
TB5A-69m-1	<0.5	<5	<0.002	1.1	<0.1	<5	<0.005	<0.03
TB5A-92m-1	<0.5	<5	<0.002	1.2	3	<5	<0.005	<0.03
TB7A-41.2m-1	<0.5	<5	<0.002	1.1	<0.1	<5	<0.005	<0.03
TB7A-61.8m-1	<0.5	<5	<0.002	0.9	<0.1	<5	<0.005	<0.03
TB7A-82.4m-1	<0.5	<5	<0.002	0.8	3	<5	<0.005	<0.03
TB-8A-1m-1	<0.5	<5	<0.002	1.5	6	<5	<0.005	<0.03
TB-AM-1m-1	<0.5	<5	0.0032	1.5	2	<5	<0.005	<0.03
TB-H-DKP-10.8m-1	0.6	<5	<0.002	1.6	<0.1	<5	<0.005	<0.03
TB-H-DKP-21.6m-1	0.7	<5	<0.002	1.3	2	<5	0.006	<0.03
TB-H-DKP-43.2m-1	<0.5	<5	<0.002	1.3	2	<5	<0.005	<0.03
TB-MW5-10m-1	<0.5	<5	<0.002	0.9	<0.1	<5	<0.005	<0.03
TB-MW5-20m-1	<0.5	<5	<0.002	1	<0.1	<5	<0.005	<0.03
TB-MW5-40m-1	<0.5	<5	<0.002	0.8	2	<5	<0.005	<0.03

Criteria for Fish / Buyat Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg-Fish Tissue (ppm)	Arsenic-Fish Tissue (ppm)	Cu-Fish Tissue (ppm)	Mn-Fish Tissue (ppm)	Fe-Fish Tissue (ppm)			
Monitoring Pt.	Std. 0.5	2						
Buyat Bay-1	0.225	0.072	0.11	0.285	17.975			
Buyat Bay-2	0.09	0.264	0.24	1.01	4.41			
Buyat Bay-3	0.02	0.0715		0.25	4.6			
Buyat Bay-4	0.01	0.09	0.645	2.13	35.36			
Buyat Bay-5	0.33	0.0004	0.805	0.54				
Buyat Bay-6	0.19	0.141	0.785	0.41	4.62			
Buyat Bay-7	0.29	0.02	0.42	0.435	2.65			
Buyat Bay-8	0.43	0.044	0.42	0.455	4.03			
Buyat Bay-9	0.08	0.194	0.54	0.76	6.855			
Buyat Bay-10	0.1		1.08	3.47	323.445			
Buyat Bay-11	0.003		0.725	4.95	77.22			
Buyat Bay-12				1.265	13.27			
Buyat Bay-13	0.001	0.07		1.61	94.77			
Buyat Bay-14	0.34	0.026		1.145	112.86			
Buyat Bay-15	0.39	0.19		1.485	114.1			
Buyat Bay-16	0.16	0.072		0.295	10.225			
Buyat Bay-17	0.04	0.112		0.16	12.39			
Buyat Bay-18	0.03	0.33		0.405	3.01			
Buyat Bay-19		0.068		0.545	15.55			
Buyat Bay-20	0.45	0.118		0.64	3.94			
Buyat Bay-21	0.01	<0.0004		0.665	2.61			
Buyat Bay-22				0.8	14.68			
Buyat Bay-23	0.145		0.15	12.385	302.23			
Buyat Bay-24				5.695	95.09			
Buyat Bay-25			0.23	3.825	146.625			
Buyat Bay-26				0.63	93.12			
Buyat Bay-27	0.2			3.46	74.015			
Buyat Bay-28	0.27			2.61	51.2			
Buyat Bay-29				0.18	110.675			
Buyat Bay-30	0.37		32.2	0.245	436.935			
Buyat Bay-31	0.03		1.08	1.56	200.72			
Buyat Bay-32				1.525	54.305			
Buyat Bay-33		0.934		0.67	5.535			
Buyat Bay-34	0.02	0.701		0.71	7.61			
Buyat Bay-35			15.09	34.61	73.36			

Criteria for Fish / Sungai Buyat

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg-Fish Tissue (ppm)	Arsenic-Fish Tissue (ppm)	Cu-Fish Tissue (ppm)	Mn-Fish Tissue (ppm)	Fe-Fish Tissue (ppm)			
Monitoring Pt.	Std. 0.5	2						
Sungai Buyat-10	0.008		0.465	1.2	27.23			
Sungai Buyat-11	0.1		0.425	1.09	4.51			
Sungai Buyat-12	0.16	0.087	0.49	0.895	8605			
Sungai Buyat-13	0.15	0.0004	0.445	0.95	6975			
Sungai Buyat-14	0.15	0.0004	0.405	0.955	8.75			

Criteria for River Quality / Sungai Totok

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	TSS (mg/l)	Hg-D (mg/l)	As-D (mg/l)	Cu-D (mg/l)	Fe-D (mg/l)	CN (mg/l)	Mn (mg/l)	Ag (mg/l)
Monitoring Pt.	Std. 50	0.001	0.05	0.02	0.3	0.02	0.1	
ST-1-1	2.5	<0.0005	0.007	<0.0008	<0.03	0.0054	0.005	<0.005
ST-2-1	2.5	<0.0005	0.003	<0.0008	0.034	0.0068	0.048	<0.005
ST-3-1	20.5	<0.0005	0.005	<0.0008	<0.03	0.0088	0.046	<0.005
ST-4-1	27	<0.0005	0.004	0.002	0.007	0.0092	0.075	<0.005
ST-9-1	2	<0.0005	<0.002	<0.0008	<0.03	0.0068	<0.005	<0.005

Criteria for River Quality / Sungai Buyat

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	TSS (mg/l)	Hg-D (mg/l)	As-D (mg/l)	Cu-D (mg/l)	Fe-D (mg/l)	CN (mg/l)	Mn (mg/l)	Ag (mg/l)
Monitoring Pt.	Std. 50	0.001	0.05	0.02	0.3	0.02	0.1	
SB-1-1	2	<0.0005	0.011	<0.0008	<0.03	0.004	<0.005	0.0177
SB-2-1	1.5	<0.0005	0.009	<0.0008	<0.03	0.0072	<0.005	<0.005
SB-3-1	3	<0.0005	0.01	<0.0008	<0.03	0.0092	<0.005	<0.005
SB-4-1	42.2	<0.0005	0.008	<0.0008	<0.03	0.0092	<0.005	0.0381
SB-5-1	17.2	<0.0005	0.009	0.0038	<0.03	0.0074	<0.005	<0.005

Criteria for Drinking Water / Desa Ratatotok

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	CN (mg/l)	Hg-D (mg/l)	As-D (mg/l)	Cu-D (mg/l)	Fe-D (mg/l)	Mn-D (mg/l)	Sb-D(mg/l)	Ag-D (mg/l)
Monitoring Pt.	Std. 0.1	0.001	0.01	1	0.3	0.1	0.005	
SMT-1-1	0.01	<0.0005	<0.002	<0.0008	<0.03	0.298	<0.003	<0.0005
SMT-2-1	0.02	<0.0005	<0.002	<0.0008	<0.03	0.068	<0.003	<0.0005
SMT-3-1	0.01	<0.0005	<0.002	<0.0008	<0.03	0.224	<0.003	<0.0005
SMT-4-1	0.02	<0.0005	<0.002	<0.0008	<0.03	1.537	<0.003	<0.0005
SMT-5-1	0.01	<0.0005	<0.002	<0.0008	<0.03	0.832	<0.003	<0.0005

Criteria for Drinking Water / Desa Buyat

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	CN (mg/l)	Hg-D (mg/l)	As-D (mg/l)	Cu-D (mg/l)	Fe-D (mg/l)	Mn-D (mg/l)	Sb-D(mg/l)	Ag-D (mg/l)
Monitoring Pt.	Std. 0.1	0.001	0.01	1	0.3	0.1	0.005	
SMB-1-1	0.002	<0.0005	0.029	<0.0008	<0.03	1.26	<0.003	<0.0005
SMB-2-1	0.009	<0.0005	0.012	<0.0008	<0.03	1.89	<0.003	<0.0005
SMB-3-1	0.015	<0.0005	<0.002	<0.0006	<0.03	0.195	<0.003	<0.0005
SMB-4-1	0.015	<0.0005	0.068	<0.0008	0.1355	6.48	<0.003	<0.0005
SMB-5-1	0.01	0.001	0.045	<0.0008	<0.03	2.93	<0.003	<0.0005
SMB-9-1	0.01	<0.0005	<0.002	<0.0008	<0.03	<0.005	<0.003	<0.0005

Criteria for Drinking Water / Dusun Buyat Pante

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	CN (mg/l)	Hg-D (mg/l)	As-D (mg/l)	Cu-D (mg/l)	Fe-D (mg/l)	Mn-D (mg/l)	Sb-D(mg/l)	Ag-D (mg/l)
Monitoring Pt.	Std. 0.1	0.001	0.01	1	0.3	0.1	0.005	
Buyat Pante-AS-1-1	0.02	<0.0005	0.005	0.00415	<0.03	0.321	<0.003	<0.0005

Criteria for Drinking Water / Desa Belang

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	CN (mg/l)	Hg-D (mg/l)	As-D (mg/l)	Cu-D (mg/l)	Fe-D (mg/l)	Mn-D (mg/l)	Sb-D(mg/l)	Ag-D (mg/l)
Monitoring Pt.	Std. 0.1	0.001	0.01	1	0.3	0.1	0.005	
D-Belang-1-1	0.01	<0.0005	<0.002	0.0023	<0.03	<0.005	<0.003	<0.0005
D-Belang-2-1	0.01	<0.0005	<0.002	0.0112	<0.03	0.017	<0.003	<0.0005
D-Belang-3-1	0.01	<0.0005	<0.002	<0.0008	<0.03	2.35	<0.003	<0.0005

Metals in Sediment / Buyat Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	As (mg/kg)	Hg (mg/kg)	Sb (mg/kg)	Cu (mg/kg)	Ag (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	CN (mg/kg)
Monitoring Pt.	Std.							
A-1	322	0.954	<2	24.9	1.5	22183	1154	<0.2
AH-1	7.75	0.025	13	24.9	0.3	42549	668	<0.2
B-1	456	1.19	4	26.3	1.3	20250	1407	<0.2
BB1-1	40.7	0.223	7	10	1	31935	463	<0.2
BB4-1	63.2	0.412	9	20.9	0.7	44242	547	<0.2
BB5-1	121	1.49	9	18.7	1.5	28467	700	<0.2
BB6-1	10.01	0.176	5	7.9	1.9	16694	357	<0.2
BB7-1	92.5	1.17	5	16.2	1.7	31782	676	<0.2
BB9-1	26.6	0.143	8	11.4	1	40302	450	<0.2
C-1	243	1.17	5	24.8	1.3	30166	758	<0.2
CB1-1	20.7	0.215	10	10.1	1.8	24816	387	<0.2
CB3-1	25.1	0.193	6	11.3	1.1	37380	433	<0.2
D-1	313	1.44	5	33.2	2.6	20503	1081	<0.2
E-1	666	0.491	4	29.7	1.5	18013	1267	<0.2
JO1-1	2.3	0.067	10	5.9	2.4	7647	74	<0.2
K-1	10.9	1.51	3	19	0.9	24557	611	<0.2
KB-1	37.2	0.607	13	15.3	0.5	37826	562	<0.2
MH-1	7.77	0.0275	17	26.2	0.2	46822	571	<0.2
MWR-1	19.1	0.107	17	34.5	<0.1	39370	547	<0.2
T-1	171	1.7	8	21.7	0.7	23022	929	<0.2
TB1-1	300	1.26	11	24.1	<0.1	20296	1201	0.43

Metals in Sediment / Totok Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	As (mg/kg)	Hg (mg/kg)	Sb (mg/kg)	Cu (mg/kg)	Ag (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	CN (mg/kg)
Monitoring Pt.	Std.							
10A-1	5.34	0.565	14	17.3	1.5	27864	350	<0.2
15A-1	5.26	0.728	10	18.5	1.4	22772	300	<0.2
16A-1	6.63	1.63	3	34.6	1	39754	423	<0.2
18A-1	24.01	2.93	6	33.4	0.7	39833	414	<0.2
1A-1	12	0.801	10	23.8	1.6	32355	382	<0.2
20-1	14.1	1	3	23.9	1.1	34728	371	<0.2
21A-1	11.2	0.866	4	19.2	1.5	22785	295	<0.2
23A-1	9.07	1.43	8	25.3	0.8	39280	408	<0.2
25A-1	17.9	2.34	8	34.9	0.9	40919	457	<0.2

Metals in Sediment / Totok Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	As (mg/kg)	Hg (mg/kg)	Sb (mg/kg)	Cu (mg/kg)	Ag (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	CN (mg/kg)
Monitoring Pt.	Std.							
27A-1	37.6	1.31	<2	18.4	0.6	39522	600	<0.2
3A-1	8.59	1.14	11	21.8	1.3	36254	407	<0.2
5A-1	7.66	0.92	13	26.5	1.3	42950	383	<0.2
7A-1	20	4.58	<2	46.5	1	43207	439	<0.2
8A-1	20	5.56	<2	53.9	1.4	40611	654	<0.2
AM-1	34.8	4.19	17	41.3	0.8	40859	686	<0.2
CT1-1	7.02	0.087	55	12	1.3	26305	304	<0.2
CT2-1	13.7	0.01	20	10.1	1.8	22004	383	<0.2
H-1	14.8	1.34	24	26.3	0.8	37488	456	<0.2
MW-5-1	16.04	1.42	12	27.7	0.3	38139	455	<0.2

Metals in Sediment / Sungai Buyat

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	As (mg/kg)	Hg (mg/kg)	Sb (mg/kg)	Cu (mg/kg)	Ag (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	CN (mg/kg)
Monitoring Pt.	Std.							
SB-1-1	9.77	0.099	<2	25.6	<0.01	37876.4	394	<0.2
SB-2-1	13	0.049	<2	25.9	<0.01	43708.6	371	<0.2
SB-3-1	13.2	0.173	<2	27.2	<0.01	35560.3	441	<0.2
SB-4-1	6.24	0.089	<2	24.7	<0.01	116197.5	645	<0.2
SB-5-1	7.96	0.048	<2	23.8	<0.01	31774.9	548	<0.2

Metals in Sediment / Sungai Totok

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	As (mg/kg)	Hg (mg/kg)	Sb (mg/kg)	Cu (mg/kg)	Ag (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	CN (mg/kg)
Monitoring Pt.	Std.							
ST-1-1	79.8	11.8	<2	35	<0.01	43636.6	587	<0.2
ST-2-1	13.5	0.169	<2	29.9	<0.01	47687.7	514	<0.2
ST-3-1	37.5	9.04	<2	27.4	<0.01	42422.6	608	<0.2
ST-4-1	30.3	4.47	<2	25.9	<0.01	67374.4	506	<0.2
ST-9-1	<4	2.06	<2	16.7	<0.01	31526.8	293	<0.2

Criteria for Biodiversity / Buyat Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Shannon- Wiener Index	Simpson Index						
Monitoring Pt.	Std.							
A-1	0.683	0.49						
B-1	0.847	0.54						
BB1-1	1.88	0.84						
BB4-1	1.609	0.76						
BB5-1	1.386	0.688						
BB7-1	1.561	0.778						
C-1	0.693	0.5						
D-1	1.099	0.667						
E-1	0.95	0.639						
T-1	2.205	0.872						

Criteria for Biodiversity / Totok Bay

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Shannon- Wiener Index	Simpson Index						
Monitoring Pt.	Std.							
10A-1	1.889	0.84						
16A-1	1.972	0.843						
1A-1	1.55	0.776						
20A-1	1.657	0.848						
21A-1	1.561	0.778						
7A-1	1.332	0.72						
8A-1	1.907	0.836						
AM-1	1.099	0.667						
CT2-1	0.927	0.432						
MH-1	1.242	0.667						

Criteria for Contamination of Food / Dusun Buyat Pante

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg (mg/kg)	As (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	Cu (mg/kg)	CN (mg/kg)	
Monitoring Pt.	Std.						
Air Kelapa-1	<0.0005	0.004	0.09	2.7	0.04		
Beras-1	<0.0005	<0.0002	0.89	2.3	1.22		
Beras-2	<0.0005	<0.0002	17.9	3.37	1.48		
Daging Kelapa-1	<0.0005	0.02	1.6	6.76	0.2		
Pepaya-1	<0.0005	0.07	1.44	0.17	0.27		

Criteria for Contamination of Food / Desa Buyat

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg (mg/kg)	As (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	Cu (mg/kg)	CN (mg/kg)	
Monitoring Pt.	Std.						
Beras-1	<0.0005	0.1	1.17	5.97	0.8		

Criteria for Contamination of Food / Desa Ratatotok

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg (mg/kg)	As (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	Cu (mg/kg)	CN (mg/kg)	
Monitoring Pt.	Std.						
Beras-Rumah Alamsyah-1	0.19	0.09	1.33	5.75	1.54		
Beras-Rumah Bu Ilo-1	0.002	0.03	2.48	8.05	1.8		
Beras-Rumah Ibrahim-1	<0.0005	0.04	1.1	6.24	1.87		
Daun Keniki-Rumah Bu Ilo-1	<0.0005	0.58	2.66	10.6	43.6		
Daun Keniki-Rumah Mama Dila-1	<0.0005	1.72	51.4	4.39	4.39		
Daun Pepaya-1	0.004	2.65	175	17.7	1.4		

Criteria for Contamination of Food / Desa Belang

Data Source: Tim Lapangan

Sampling Date: Aug-28-04 - Sep-12-04

	Hg (mg/kg)	As (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	Cu (mg/kg)	CN (mg/kg)	
Monitoring Pt.	Std.						
Beras-1	<0.0005	0.08	1.63	6.8	1.49		

Criteria for Ambient air Quality / Desa Ratatotok

Data Source: Tim Lapangan

Sampling Date: Aug-29-04 - Sep-12-04

	Mn (ug/Nm3)	Cu (ug/Nm3)	Ag (ug/Nm3)	As (ug/Nm3)	Sb (ug/Nm3)	Zn (ug/Nm3)	Fe (ug/Nm3)	Hg (ug/Nm3)
Monitoring Pt.	Std.							
Desa Basaan-1	0.0036	0.8586	0.00014	0.00015	0.000029	0.0029	0.0415	0
Desa Buyat-1	0.008	10.1	0.0048	0.00096	0.00009	0.0128	0.277	0
Desa Ratatotok-1	0.0295	1.77	0.0013	0.0056	0.001139	0	0.514	0.008
Dusun Buyat Pante-1	0.0214	24.138	0.01486	0.003	0.0011	0.0712	1.061	0