

WATER QUALITY OF RIVER BUDHABALANGA - 2011

Baripada D/s

Month	Year	Temp., °C	pH	DO, mg/l	BOD, mg/l	COD, mg/l	Cond., µS/cm	Nitrate- N, mg/l
Jan	2011	20	8.2	8.0	2.4	10.1	332	0.873
Feb		22	8	7.6	2.8	11.3	330	0.738
Mar		24	8.3	7.4	1.5	10.3	283	0.084
Apr		28	8.26	7.8	1.1	7.8	316	0.126
May		27	8.1	7.2	2.2	9.3	227	0.325
June		24	7.7	7.4	2.6	10.3	117	0.675
July		21	7.5	7.4	2.4	12	132.5	0.179
Aug		23	8.4	7.2	1.2	10.1	134	0.184
Sep		16	8.0	7.4	2.0	16	118	0.521
Oct		22	7.6	7.2	2.2	7.0	142	0.195
Nov		22	8.0	7.6	1.1	6.1	184	0.310
Dec		18	8.1	8.0	1.4	7.8	212	0.338
Minimum		16.0	7.5	7.2	1.1	6.1	117.0	0.084
Maximum		28.0	8.4	8.0	2.8	16.0	332.0	0.873
Average		22.3	8.0	7.5	1.9	9.8	210.6	0.379

Balasore U/s

Month	Year	Temp., °C	pH	DO, mg/l	BOD, mg/l	COD, mg/l	Cond., µS/cm	Nitrate- N, mg/l
Jan	2011	21	7.9	7.8	1.2	8	290	0.914
Feb		20	7.9	7.8	1.2	7.3	283	0.050
Mar		24	8.1	7.6	1.6	12.4	268	0.139
Apr		28	7.65	7.6	1.1	8.7	261	0.092
May		22	7.9	7.4	2.2	9.6	203	0.865
June		22	7.5	7.6	1.4	6.8	118	0.457
July		21	7.3	7.4	2	10	180	0.124
Aug		22	8.3	7.8	1.0	10.1	150	0.676
Sep		17	8.0	8.2	2.2	17.1	115	0.836
Oct		23	8.0	7.8	1.6	6.5	151	0.311

Nov		23	8.3	7.4	1.5	6.1	192	0.137
Dec		18	8.4	8.6	1.2	7.8	215	0.041
Minimum		17.0	7.3	7.4	1.0	6.1	115.0	0.041
Maximum		28.0	8.4	8.6	2.2	17.1	290.0	0.914
Average		21.8	7.9	7.8	1.5	9.2	202.2	0.387

Balasore D/s

Month	Year	Temp., °C	pH	DO, mg/l	BOD, mg/l	COD, mg/l	Cond., µS/cm	Nitrate- N, mg/l
Jan	2011	20	7.7	7.4	1.9	12.1	504	0.874
Feb		23	7.9	7.4	1.6	8.6	376	0.622
Mar		24	7.9	7.2	2.1	20.6	309	2.855
Apr		29	7.93	7.4	2.1	11.6	323	0.105
May		25	8.3	7.6	2.0	9.3	254	0.907
June		23	7.4	7.2	2.2	8.8	153	0.114
July		22	7.5	7.0	2.2	12	186	0.546
Aug		24	8.4	7.2	2.1	14.1	233	0.353
Sep		17	8.2	7.2	1.8	15.2	186	0.599
Oct		22	8.0	7.4	2.4	8.0	181	0.320
Nov		20	8.1	7.2	2.4	12.2	192	0.004
Dec		19	8.2	8.0	1.6	11.7	256	0.119
Minimum		17.0	7.4	7.0	1.6	8.0	153.0	0.004
Maximum		29.0	8.4	8.0	2.4	20.6	504.0	2.855
Average		22.3	8.0	7.4	2.0	12.0	262.8	0.618

NH ₄ -N, mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml				Nitrite-N, mg/l	T. Alk., mg/l	P. Alk., mg/l
0.504	1500	700	5.8	0.48	C	0.00792	112	4
0.672	2400	1300				ND	116	ND
0.84	1500	580				0.001	104	0
0.728	1300	780	5.3	0.6	C	0.003	118	8
0.448	8400	4300				0.003	80	ND
0.448	2200	1300				0.012	32	ND
0.336	13000	2700				0.023	60	ND
0.224	4900	2300				0.005	44	8
0.56	35000	17000				0.003	28	ND
0.224	2100	1200	5.8	0.7	C	0.001	50	ND
0.112	4600	1700				0.004	68	2
0.168	5400	2200				0.011	96	4
0.1	1300.0	580.0	5.3	0.5	0.0	0.0	28.0	0.0
0.8	35000.0	17000.0	5.8	0.7	0.0	0.0	118.0	8.0
0.4	6858.3	3005.0	5.6	0.6	#DIV/0!	0.0	75.7	4.3

NH ₄ -N, mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml				Nitrite-N, mg/l	T. Alk., mg/l	P. Alk., mg/l
0.952	940	330	5.8	0.72	C	ND	112	0
0.728	580	130				ND	94	ND
0.728	940	490				0.002	136	0
0.504	1700	930	4.6	0.5	C	0.006	84	ND
0.896	1700	1100				0.002	76	ND
0.56	2400	1300				0.065	28	ND
0.448	1500	840				0.003	84	ND
0.112	1100	700				0.004	52	16
0.56	13000	7900				0.007	32	ND
0.112	1700	790	5.7	0.4	C	ND	68	4

0.112	2200	1100				0.005	78	2
0.056	1700	1300				0.008	88	6
0.1	580.0	130.0	4.6	0.4	0.0	0.0	28.0	0.0
1.0	13000.0	7900.0	5.8	0.7	0.0	0.1	136.0	16.0
0.5	2455.0	1409.2	5.4	0.5	#DIV/0!	0.0	77.7	4.7

NH ₄ -N, mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml				Nitrite-N, mg/l	T. Alk., mg/l	P. Alk., mg/l
0.448	2100	1400	--	--	--	0.00891	104	0
1.288	2200	1100				ND	96	ND
0.896	2400	1300				0.003	80	0
0.560	6300	3300	4.8	0.6	C	0.002	92	ND
0.784	3500	1300				0.017	112	ND
0.336	7900	4900				0.001	42	ND
0.56	9400	6300				0.031	88	ND
0.168	7900	4900				0.002	68	16
0.336	28000	14000				0.007	46	ND
0.336	4000	2700	5.4	0.7	C	0.002	76	4
0.56	11000	3300				0.004	72	4
0.056	92000	35000				0.012	98	6
0.1	2100.0	1100.0	4.8	0.6	0.0	0.0	42.0	0.0
1.3	92000.0	35000.0	5.4	0.7	0.0	0.0	112.0	16.0
0.5	14725.0	6625.0	5.1	0.7	#DIV/0!	0.0	81.2	5.0

s CaCO ₃ , mg/l	Ca as CaCO ₃ , mg/l	Mg as CaCO ₃ , mg/l	Chloride , mg/l	Sulphate , mg/l	PO ₄ ³⁻ -P, mg/l	Flouride, mg/l	Total Kjeldahl N, mg/l	TSS, mg/l
120	72	48	33.1	8.2	0.071	0.618	2.8	12
116	60	56	22	17.4	0.020	0.65	3.4	73
88	60	28	18	19.6	0.016	0.568	2.52	7
108	64	44	22	22.69	0.081	0.503	11.76	72
68	44	24	22	8.28	0.106	0.332	14.56	27
42	28	14	12.5	7.53	0.10	0.19	2.24	220
44	28	16	14.7	0.22	0.075	0.216	3.92	144
52	30	22	11.7	4.5	0.052	0.269	1.68	83
34	22	12	10.6	12.9	0.071	0.164	3.08	174
46	28	18	14.0	3.225	0.052	0.185	3.92	44
52	32	20	13	4.19	0.001	0.167	2.20	37
76	52	24	10.6	3.01	0.175	0.202	1.68	55
34.0	22.0	12.0	10.6	0.2	0.0	0.2	1.7	7.0
120.0	72.0	56.0	33.1	22.7	0.2	0.7	14.6	220.0
70.5	43.3	27.2	17.0	9.3	0.1	0.3	4.5	79.0

s CaCO ₃ , mg/l	Ca as CaCO ₃ , mg/l	Mg as CaCO ₃ , mg/l	Chloride , mg/l	Sulphate , mg/l	PO ₄ ³⁻ -P, mg/l	Flouride, mg/l	Total Kjeldahl N, mg/l	TSS, mg/l
124	68	56	23.5	7.6	0.016	0.498	7	29
84	52	32	26	6.2	0.022	0.47	3.6	69
112	76	36	17	6.9	0.032	0.515	3.92	117
68	48	20	17	21.94	0.009	0.394	18.2	74
60	36	24	20	6.99	0.275	0.306	6.72	32
28	12	16	12.5	7.53	0.04	0.17	1.68	190
64	46	18	10.7	1.94	0.025	0.227	3.64	148
66	38	28	8.7	6.0	0.014	0.176	0.84	96
40	20	20	12.5	14.8	0.05	0.171	2.52	190
50	28	22	12.0	1.29	0.027	0.161	1.12	56

78	44	34	5	5.81	0.220	0.177	0.84	39
80	54	26	12.5	5.69	0.015	0.246	1.68	81
28.0	12.0	16.0	5.0	1.3	0.0	0.2	0.8	29.0
124.0	76.0	56.0	26.0	21.9	0.3	0.5	18.2	190.0
71.2	43.5	27.7	14.8	7.7	0.1	0.3	4.3	93.4

s	Ca as	Mg as	Chloride	Sulphate	PO ₄ ³⁻ -P,	Flouride,	Total	
CaCO ₃ ,	CaCO ₃ ,	CaCO ₃ ,	, mg/l	, mg/l	mg/l	mg/l	Kjeldahl	TSS, mg/l
mg/l	mg/l	mg/l					N, mg/l	
120	76	44	84.9	17.3	0.024	0.296	3.36	87
84	52	32	28	17.4	0.071	0.60	9.0	84
96	72	24	29	31.9	1.600	0.242	2.52	204
84	56	28	25	22.37	0.137	0.244	15.58	110
88	44	44	21	2.04	0.432	0.348	3.36	110
50	32	18	17.3	9.03	0.14	0.22	2.8	272
68	44	24	13.6	1.83	0.056	0.206	2.52	102
72	52	20	23.5	2.2	0.059	0.169	0.84	166
50	36	14	16.3	12.5	0.089	0.201	2.52	86
62	42	20	13.0	1.505	0.047	0.169	1.12	74
54	34	20	19	10.22	0.021	0.180	1.96	78
80	58	22	18.3	5.69	0.025	0.216	1.68	39
50.0	32.0	14.0	13.0	1.5	0.0	0.2	0.8	39.0
120.0	76.0	44.0	84.9	31.9	1.6	0.6	15.6	272.0
75.7	49.8	25.8	25.7	11.2	0.2	0.3	3.9	117.7

TDS, mg/l	TFS, mg/l	Turbidity, NTU	Na, mg/l	K, mg/l	B, mg/l	Cadmium, micro gm/l	Copper, micro gm/l	Lead, micro gm/l
172	168	10.9	21.3	1.8	0.053	0.3	3.3	1.1
176	214	15.5	14.4	2.0	0.155	1.5	5.1	5.7
152	140	1.5	12.02	5.78	0.193	0.7	7.750	0.5
180	234	3.8	14.23	2.03	0.231	0.5	1.5	6.1
128	128	24.6	13.33	1.69	0.105	0.8	6.0	4.7
71	268	51.6	8.3	2.6	0.049	1.5	2.9	6.0
84	168	34.9	8.68	1.36	0.007	2.3	8.1	8.1
86	192	42.0	7.2	1.12	0.011	1.8	3.4	6.9
75	206	25.6	6.7	2.06	0.011	BDL	6.3	2.4
87	114	5.1	9.4	0.8	0.011	0.3	6.4	BDL
100	124	13.2	9.1	1.0	0.053	4.3	2.3	6.1
125	144	8.0	6.9	0.6	0.049	2.3	4.7	9.2
71.0	114.0	1.5	6.7	0.6	0.0	0.3	1.5	0.5
180.0	268.0	51.6	21.3	5.8	0.2	4.3	8.1	9.2
119.7	175.0	19.7	11.0	1.9	0.1	1.5	4.8	5.2

TDS, mg/l	TFS, mg/l	Turbidity, NTU	Na, mg/l	K, mg/l	B, mg/l	Cadmium, micro gm/l	Copper, micro gm/l	Lead, micro gm/l
149	158	21	14.6	1.3	0.030	0.9	16.7	1.0
146	194	19.1	15.8	1.6	0.045	0.8	5.4	5.7
173	260	24.5	12.98	1.43	0.212	0.9	7.188	2.8
142	282	11.2	12.89	1.67	0.076	0.6	1.5	7.3
132	146	21.3	12.39	1.4	0.049	2.4	4.8	2.5
64	224	55.5	8.58	1.46	0.113	1.4	1.6	4.9
105	206	32.1	6.72	1.17	0.004	2.2	4.1	8.7
96	160	50.1	5.1	0.95	ND	1.8	3.4	5.4
74	200	77	8.0	1.96	0.019	0.1	6.4	1.7
91	112	6.8	7.7	0.6	0.019	0.4	4.9	0.6

102	114	3.4	3.2	1.1	0.068	3.3	2.8	2.1
124	174	9.6	9.7	0.8	0.068	1.4	2.0	7.2
64.0	112.0	3.4	3.2	0.6	0.0	0.1	1.5	0.6
173.0	282.0	77.0	15.8	2.0	0.2	3.3	16.7	8.7
116.5	185.8	27.6	9.8	1.3	0.1	1.3	5.1	4.2

TDS, mg/l	TFS, mg/l	Turbidity, NTU	Na, mg/l	K, mg/l	B, mg/l	Cadmiu m, micro gm/l	Copper, micro gm/l	Lead, micro gm/l
278	335	51.6	57.5	4	0.042	1.7	5.6	2.8
189	248	13.6	20.2	2.0	0.095	0.8	6.2	40.0
168	338	25.3	18.5	1.44	0.057	0.7	7.438	3.3
184	278	40.3	18.81	1.51	0.114	0.4	0.5	6.8
165	248	2.3	13.83	1.36	0.034	0.6	5.3	6.1
90	348	46.3	11.2	2.34	0.072	1.4	3.7	6.1
110	158	33.6	9.6	1.55	0.015	1.9	7.6	9.6
142	276	69.5	13.8	2.28	ND	1.9	4.1	6.3
110	146	63.6	10.8	3.36	0.034	BDL	6.1	4.8
111	152	10.9	8.2	0.6	0.011	0.4	6.8	3.5
111	168	7.2	12.6	1.7	0.030	4.3	2.9	5.5
142	148	0.7	12.6	1.5	0.075	2.4	5.1	9.3
90.0	146.0	0.7	8.2	0.6	0.0	0.4	0.5	2.8
278.0	348.0	69.5	57.5	4.0	0.1	4.3	7.6	40.0
150.0	236.9	30.4	17.3	2.0	0.1	1.5	5.1	8.7

m Total, micro gm/l	Nickel, micro gm/l	Zinc, micro gm/l	Total, micro gm/l	Hg, micro gm/l
BDL	4.6	0.1	1200	
45	9.75	1.81	2200	
86.0	5.8	4.6	2060	BDL
154	1.6	7.6	260	BDL
18	4.3	5.8	2558	BDL
45	2.3	7.0	8918	BDL
5	1.9	10.4	5155	BDL
8.0	0.6	4.3	6523	BDL
23	0.9	8.7	14822	BDL
35	2.2	12.3	1640	BDL
65	7.1	3.3	2669	BDL
27	3.0	4.3	1502	BDL
5.0	0.6	0.1	260.0	0.0
154.0	9.8	12.3	14822.0	0.0
46.5	3.7	5.9	4125.6	#DIV/0!

m Total, micro gm/l	Nickel, micro gm/l	Zinc, micro gm/l	Total, micro gm/l	Hg, micro gm/l
40.0	3.8	0.2	2900	
22	9.75	2.06	3130	
85.0	5.6	1.8	11020	BDL
48	3.1	BDL	1510	BDL
12	0.4	10.1	1762	BDL
28	2.1	5.3	10589	BDL
32	4.4	3.4	158	BDL
11.0	2.1	1.9	7089	BDL
23	1.9	10.6	15090	BDL
63	0.9	0.3	2270	BDL

11	7.6	3.4	586	BDL
18	2.4	3.5	5146	BDL
11.0	0.4	0.2	158.4	0.0
85.0	9.8	10.6	15090.0	0.0
32.8	3.7	3.9	5104.2	#DIV/0!

m Total, micro gm/l	Nickel, micro gm/l	Zinc, micro gm/l	Total, micro gm/l	Hg, micro gm/l
13.0	4.9	3.6	3900	
114	9.75	3.88	3500	
98.0	6.4	2.3	13940	BDL
117	0.2	7.2	3430	BDL
7	2.0	0.6	1354	BDL
17	3.0	7.8	10426	BDL
23	3.6	6.8	3917	BDL
5.0	4.5	2.9	6029	BDL
23	2.5	15.2	13075	BDL
40	1.4	1.1	3820	BDL
5	7.9	8.4	658	BDL
15	2.4	4.7	734	BDL
5.0	0.2	0.6	658.0	0.0
117.0	9.8	15.2	13940.0	0.0
39.8	4.0	5.4	5398.6	#DIV/0!