

## WATER QUALITY OF RIVER BUDHABALANGA - 2012

### 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	2012	18	7.5	7.8	1.8	12.5	198	0.008
Feb		22	8.0	9.6	1.8	8.6	242	0.099
Mar		22	7.5	7.8	1.7	7.8	287	0.114
Apr		24	8.0	7.4	1.4	11.8	258	0.141
May		24	8.4	7.6	1.7	14.5	263	0.242
June		23	7.5	8.0	1.4	11.5	226	0.035
July		25	7.5	7.6	0.8	10.1	172	0.638
Aug		22	7.9	7.8	1.4	7.7	129	0.327
Sep		24	8.4	7.6	1.0	7.4	185	0.298
Oct		24	8.2	7.6	1.7	10.1	144	0.204
Nov		21	7.5	7.4	1.1	5.6	237	1.462
Dec		19	8.4	7.6	1.6	8.4	210	0.498
<b>Minimum</b>		<b>18.0</b>	<b>7.5</b>	<b>7.4</b>	<b>0.8</b>	<b>5.6</b>	<b>129</b>	<b>0.0</b>
<b>Maximum</b>		<b>25.0</b>	<b>8.4</b>	<b>9.6</b>	<b>1.8</b>	<b>14.5</b>	<b>287</b>	<b>1.5</b>
<b>Average</b>		<b>22.3</b>	<b>7.9</b>	<b>7.8</b>	<b>1.5</b>	<b>9.7</b>	<b>213</b>	<b>0.3</b>

### 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	2012	16	8.1	7.4	1.2	7.1	191	0.860
Feb		24	8.3	7.7	1.4	8.6	261	0.322
Mar		24	8.3	8.2	2.1	18.7	307	0.052
Apr		23	8.0	8.0	1.3	19.7	236	0.141
May		25	8.3	8.0	1.8	19.9	286	0.034
June		24	7.8	8.0	1.5	12.2	215	0.028
July		24	7.3	8.2	0.7	10.1	141	1.685
Aug		18	8.0	7.9	3.0	7.7	113	0.408
Sep		24	8.4	7.4	1.6	10.4	197	0.165
Oct		25	8.2	7.4	1.8	12.1	167	0.401

Nov		19	7.3	7.8	1.2	7.5	233	0.458
Dec		17	8.4	8.0	1.5	8.2	225	0.169
<b>Minimum</b>		<b>16.0</b>	<b>7.3</b>	<b>7.4</b>	<b>0.7</b>	<b>7.1</b>	<b>113.0</b>	<b>0.0</b>
<b>Maximum</b>		<b>25.0</b>	<b>8.4</b>	<b>8.2</b>	<b>3.0</b>	<b>19.9</b>	<b>307.0</b>	<b>1.7</b>
<b>Average</b>		<b>21.9</b>	<b>8.0</b>	<b>7.8</b>	<b>1.6</b>	<b>11.9</b>	<b>214.3</b>	<b>0.4</b>

**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	2012	16	8.2	7.8	1.8	12.5	236	2.000
Feb		22	8.4	9.7	1.3	6.9	296	0.272
Mar		25	8.0	8.0	2.6	22.8	406	0.623
Apr		23	7.9	7.4	1.9	21.7	426	0.306
May		23	8.4	7.4	1.3	24.4	685	0.525
June		22	7.8	7.6	1.6	11.5	302	0.456
July		25	7.2	7.2	2.0	20.1	245	0.432
Aug		22	8.5	7.4	1.8	17.3	206	1.639
Sep		25	8.1	8.2	2.2	19.8	273	0.022
Oct		23	7.8	7.2	2.0	18.1	190	0.684
Nov		21	8.0	7.2	2.8	18.2	247	0.888
Dec		20	8.4	7.2	2.3	15.9	234	0.620
<b>Minimum</b>		<b>16.0</b>	<b>7.2</b>	<b>7.2</b>	<b>1.3</b>	<b>6.9</b>	<b>190.0</b>	<b>0.0</b>
<b>Maximum</b>		<b>25.0</b>	<b>8.5</b>	<b>9.7</b>	<b>2.8</b>	<b>24.4</b>	<b>685.0</b>	<b>2.0</b>
<b>Average</b>		<b>22.3</b>	<b>8.1</b>	<b>7.7</b>	<b>2.0</b>	<b>17.4</b>	<b>312.1</b>	<b>0.7</b>

NH <sub>4</sub> -N, mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml				Nitrite-N, mg/l	T. Alk., mg/l	P. Alk., mg/l
0.112	5800	2100	6	0.67	--	0.004	80	ND
0.112	7000	4900				ND	102	ND
0.336	9400	3100				0.004	112	ND
0.560	7900	4900	5.7	0.78	C	0.018	108	ND
0.112	54000	35000				0.003	108	10
0.448	11000	7000				0.001	108	BDL
ND	7900	3300				0.012	64	BDL
0.112	13000	7900				0.010	60	BDL
0.448	24000	7900				0.014	80	4
0.224	17000	7000	6	0.81	B - C	0.016	62	BDL
0.392	13000	4900	--	--	--	0.016	104	BDL
0.224	11000	4900	--	--	--	0.020	96	4
<b>0.112</b>	<b>5800.0</b>	<b>2100</b>	<b>5.70</b>	<b>0.67</b>		<b>0.0</b>	<b>60.0</b>	<b>4.0</b>
<b>0.560</b>	<b>54000.0</b>	<b>35000</b>	<b>6.00</b>	<b>0.81</b>		<b>0.0</b>	<b>112.0</b>	<b>10.0</b>
<b>0.280</b>	<b>15083.3</b>	<b>7742</b>	<b>5.90</b>	<b>0.75</b>		<b>0.0</b>	<b>90.3</b>	<b>6.0</b>

NH <sub>4</sub> -N, mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml				Nitrite-N, mg/l	T. Alk., mg/l	P. Alk., mg/l
0.112	2200	1400	6.5	0.64	--	0.005	86	ND
0.112	1500	840				ND	86	8
0.112	1700	840				0.006	96	8
0.392	790	330	6	0.44	C	0.009	108	ND
0.448	3500	700				0.012	96	6
0.336	2800	1400				ND	84	BDL
0.112	9200	2400				0.032	54	BDL
0.336	5400	1100				0.020	48	BDL
0.112	2200	1300				0.027	84	8
0.224	2800	1300	6.1	0.95	B - C	0.024	78	BDL

0.112	2800	1300	--	--	--	0.024	100	BDL
0.112	1700	790	--	--	--	0.033	88	4
<b>0.112</b>	<b>790.0</b>	<b>330</b>	<b>6.00</b>	<b>0.44</b>		<b>0.0</b>	<b>48.0</b>	<b>4.0</b>
<b>0.448</b>	<b>9200.0</b>	<b>2400</b>	<b>6.50</b>	<b>0.95</b>		<b>0.0</b>	<b>108.0</b>	<b>8.0</b>
<b>0.210</b>	<b>3049.2</b>	<b>1142</b>	<b>6.20</b>	<b>0.68</b>		<b>0.0</b>	<b>84.0</b>	<b>6.8</b>

NH <sub>4</sub> -N, mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml				Nitrite-N, mg/l	T. Alk., mg/l	P. Alk., mg/l
0.112	15000	5800	5.87	0.6	C	0.005	110	ND
0.112	9400	3100				ND	88	8
0.112	8400	4300				0.007	112	ND
0.112	24000	13000	5.3	0.5	C	0.009	92	ND
0.112	92000	35000				0.117	108	10
0.112	9400	3100				0.004	88	BDL
1.176	17000	11000				0.324	72	BDL
ND	54000	22000				0.006	72	8
0.112	28000	7000				0.010	80	BDL
0.336	22000	7900	6	0.62	B - C	BDL	78	BDL
0.268	13000	4900	--	--	--	BDL	96	BDL
0.224	92000	35000	--	--	--	BDL	96	4
<b>0.112</b>	<b>8400.0</b>	<b>3100</b>	<b>5.30</b>	<b>0.50</b>	<b>0.0</b>	<b>0.0</b>	<b>72.0</b>	<b>4.0</b>
<b>1.176</b>	<b>92000.0</b>	<b>35000</b>	<b>6.00</b>	<b>0.62</b>	<b>0.0</b>	<b>0.3</b>	<b>112.0</b>	<b>10.0</b>
<b>0.253</b>	<b>32016.7</b>	<b>12675</b>	<b>5.72</b>	<b>0.57</b>	<b>#DIV/0!</b>	<b>0.1</b>	<b>91.0</b>	<b>7.5</b>

s	Ca as	Mg as	Chloride	Sulphate	PO <sub>4</sub> <sup>3-</sup> -P,	Flouride,	Total	
CaCO <sub>3</sub> ,	CaCO <sub>3</sub> ,	CaCO <sub>3</sub> ,	, mg/l	, mg/l	mg/l	mg/l	Kjeldahl	TSS, mg/l
mg/l	mg/l	mg/l					N, mg/l	
80	64	16	13.5	2.2	0.015	0.225	2.0	30
92	52	40	19.3	5.04	0.029	0.23	3.6	19
104	58	46	24.2	10.30	0.039	0.265	1.12	51
104	74	30	20.3	8.44	0.005	0.245	5.04	58
104	52	52	23.3	5.94	0.065	0.135	1.96	17
104	56	48	16.0	11.88	0.149	0.310	1.40	89
72	46	26	10.9	7.4	0.018	0.224	2.80	50
52	28	24	9.61	8.60	0.001	0.178	5.60	102
80	56	24	17.5	2.18	0.048	0.188	5.88	146
56	36	20	11.2	2.1	0.046	0.168	2.5	64
98	62	36	16.7	7.92	0.074	0.197	4.48	14
88	54	34	18.7	3.4	0.034	0.170	4.5	38
<b>52.0</b>	<b>28.0</b>	<b>16.0</b>	<b>9.6</b>	<b>2.11</b>	<b>0.001</b>	<b>0.135</b>	<b>1.12</b>	<b>14</b>
<b>104.0</b>	<b>74.0</b>	<b>52.0</b>	<b>24.2</b>	<b>11.88</b>	<b>0.149</b>	<b>0.310</b>	<b>5.88</b>	<b>146</b>
<b>86.2</b>	<b>53.2</b>	<b>33.0</b>	<b>16.8</b>	<b>6.28</b>	<b>0.044</b>	<b>0.212</b>	<b>3.41</b>	<b>57</b>

s	Ca as	Mg as	Chloride	Sulphate	PO <sub>4</sub> <sup>3-</sup> -P,	Flouride,	Total	
CaCO <sub>3</sub> ,	CaCO <sub>3</sub> ,	CaCO <sub>3</sub> ,	, mg/l	, mg/l	mg/l	mg/l	Kjeldahl	TSS, mg/l
mg/l	mg/l	mg/l					N, mg/l	
114	60	28	13.6	2.1	0.009	0.239	2.5	44
86	54	32	26.4	13.46	0.059	0.24	4.2	30
94	70	24	34.3	23.47	0.059	0.293	1.68	116
100	68	32	22.3	18.47	0.023	0.282	4.76	42
84	48	36	24.0	14.60	0.048	0.155	3.36	40
92	48	44	19.6	17.43	0.040	0.303	1.68	35
68	40	28	9.0	12.7	0.001	0.175	8.40	112
52	28	24	9.61	3.86	0.007	0.186	5.60	100
88	58	30	18.5	1.49	0.048	0.167	2.52	102
72	46	26	6.8	1.3	0.032	0.154	1.7	42

98	66	32	17.7	8.41	0.046	0.202	2.80	12
90	52	38	18.7	5.0	0.020	0.162	1.7	16
<b>52.0</b>	<b>28.0</b>	<b>24.0</b>	<b>6.8</b>	<b>1.34</b>	<b>0.001</b>	<b>0.154</b>	<b>1.68</b>	<b>12.0</b>
<b>114.0</b>	<b>70.0</b>	<b>44.0</b>	<b>34.3</b>	<b>23.47</b>	<b>0.059</b>	<b>0.303</b>	<b>8.40</b>	<b>116.0</b>
<b>86.5</b>	<b>53.2</b>	<b>31.2</b>	<b>18.4</b>	<b>10.19</b>	<b>0.033</b>	<b>0.213</b>	<b>3.41</b>	<b>57.6</b>

s	Ca as	Mg as	Chloride	Sulphate	PO <sub>4</sub> <sup>3-</sup> -P,	Flouride,	Total	
CaCO <sub>3</sub> ,	CaCO <sub>3</sub> ,	CaCO <sub>3</sub> ,	, mg/l	, mg/l	mg/l	mg/l	Kjeldahl	TSS, mg/l
mg/l	mg/l	mg/l					N, mg/l	
102	64	38	22.2	4.6	0.111	0.239	2.8	21
98	52	46	38.8	11.58	0.120	0.25	3.6	61
116	62	54	63.8	24.65	0.159	0.296	1.12	205
104	82	22	73.9	24.20	0.187	0.277	5.04	560
148	64	84	134.5	40.89	0.164	0.254	1.68	24
102	54	48	30.2	18.91	0.045	0.317	1.40	58
94	54	40	26.8	28.0	0.030	0.247	9.52	76
92	36	56	25.96	13.86	0.175	0.263	5.88	80
104	60	44	31.1	21.09	0.047	0.171	4.96	164
78	52	26	14.2	4.2	0.044	0.184	3.4	82
104	78	26	20.7	10.29	0.063	0.197	3.92	86
92	58	34	27.6	5.4	0.056	0.190	6.7	68
<b>78.0</b>	<b>36.0</b>	<b>22.0</b>	<b>14.2</b>	<b>4.21</b>	<b>0.030</b>	<b>0.171</b>	<b>1.12</b>	<b>21.0</b>
<b>148.0</b>	<b>82.0</b>	<b>84.0</b>	<b>134.5</b>	<b>40.89</b>	<b>0.187</b>	<b>0.317</b>	<b>9.52</b>	<b>560.0</b>
<b>102.8</b>	<b>59.7</b>	<b>43.2</b>	<b>42.5</b>	<b>17.31</b>	<b>0.100</b>	<b>0.241</b>	<b>4.17</b>	<b>123.8</b>

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
118	126	3.3	8.6	1.28	0.053	1.6	4.3	8.4
156	156	10.0	12.6	1.8	0.079	1.4	3.3	10.1
185	206	8	16.8	3.2	0.015	0.5	2.1	3.4
164	208	12	14.6	1.9	0.068	1.8	4.6	7.6
167	152	19.1	16.0	2.5	0.057	1.1	4.4	5.6
146	220	52.5	10.4	2.41	0.042	--	--	--
100	124	35.9	6.4	0.7	0.087	--	--	--
83	168	70.5	5.18	1.56	0.079	--	--	--
115	232	21.4	10.92	3.2	0.023	--	--	--
88	130	13.1	7.64	2.16	0.028	--	--	--
144	132	8.4	10.9	1.9	0.076	--	--	--
127	148	17.3	11.0	2.3	0.036	--	--	--
<b>83</b>	<b>124</b>	<b>3.3</b>	<b>5.2</b>	<b>0.7</b>	<b>0.015</b>	<b>0.5</b>	<b>2.1</b>	<b>3.4</b>
<b>185</b>	<b>232</b>	<b>70.5</b>	<b>16.8</b>	<b>3.2</b>	<b>0.087</b>	<b>1.8</b>	<b>4.6</b>	<b>10.1</b>
<b>133</b>	<b>167</b>	<b>22.6</b>	<b>10.9</b>	<b>2.1</b>	<b>0.054</b>	<b>1.3</b>	<b>3.7</b>	<b>7.0</b>

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
123	144	2.4	8.3	1.50	0.109	2.3	5.7	11.6
150	166	15.0	17.6	1.8	0.072	1.1	1.4	7.4
199	282	26	22.9	4.3	0.053	0.4	2.6	3.3
158	186	11	13.9	2.2	0.068	1.9	4.2	5.8
166	176	3.7	17.3	2.4	0.042	1.1	4.8	8.4
138	158	14.3	12.8	3.10	0.091	--	--	--
96	184	85.5	5.8	1.0	0.113	--	--	--
70	146	106.1	5.78	1.59	0.109	--	--	--
121	256	33.1	11.35	4.4	0.015	--	--	--
98	126	5.3	4.68	1	0.022	--	--	--

148	138	8.1	10.2	1.9	0.013	--	--	--
132	126	9.4	10.8	2.3	0.026	--	--	--
<b>70.0</b>	<b>126.0</b>	<b>2.4</b>	<b>4.7</b>	<b>1.0</b>	<b>0.013</b>	<b>0.4</b>	<b>1.4</b>	<b>3.3</b>
<b>199.0</b>	<b>282.0</b>	<b>106.1</b>	<b>22.9</b>	<b>4.4</b>	<b>0.113</b>	<b>2.3</b>	<b>5.7</b>	<b>11.6</b>
<b>133.3</b>	<b>174.0</b>	<b>26.7</b>	<b>11.8</b>	<b>2.3</b>	<b>0.061</b>	<b>1.4</b>	<b>3.7</b>	<b>7.3</b>

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
145	142	13.4	14.0	1.47	1.347	2.6	5.8	1.1
188	220	50.0	23.8	2.8	0.106	1.1	3.9	8.4
264	436	82	43.7	4.6	0.060	0.5	3.7	3.4
257	712	159	49.5	4.6	0.098	1.9	4.6	9.4
388	386	14.1	83.1	5.8	0.023	1.2	5.8	8.8
169	198	43.5	18.3	3.33	0.083	--	--	--
164	200	46.5	16.9	2.7	0.060	--	--	--
140	188	76.5	14.97	4.03	0.072	--	--	--
170	296	49.7	16.60	5.0	0.057	--	--	--
118	166	25.1	9.34	2	0.068	--	--	--
156	202	15.2	12.1	2.5	0.025	--	--	--
151	188	30.1	17.0	2.8	0.048	--	--	--
<b>118.0</b>	<b>142.0</b>	<b>13.4</b>	<b>9.3</b>	<b>1.5</b>	<b>0.023</b>	<b>0.5</b>	<b>3.7</b>	<b>1.1</b>
<b>388.0</b>	<b>712.0</b>	<b>159.0</b>	<b>83.1</b>	<b>5.8</b>	<b>1.347</b>	<b>2.6</b>	<b>5.8</b>	<b>9.4</b>
<b>192.5</b>	<b>277.8</b>	<b>50.4</b>	<b>26.6</b>	<b>3.5</b>	<b>0.171</b>	<b>1.5</b>	<b>4.8</b>	<b>6.2</b>



Chromium Total, micro gm/l	Nickel, micro gm/l	Zinc, micro gm/l	Iron Total, micro gm/l	Hg, micro gm/l	
10	1.5	4.8	926	BDL	BDL
38	3.3	1.4	2602		
15	3.8	4.8	763	BDL	ND
15	1.6	4.5	979	BDL	BDL
15	0.8	4.6	264	BDL	
48	--	--	3620	--	BDL
50	--	--	3940	--	BDL
3	--	--	5700	--	BDL
15	--	--	2090	--	--
22	--	--	6400	--	--
41	--	--	780	--	BDL
15	--	--	300	--	BDL
<b>3.0</b>	<b>0.8</b>	<b>1.4</b>	<b>264.0</b>	<b>0.0</b>	
<b>50.0</b>	<b>3.8</b>	<b>4.8</b>	<b>6400.0</b>	<b>0.0</b>	
<b>23.9</b>	<b>2.2</b>	<b>4.0</b>	<b>2363.7</b>	<b>#DIV/0!</b>	

Chromium Total, micro gm/l	Nickel, micro gm/l	Zinc, micro gm/l	Iron Total, micro gm/l	Hg, micro gm/l	
23	0.9	5.8	849	BDL	BDL
42	5.8	0.7	2741		
20	3.6	4.3	2506	BDL	ND
20	1.8	5.6	1334	BDL	BDL
25	1.3	2.8	302	BDL	
45	--	--	1171	--	BDL
27	--	--	5980	--	BDL
22	--	--	7900	--	BDL
20	--	--	2740	--	--
18	--	--	3200	--	--

47	--	--	500	--	BDL
16	--	--	475	--	BDL
<b>16.0</b>	<b>0.9</b>	<b>0.7</b>	<b>302.0</b>	<b>0.0</b>	
<b>47.3</b>	<b>5.8</b>	<b>5.8</b>	<b>7900.0</b>	<b>0.0</b>	
<b>27.1</b>	<b>2.7</b>	<b>3.8</b>	<b>2474.8</b>	<b>#DIV/0!</b>	

Chromium Total, micro gm/l	Nickel, micro gm/l	Zinc, micro gm/l	Iron Total, micro gm/l	Hg, micro gm/l	
33	2.9	7.1	1469	BDL	BDL
60	6.1	2.3	4872		
12	4.6	6.3	5990	BDL	ND
22	2.2	5.8	45120	BDL	BDL
18	4.2	7.9	720	BDL	
12	--	--	2550	--	BDL
22	--	--	3710	--	BDL
18	--	--	5200	--	BDL
27	--	--	3680	--	--
34	--	--	4870	--	--
61	--	--	1600	--	BDL
18	--	--	1770	--	BDL
<b>12.0</b>	<b>2.2</b>	<b>2.3</b>	<b>720.0</b>	<b>0.0</b>	
<b>60.8</b>	<b>6.1</b>	<b>7.9</b>	<b>45120.0</b>	<b>0.0</b>	
<b>28.1</b>	<b>4.0</b>	<b>5.9</b>	<b>6795.9</b>	<b>#DIV/0!</b>	