

**Appendix 2a: Representation of 3<sup>rd</sup> observation (falling tide) for 10mins at sample site 1**

TROUGH HEIGHT (m)	CREST HEIGHT (m)	BREAKING HEIGHT (m)	WAVE LENGTH (m)	WAVE HEIGHT (m)	WAVE AMPLITUDE (m)	WAVE DEPTH (m)	WAVE RELATIVE HEIGHT (m)	WAVE RELATIVE DEPTH(m)	WAVE HEIGHT DURING BREAKING(m)	AVER. CREST HEIGHT (m)	AVER. TROUGH HEIGHT (m)	AVER. AMPLITUDE (m)	AVER. WATER LEVEL (m)	WAVE STEEPNESS	WAVE FREQUENCY	WAVE PERIOD (SEC)
0.9	1.1 9	1.49	7	0.2 9	0.1 45	1. 04	0.2 775	0.14 9286	0.59	1.28 2	0.8 1	0.2 36	1.046	0.04 1428 571	91 IN 10 MUNI	6.5 93
0.8	1.2 1	1.47	11	0.4 1	0.2 05	1. 00	0.4 079	0.09 1364	0.67					0.03 7272 727	TES	
0.6	1.3 5	1.59	11 .3	0.7 5	0.3 75	0. 97	0.7 692	0.08 6283	0.99					0.06 6371 681		
0.9	1.3 4	1.48	9	0.4 4	0.2 2	1. 12	0.3 928	0.12 4444	0.58					0.04 8888 889		
0.9	1.1 4	1.2	10	0.2 4	0.1 2	1. 02	0.2 352	0.10 2	0.3					0.02 4		
0.9	1.3	1.64	10 .5	0.4	0.2	1. 1	0.3 636	0.10 4762	0.74					0.03 8095 238		
0.9	1.4 7	1.28	9. 9	0.5 7	0.2 85	1. 18	0.4 810	0.11 9697	0.38					0.05 7575 758		
0.8	1.5 1	1.42	5	0.7 1	0.3 55	1. 15	0.6 147	0.23 1	0.62					0.14 2		
0.8	1.1 7	1.39	10 .1	0.3 7	0.1 85	0. 98	0.3 756	0.09 7525	0.59					0.03 6633 663		
0.7	1.2 5	1.59	10 .7	0.4 9	0.2 45	0. 99	0.4 924	0.09 2991	0.84					0.04 5794 393		
0.8	1.3	1.44		0.5	0.2 5	1. 05	0.4 761		0.64							
0.7	1.2 9	1.55		0.5 9	0.2 95	0. 99	0.5 929		0.85							
0.8	1.1 5	1.45		0.3 3	0.1 65	1. 01	0.3 251		0.6							
0.7	1.3 5	1.51		0.5 9	0.2 95	1. 04	0.5 645		0.76							
0.8	1.2	1.5		0.4	0.2	1	0.4		0.7							

**Appendix 2b: Representation of 3<sup>rd</sup> observation (falling tide) for 10mins at sample site 2**

TROUGH HEIGHT (m)	CREST HEIGHT (m)	BREAKING HEIGHT (m)	WAVE LENGTH (m)	WAVE HEIGHT (m)	WAVE AMPLITUDE	WAVE DEPTH	WAVE RELATIVE	WAVE RELATIVE	WAVE HEIGHT DURING BREAKING (m)	AVER. CREST HEIGHT (m)	AVER. TROUGH HEIGHT (m)	AVER. AMPLITUDE	AVER. WATER LEVEL (m)	WAVE STEEPNESS	WAVE FREQUENCY	WAVE PERIOD (SEC)
0.95	1.67	1.85	5	0.72	0.36	1.31	0.5496	0.8518	1.6757	1.1242	0.27586	1.4				
1.29	1.63	1.84	72	0.34	0.17	1.46	0.2328	0.5577							63 in 10mins	10
0.95	1.83	1.76	3.6	0.88	0.44	1.39	0.6330	0.8194								
1.17	1.75	1.85	6.9	0.67	0.335	1.435	0.4668	0.7599								
1.15	1.73	2	4.5	0.58	0.29	1.44	0.4027	0.8578								
1.25	1.53	1.83	8.7	0.25	0.125	1.375	0.1818	0.5818								
1.18	1.69	2.09	4.3	0.42	0.21	1.39	0.3021	0.9158								
1.21	1.54	1.87	2.5	0.33	0.165	1.375	0.24	0.664	1.6257	1.115	0.25543	1.37035				
1.25	1.42	2.05	6.7	0.17	0.085	1.335	0.1273	0.841								
1.18	1.36	1.83	4.8	0.18	0.09	1.27	0.1417	0.6532								
1.19	1.37	2	6.3	0.18	0.09	1.28	0.1406	0.8125								
1.27	1.64	1.84	5.8	0.37	0.185	1.455	0.2542	0.5796								
0.81	1.24	1.99	4.9	0.43	0.215	1.025	0.4195	1.1812								
1.29	1.41	1.77	3.7	0.12	0.06	1.35	0.0888	0.4889								
0.95	1.95	2.35	8.6	1.05	0.525	1.425	0.7368	1.4542								
1.02	1.82	2	8	0.8	0.4	1.42	0.5633	0.988								
0.98	1.88	1.93	7.5	0.98	0.49	1.39	0.7050	1.0336								
0.95	1.81	1.99	6.3	0.86	0.43	1.38	0.6231	1.0488								
1.11	1.92	2.05	5.4	0.7	0.39	1.5	0.5	0.91								

<b>2</b>		<b>3</b>		<b>8</b>		<b>1</b>	<b>165</b>		
							<b>56</b>		
<b>1.0</b>	<b>1.6</b>	<b>1.9</b>	<b>6.9</b>	<b>0.5</b>	<b>0.29</b>	<b>1.3</b>	<b>0.4</b>	<b>0.86</b>	
<b>7</b>	<b>5</b>	<b>3</b>		<b>8</b>		<b>6</b>	<b>264</b>		
							<b>71</b>		
<b>1.4</b>	<b>1.7</b>	<b>2.2</b>	<b>7.5</b>	<b>0.3</b>	<b>0.16</b>	<b>1.6</b>	<b>0.1</b>	<b>0.77</b>	
<b>5</b>	<b>7</b>	<b>2</b>		<b>2</b>		<b>1</b>	<b>987</b>		
							<b>58</b>		

**Appendix 2c: Representation of 2<sup>nd</sup> observation (high tide) for 10mins at sample site 3**

TROUGH HEIGHT (m)	CREST HEIGHT (m)	BREAKING HEIGHT	WAVE PERIOD (s)	WAVE HEIGHT (m)	WAVE AMPLITUDE	WAVE PERIOD (s)	WAVE RELATIVE	WAVE RELATIVE	WAVE HEIGHT DURING	AVER. CREST	AVER. TROUGH	AVER. AMPLITUDE	AVER. WATER LEVEL	WAVE STEEPNESS	WAVE FREQUENCY	WAVE PERIOD (SEC)
<b>0.8</b>	<b>1.6</b>	<b>1.8</b>		<b>0.8</b>	<b>0.4</b>	<b>1.2</b>	<b>0.6</b>		<b>1</b>	<b>1.5</b>	<b>1.0</b>	<b>0.27</b>	<b>1.2</b>		<b>58</b>	
<b>5</b>	<b>5</b>	<b>5</b>				<b>5</b>	<b>4</b>			<b>717</b>	<b>229</b>	<b>4411</b>	<b>97</b>		<b>in</b>	<b>10.</b>
										<b>65</b>	<b>4</b>	<b>765</b>	<b>35</b>		<b>10m</b>	<b>3</b>
													<b>3</b>		<b>ins</b>	
<b>0.8</b>	<b>1.4</b>	<b>1.7</b>	<b>23.</b>	<b>0.6</b>	<b>0.31</b>	<b>1.1</b>	<b>0.5</b>	<b>0.0</b>	<b>0.87</b>					<b>0.0</b>		
<b>3</b>	<b>5</b>		<b>04</b>	<b>2</b>		<b>4</b>	<b>43</b>	<b>49</b>						<b>269</b>		
							<b>86</b>	<b>47</b>						<b>097</b>		
								<b>9</b>						<b>22</b>		
<b>0.8</b>	<b>1.5</b>	<b>1.9</b>	<b>23.</b>	<b>0.6</b>	<b>0.33</b>	<b>1.2</b>	<b>0.5</b>	<b>0.0</b>	<b>1.03</b>					<b>0.0</b>		
<b>8</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>5</b>	<b>15</b>	<b>51</b>	<b>52</b>						<b>287</b>		
							<b>44</b>	<b>14</b>						<b>553</b>		
								<b>6</b>						<b>65</b>		
<b>0.8</b>	<b>1.5</b>	<b>1.8</b>	<b>27.</b>	<b>0.7</b>	<b>0.35</b>	<b>1.2</b>	<b>0.5</b>	<b>0.0</b>	<b>0.95</b>					<b>0.0</b>		
<b>6</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>15</b>	<b>84</b>	<b>44</b>						<b>261</b>		
							<b>36</b>	<b>83</b>						<b>992</b>		
							<b>2</b>	<b>4</b>						<b>62</b>		
<b>0.9</b>	<b>1.6</b>	<b>1.9</b>	<b>27.</b>	<b>0.7</b>	<b>0.35</b>	<b>1.3</b>	<b>0.5</b>	<b>0.0</b>	<b>0.93</b>					<b>0.0</b>		
<b>8</b>	<b>9</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>35</b>	<b>31</b>	<b>49</b>						<b>261</b>		
							<b>83</b>	<b>08</b>						<b>029</b>		
							<b>5</b>	<b>1</b>						<b>41</b>		
<b>1.1</b>	<b>1.4</b>	<b>1.8</b>	<b>21.</b>	<b>0.3</b>	<b>0.16</b>	<b>1.3</b>	<b>0.2</b>	<b>0.0</b>	<b>0.7</b>					<b>0.0</b>		
<b>5</b>	<b>8</b>	<b>5</b>	<b>85</b>	<b>3</b>	<b>5</b>	<b>15</b>	<b>50</b>	<b>60</b>						<b>151</b>		
							<b>95</b>	<b>18</b>						<b>029</b>		
							<b>1</b>	<b>3</b>						<b>75</b>		
<b>1.6</b>	<b>1.5</b>	<b>1.9</b>	<b>25.</b>	<b>-</b>	<b>-0.02</b>	<b>1.5</b>	<b>-</b>	<b>0.0</b>	<b>0.36</b>					<b>-</b>		
	<b>6</b>	<b>6</b>	<b>78</b>	<b>0.0</b>		<b>8</b>	<b>0.0</b>	<b>61</b>						<b>0.0</b>		
				<b>4</b>			<b>25</b>	<b>28</b>						<b>015</b>		
							<b>31</b>	<b>8</b>						<b>515</b>		
							<b>6</b>							<b>9</b>		
<b>1.3</b>	<b>1.5</b>	<b>1.7</b>	<b>23.</b>	<b>0.1</b>	<b>0.09</b>	<b>1.4</b>	<b>0.1</b>	<b>0.0</b>	<b>0.42</b>					<b>0.0</b>		
<b>5</b>	<b>4</b>	<b>7</b>	<b>5</b>	<b>9</b>	<b>5</b>	<b>45</b>	<b>31</b>	<b>61</b>						<b>080</b>		
							<b>48</b>	<b>48</b>						<b>851</b>		
							<b>8</b>	<b>9</b>						<b>06</b>		
<b>0.9</b>	<b>1.5</b>	<b>1.6</b>	<b>24</b>	<b>0.6</b>	<b>0.31</b>	<b>1.2</b>	<b>0.5</b>	<b>0.0</b>	<b>0.78</b>					<b>0.0</b>		
	<b>3</b>	<b>8</b>		<b>3</b>	<b>5</b>	<b>15</b>	<b>18</b>	<b>50</b>						<b>262</b>		
							<b>51</b>	<b>62</b>						<b>5</b>		
							<b>9</b>	<b>5</b>								
<b>1.3</b>	<b>1.5</b>	<b>1.9</b>	<b>20.</b>	<b>0.2</b>	<b>0.13</b>	<b>1.4</b>	<b>0.1</b>	<b>0.0</b>	<b>0.59</b>					<b>0.0</b>		
<b>2</b>	<b>9</b>	<b>1</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>55</b>	<b>85</b>	<b>69</b>						<b>129</b>		
							<b>56</b>	<b>95</b>						<b>807</b>		
							<b>7</b>	<b>2</b>						<b>69</b>		
<b>0.8</b>	<b>1.7</b>	<b>1.8</b>	<b>25.</b>	<b>0.9</b>	<b>0.46</b>	<b>1.3</b>	<b>0.7</b>	<b>0.0</b>	<b>1.04</b>					<b>0.0</b>		
<b>5</b>	<b>7</b>	<b>9</b>	<b>8</b>	<b>2</b>		<b>1</b>	<b>02</b>	<b>50</b>						<b>356</b>		
							<b>29</b>	<b>77</b>						<b>589</b>		
							<b>5</b>							<b>15</b>		
<b>1.1</b>	<b>1.7</b>	<b>1.7</b>	<b>21.</b>	<b>0.6</b>	<b>0.31</b>	<b>1.4</b>	<b>0.4</b>	<b>0.0</b>	<b>0.64</b>					<b>0.0</b>		
	<b>2</b>	<b>4</b>	<b>25</b>	<b>2</b>		<b>1</b>	<b>39</b>	<b>66</b>						<b>291</b>		
							<b>71</b>	<b>35</b>						<b>764</b>		
							<b>6</b>	<b>3</b>						<b>71</b>		

<b>0.9</b>	1.4	1.7	24.	0.5	0.27	1.2	0.4	0.0	0.8		0.0
<b>5</b>	9	5	3	4		2	42	50			222
							62	20			222
							3	6			22
<b>0.9</b>	1.5	1.7	23.	0.6	0.30	1.2	0.5	0.0	0.83		0.0
	1	3	3	1	5	05	06	51			261
							22	71			802
							4	7			58
<b>0.8</b>	1.5	1.7	23	0.7	0.35	1.1	0.5	0.0	0.97		0.0
<b>2</b>	2	9				7	98	50			304
							29	87			347
							1				83
<b>1.2</b>	1.5	1.9		0.3	0.15	1.3	0.2		0.71		
	1	1		1	5	55	28				
							78				
							2				
<b>0.8</b>	1.5	1.9		0.7	0.37	1.2	0.6		1.08		
<b>5</b>	9	3		4		2	06				
							55				
							7				

#### Appendix 2d: Representation of 1<sup>st</sup> observation (rising tide) for 10mins at sample site 4

TROUGH HEIGHT (m)	CREST HEIGHT (m)	BREAKING HEIGHT (m)	WAVE LENGTH (m)	WAVE HEIGHT (m)	WAVE AMPLITUDE	WAVE DEPTH	WAVE RELATIVE HEIGHT (m)	WAVE RELATIVE DEPTH(m)	WAVE HEIGHT DURING BREAKING(m)	AVER. CREST HEIGHT (m)	AVER. TROUGH HEIGHT (m)	AVER. AMPLITUDE	AVER. WATER LEVEL (m)	WAVE STEEPNESS	WAVE FREQUENCY	WAVE PERIOD (SEC)
<b>0.7</b>	1.2	1.4	8	0.5	0.265	1.0	0.5	0.1	0.68	1.4	0.6	0.399	1.0	0.0	78	7.
<b>5</b>	8	3		3		15	221	268		59	6	5	59	662	for	69
							67	75					5	5	10m	ins
<b>0.8</b>	1.5	1.6	7.6	0.7	0.355	1.1	0.6	0.1	0.89					0.0		
	1	9		1		55	147	519						934		
							19	74						210		
														53		
<b>0.5</b>	1.3	1.8	6.4	0.8	0.44	0.9	0.9	0.1	1.34					0.1		
	8	4		8		4	361	468						375		
							7	75								
<b>0.4</b>	1.5	1.6	8.6	1.1	0.595	0.9	1.1	0.1	1.2					0.1		
	9			9		95	959	156						383		
							8	98						720		
														93		
<b>0.3</b>	1.4	1.7	12.	1.1	0.56	0.9	1.2	0.0	1.4					0.0		
<b>5</b>	7	5	5	2		1	307	728						896		
							69									
<b>0.6</b>	1.4	1.8	8.3	0.8	0.425	1.0	0.8	0.1	1.18					0.1		
<b>2</b>	7			5		45	133	259						024		
							97	04						096		
														39		

<b>0.5</b>	1.6	1.6	9.8	1.0	0.525	1.1	0.9	0.1	1.04	0.1
<b>8</b>	3	2		5		05	502	127		071
							26	55		428
										57
<b>0.8</b>	1.2	1.4	10.	0.4	0.225	1.0	0.4	0.0	0.67	0.0
	5	7	9	5		25	390	940		412
							24	37		844
										04
<b>0.9</b>	1.5	1.6	7.5	0.6	0.315	1.2	0.5	0.1	0.71	0.0
	3	1		3		15	185	62		84
										19
<b>0.9</b>	1.4	1.6		0.5	0.29	1.1	0.4		0.73	
	8	3		8		9	873			
										95

## Appendix 2e: Floral species diversity and concentration

Sl. No.	Plants	Dune ridge		Dune slope		Dune furrow	
		Fore	Back	Fore	Back	Fore	Back
1.	<i>Ipomoea pes-caprae</i>	++	+	+	+	+	+
2.	<i>Launaea sarmentosa</i>	++	+	+	++	+	-
3.	<i>Sesuvium portulacastrum</i>	+	-	++	++	+	-
4.	<i>Borreria articularis</i>	-	++	+	+	++	+
5.	<i>Aeluropus lagopoides</i>	-	++	+	++	+	++
6.	<i>Deris sp.</i>	++	+	+	-	-	-
7.	<i>Panicum repens</i>	-	+	-	++	+	++
8.	<i>Lippia alba</i>	-	-	-	+	++	+
9.	<i>Phyllanthus niruni</i>	-	+	-	+	+	+
10.	<i>Eragrostris tenella</i>	-	-	-	+	+	+
11.	<i>Anaisomelis ovate</i>	-	-	-	+	+	+
12.	<i>Dentella sp.</i>	-	+	-	+	++	+
13.	<i>Cyperus sp.</i>	+	++	+	++	+	++
14.	<i>Alysicarpus indica</i>	+	-	++	+	++	-
15.	<i>Commelina sp.</i>	-	+	+	++	-	++
16.	<i>Polygonum sp.</i>	-	-	-	++	-	++

17.	<i>Opuntia sp.</i>	+	+	-	+	+	++
18.	<i>Sida cordifolia</i>	-	-	+	+	+	++
19.	<i>Cassia sp.</i>	-	+	-	++	+	++
20.	<i>Pedaliium murex</i>	-	+	-	++	-	+
21.	<i>Trianthema pentandra</i>	-	+	++	+	-	+
22.	<i>Sida romboidea</i>	-	-	-	+	+	++
23.	<i>Pandanus sp.</i>	-	++	-	++	-	++
24.	<i>Croton bonplandianum</i>	-	-	-	++	+	++
25.	<i>Abutilon sp.</i>	-	-	-	+	+	+
26.	<i>Cynodon sp.</i>	+	-	++	+	+	+
27.	<i>Coccinia cordifolia</i>	-	+	-	-	+	+
28.	<i>Lantana sp.</i>	-	-	-	++	+	++

NB: ++ Significant, + Present, - Absent

Appendix 3a: Estimated mouza wise decadal change on demographic attributes and reasons for migration

Mouza Name	Estimated changes	No. Of households	Total population	Total workers	Main workers	Main cultivators	Main agricultural labourers	Main household	Main other workers	Marginal workers	Marginal cultivators	Marginal agricultural	Marginal household	Marginal other workers	Non workers
Mandarmani	D	-5	-57	-12	14	42	3	4	-35	-26	8	3	0	-37	-45
	C														
	R	low	moderate	low	low	moderate			moderate	moderate	low			Mode rate	Moderate
Silampur	O	<b>Tourism development, Erosion of the land</b>													
	D	50	238	80	-47	-53	2	4	0	127	1	1	4	136	158
	C										4				
Sonamahi	R	moderate	significant	moderate	moderate	moderate				significant	low			Significant	Significant
	O	<b>Tourism development</b>													
	D	0	-13	-61	13	-26	0	0	39	-11	1	-54	0	-5	48
Dadanpatrabar	C										5				
	R		low	moderate	low	moderate			moderate	low	low	moderate			Moderate
	O	<b>Tourism development</b>													
Mania	D	62	210	124	298	1	149	6	142	-174	-5	-176	-1	8	86
	C														
	R	moderate	significant	significant	significant		significant		significant	significant		significant		low	moderate
Mania	O	<b>Market gardening, fishing activities, salt water flooding, rainwater flooding</b>													
	D	1	0	-2	-1	-1	0	0	0	-1	0	-1	0	0	2

		<b>Bengal Salt Factory</b>													
<b>Dakshin Purushottam pur</b>	O														
	DC	-89	-580	-202	17	-136	111	5	37	-119	-7	-64	1	-49	-478
<b>Alampur</b>	R	moderate	huge	significant	low	significant	significant	moderate	significant	low	moderate		moderate	huge	
	O	<b>Fishing plots extended, seasonal rice paddy farming, market gardening along the shoreline, with migration, marine fish landing stations, fish drying platforms</b>													
<b>Tajpur</b>	DC	2	-7	2	2	0	0	0	2	0	0	0	0	0	-9
	R		low												low
<b>Tajpur</b>	O	<b>Fishing development and Wetland Conservation</b>													
	DC	63	168	-141	87	-35	54	3	65	-228	1	-204	0	-13	309
<b>Tajpur</b>	R	moderate	significant	significant	moderate	Moderate	moderate	moderate	significant	low	significant		low	significant	
	O	<b>Tourism development, conservation of wetland</b>													

Source: Census of India, (Ramnagar I & II CD Blocks of Purba Medinipur District, West Bengal) for 1991, 2001 & 2011.

NB: DC= Decadal Change, R=Remarks, O= Observations

### Annexure 1: Hotel Survey at Mandarmani tourist spot

Sl. No	Hotel Name	Location (Distance from Htl)	Drinking Water Source	Depth of Tube Well	Water Amount Extracted	Amenities Available									
						FOOD QUALITY	WATER QUALITY	QUALITY OF	NO. OF ROOM/SEAT	NO. OF TOURIST	TREVEL	MARINE FOOD	THEME PARK	BAR &	OTHERS FACILITY
1	CALYPSO HOTEL & RESORT	200m	submersible	810m	3000 litre	Better	sweet	A	15room/36	50-55	yes	yes	N	N	No
2	J.P. RESORT	80m	submersible	120m	1000 litre	Better	sweet	A	25room/50	70-80	yes	yes	N	yes	No
3	MEGHA HOTEL	2m	submersible	580 feet	2000 litre	low	sweet	A	120room/140	50-70	No	yes	yes	yes	No
4	MOINAK HOTELL	2m	submersible	950 Feet	4000 litre	Good	sweet	A	21room/55	30-35	yes	yes	N	yes	No
5	BELA BHUMI	40m	submersible	700 FEE T	1200 litre	Good	sweet	B	14 room/36	200-210	No	yes	N	yes	cottage
6	SRINJINI RESORT	1KM	submersible	180 feet	2000 litre	Better	sweet	A	24 room/50	100-110	yes	yes	N	yes	cottage
7	SONAR GOAN RESORT	50-60m	submersible	600 feet	5000 litre	Good	sweet	A	16 room/30	30-40	No	yes	yes	N	No
8	MA SARADA MOYEE RESORT	50m	submersible	150 feet	4000 litre	Normal	sweet	B	22 room/40	40-50	No	yes	N	N	No
9	OAK RESORT	7m	submersible	550 ft	2000 litre	Normal	sweet	B	14 room/14	20-25	No	yes	N	N	No
10	GOLDEN BEACH RESORT	3m	submersible	600 ft	3000 litre	Good	sweet	B	12 room/20	20-30	No	yes	N	N	No

11	THE LANDLEWOOD PARK	2m	submersible	250 ft	4000 litre	Better	sweet	A	19 room/24	200	yess	yess	yess	yess	cottage
12	MUKTAA RPHOT RESORT	2m	submersible	450 ft	5000 litre	Good	Normal	B	30 room/60	60-70	No	yes	No	yes	No
13	MONSOON RESORT	2m	submersible	110 ft	2000 litre	Good	sweet	B	18room/28	45-50	No	yes	yes	No	No
14	BLUE LAGOON	3m	submersible	750 ft	4000 litre	Good	Normal	A	12 room/40-50	50	No	yes	No	No	No
15	STAR INN	50 m	submersible	700 ft	5000 litre	Better	Normal	A	22 room/40	45-50	yes	yes	yes	yes	No
16	SUNAR BANGLA RESORT	75m	submersible	20-30	3000 litre	Normal	Salty	A	30 room/60	30-40	No	yes	No	No	Beach space
17	OYEZTER BAY HOTEL & RESORT	1km	submersible	20-22ft	1500 litre	Good	sweet	A	48room/56	80-90	No	yes	yes	No	No
18	COASTAL VIEW	50m	submersible	450 ft	4000 litre	Normal	Normal	B	8 room/20	50-60	yes	No	No	No	No
19	VORER ALO RESORT	2m	submersible	400 m	6000 litre	Good	salty	A	11 room/22	30-50	No	yes	No	No	Beach space
20	MANDAR MONI BEACH RESORT	2m	submersible	30ft	1000 litre	Normal	sweet	B	8 room/20	40-50	No	yes	No	No	sea beach bench
21	AJOY MIER HOTEL	1km	submersible	120 ft	8000 litre	Good	Normal	A	48room/80	80-90	No	yes	No	No	car parking
22	STAR RESORT	2m	submersible	20 m	1000 litre	Good	Normal	B	11room/22	50-60	No	yes	No	No	flower garden
23	BOMBAY BEACH RESORT	2m	submersible	20-25ft	5000 ft	Good	salty	A	24room/50	100-120	No	yes	yes	yes	flower garden , bench

24	HISOK JAYANTI	40 m	submersible	670 ft	6000 litre	Good	Normal	B	27rooms/54	30-40	No	Yes	No	Yes	flower garden
25	RESORT PRIYAJEET(P)LTD	25m	submersible	700 ft	1000 litre	Better	Normal	B	35rooms/70	150-165	Yes	Yes	Yes	Yes	small pond, garden
26	A.B RESORT	10m	submersible	650 ft	6000 litre	Good	Normal	B	10rooms/30	15-20	No	Yes	No	No	garden
27	RESORT PRIYAJEET(P)LTD	100m	submersible	150 ft	8000 litre	Good	Normal	B	35rooms/70	200-250	Yes	Yes	Yes	Yes	beach space
28	RESORT HUT DREAM	20m	submersible	300 ft	10000 litre	Better	Normal	A	35rooms/71	150-165	Yes	Yes	Yes	Yes	small pond, garden
29	ZAIKA INN	20m	submersible	300 ft	6000 litre	Better	Normal	A	30rooms/50	80-100	Yes	Yes	Yes	Yes	garden
30	HOTEL SEA SAND	20m	submersible	600 ft	6000 litre	Better	Normal	A	50rooms/60	100-120	Yes	Yes	Yes	Yes	banquet
31	HOTEL SANKHA BELA	10m	submersible	30ft	6000 litre	Better	Normal	A	50rooms/61	120-200	Yes	Yes	Yes	Yes	car parking zone
32	SUN VEIWR RESORT	10m	submersible	30ft	7000 litre	Better	salty	A	60 room	250-300	Yes	Yes	Yes	Yes	car parking zone
33	MANDAR MONI RESORT	02m	submersible	35ft	3000 litre	Better	salty	A	40rooms/50	35-50	No	Yes	No	Yes	No
34	ROSE VELLY RESORT	2mt	submersible	900 ft	20000 litre	Better	sweet	A	100rooms/400	500-6000	Yes	Yes	Yes	Yes	Beach space, car parking zone, garden temple

## Annexure 2: Household Perception Survey

- Name of the surveyor: \_\_\_\_\_ Date: \_\_\_\_\_
- Block: \_\_\_\_\_ Village: \_\_\_\_\_ Zip Code: \_\_\_\_\_
- Name of the respondent: \_\_\_\_\_
- Age of the respondent: \_\_\_\_\_
- Gender: 1 ( ) Male 2 ( ) Female
- Respondent Details:
  - 1 ( ) Interview is administered with the household head
  - 2 ( ) Interview is administered with a close family member
- His or her relationship to household head: \_\_\_\_\_
- Do household members speak, understand and/or write a language other than Bengali?
  - 1. Yes (state which language) \_\_\_\_\_ 2. No \_\_\_\_\_
- Why did you move here? (Tick as much as relevant)
  - 1 ( ) Schooling of children
  - 2 ( ) Look for work
  - 3 ( ) Start new job
  - 4 ( ) Escape drought/ famine
  - 5 ( ) Escape a family conflict
  - 6 ( ) Other (specify) \_\_\_\_\_
- Had any of your relatives/friends lived here before you came?
  - 1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_
- Did they help you with your settlement?
  - 1. Yes (state how) \_\_\_\_\_ 2. No \_\_\_\_\_
- Was it easy to settle here or did you experience any difficulties when you came?  
Please explain \_\_\_\_\_

Continued.....

• Total number of household members

Member no	Name	Gender 1. Female 2. Male	Age	Relationship to Head 1. Household Head 2. Wife/Husband 3. Son 4. Daughter 5. Son/daughter In-Law 6. Grandchild 7. Parent 8. Brother/Sister 9. Grandparent 10. Others (Specify) 999. I do not know	Marital Status 1. Single 2. Married 3. Divorced 4. Widowed 5. Separated 999. I do not know	Is the family member literate or illiterate? 1. Illiterate 2. Literate	What is the current/last school that the family member is attending/has graduated? 1. Below school age 2. Hasn't graduated from any institution 3. Primary School Student 4. Primary School graduate 5. Junior High school Student 6. Junior high school graduate 7. High School student 8. High School graduate 9. Vocational School of Higher Education Student 10. Vocational School of Higher Education Graduate 11. University Student 12. University Graduate 13. Masters Student 14. Masters Graduate 15. Doctorate Student 16. Doctorate Graduate 999. I do not know
1							
2							
3							
4							
5							
6							

7							
8							
9							
10							

• Livelihood Details of Household members:

Member No	Has the household member worked in an occupation which brings income in the last 3 months.	If household member is not working, please mention the reason.	What is/are the household members' occupations?	Who is s/he working for?	Does s/he need to live outside the village to do this job?
	1. Yes 2. No 999. I do not know	1. Retired 2. Student 3. Housewife (Only for female spouses) 4. Cannot find a job 5. Pregnant 6. So ill that he/she cannot work 7. Too old 8. Too young 9. Handicapped 10. Looks after house works 11. Not allowed to work (e.g. female members)	1. Farmer 2. Agricultural Labourer 3. Fisherman 4. Fishing related workers 5. Salt Manufacturer 6. Market Gardener 7. Tourism workers 8. Livestock breeder 9. Household workers/craftsman 10. Businessman 11. Serviceman 12. Social Worker 13. Teacher 14. Doctor 15. Retired 16. Other (please specify if different than the above. 998. Not applicable 999. I do not know	1. His/her own business (gets all or a share of the profits) 2. Family business (Works with a wage) 3. Family business (unpaid) 3. Small enterprise (less than 10 workers) 4. Medium or large enterprise (More than 10 workers) State which industry (e.g. 4.marble factory) 5. Government 998. Not applicable 999. I do not know	If yes please state how many months a year, If no please enter zero. 999. I do not know

		12. Other (please specify)						
		998. Not applicable						
			Primary occupation	Marginal occupation	Primary occupatio n	Marginal occupatio n	Primary occupatio n	Marginal occupatio n
1								
2								
3								
4								
5								
6								
7								

- What are the main income sources of your family?  
(read all the options to the interviewee. 1 important, 2 less important, 3 least important, 0 none)

Sources of Income	Importance
1.Wage/salary	
2.Farming	
3.Husbandry	
4.Fishing and fish products	
5.Tourism	
6.Trading	
7.Rental income	
8.Assistance of relatives	
9.Pensions	
10.Poverty funds (State which one.....)	
11.Other governmental aids/assistance (i.e. unemployment wage)	
12.In kind aids from the government (coal etc)	

13. Aids/assistance from NGOs	
14. Allowances for elderly	
15. Other (please specify)	

- What is the average monthly income of the household? (Other than subsistence production)
- Are you engaged with any subsistence production? Please state the approximate equal value of your subsistence production (enter zero if not produced).

Rice/ paddy farming	
Fruits/vegetables etc.	
Egg, milk and milk products	
Meat	
Other (please specify)	
Total (to be filled by the surveyor)	

- How much do spend monthly for food/drinks?
- How much do spend monthly for clothing?
- How much do spend monthly for maintenance of house and farmland?
- How much do you spend monthly for electricity?
- How much your health expenditures cost annually?
- How much your children's (if exist) schooling expenditures cost annually?
- Other expenditure if any?
- How much do you save yearly?
- How do you invest your savings? (please tick as much as relevant)
  - 1 ( ) I buy foreign currency
  - 2 ( ) I buy gold
  - 3 ( ) I bank (with an interest rate)
  - 4 ( ) I buy immovable properties
  - 5 ( ) Others (please specify)
- Do you or a member of your household has any agricultural land or do farming?
  - 1. Yes
  - 2. No (Go to Section C)

- How many parcels do you own/cultivate and how large are they?

Land No	Ownership status	Is the land irrigated	What do you cultivate on this land?	Who cultivates the land?
	1. own and cultivate this land	1. Yes		
	2. own but don't cultivate this land	2. No		
	3. rent this land from someone else	999. I do not know		
	4. I rent out this land			
	5. I have a shareholder			
	6. Other (please specify)			

- How do you use the products?
  1. For subsistence
  2. Selling at internal markets
  3. Selling at external markets
  4. Other 999. I do not know
- What is the approximate value of the product?
- Will this land be acquired for the project?
  1. Yes
  2. No 999. I do not know If the answer is no, go to the next question
- Have the negotiations started/completed?
  1. Not started
  2. In progress
  3. Completed
  4. I do not know
- Do/did you prefer in kind or cash compensation for your land?
  1. In kind (land to land)
  2. Cash
  3. I do not know

- With the compensation you get, are you able to buy a parcel of similar/better size and Quality?
  1. Yes, I can buy a land which is better quality and/or bigger in size
  2. Yes, I can buy a land of similar size and quality
  3. No I cannot buy a similar/better land
  4. I do not know
  5. Not applicable (the negotiations haven't completed)
- How do you plan to use your money?
- Did/do you have any grievances about the land acquisition? If so, have you communicated this to the company? How is this dealt with?
- Do women in your family own/inherit land?
  1. If, yes, can they sell land, can they decide how to use it?
  2. If no, do they interfere with the decisions regarding the usage of lands? If so, how?
- What happened to the agricultural production in the last 5 years?
  1. Increased
  2. Decreased
  3. Did not change
- Why did the agricultural production increase? (please tick as much as relevant)
  - 1  the quality of seeds got better
  - 2  Usage of chemical fertilizers and pesticides have increased
  - 3  Usage of organic fertilizers have increased
  - 4  Irrigation has improved
  - 5  I bought agricultural vehicles
  - 6  Other, please specify
- Why did the agricultural production decrease? (please tick as much as relevant)
  - 1  Erosion
  - 2  Lack of agricultural vehicles
  - 3  Not using enough fertilizer/pesticide
  - 4  Lack of labour
  - 5  Low product prices
  - 6  Other, please specify
- What is your ownership status of your house? Owned/rented
- What is the main building material? (The surveyor should make observation and confirm it with the interviewee - tick only one)
  - 1  Brick
  - 2  Concrete
  - 3  Wooden
  - 4  Stone
  - 5  Soil
  - 6  Other (specify)
- How many rooms are there in your house (including the living room)?
- What is the domestic water source in your house?

- Do you have any problems with water supply?
  1. Yes
  2. No
  
- What are your problems with water supply? (tick as much as relevant. Can be more than one)
  - 1  Water cuts. How frequent
  - 2  Not clean
  - 3  Expensive
  - 4  Difficult to access
  - 5  Low quality (hardness)
  - 6  Other (please state)
  
- Do you use domestic water for drinking purposes?
  1. Yes
  2. No (please state your drinking water source)
  
- Do you have any problems with drinking water supply?
  1. Yes (Specify)
  2. No
  
- Which fuel do you mainly use for heating? (Tick one)
  - 1  fuel wood
  - 2  gas
  - 3  natural gas
  - 4  fuel oil
  - 5  Other