

Appendix 1

Description of soil types

Soil type code	Description	Sub group	Sub order	order	Area in sq.km
Asm 1	Very deep, well drained, fine soils occurring on gently to moderately sloping side slopes of hills having loamy surface with moderate erosion; associated with: Deep somewhat excessively drained, loamy skeletal soils occurring on moderately sloping side slopes of hills with severe erosion hazard and slight stoniness	Fine typic hapludalfs Loamy skeletal umbric dystrochrepts	Udalfs ochrepts	Alfisols Inceptisols	537.8923
Asm 2	Very deep, well drained, loamy skeletal soils occurring on moderately sloping side slopes of hills having loamy surface with moderate erosion; associated with: Very deep, well drained, loamy skeletal soils occurring on moderately steep sloping side slopes of hills with severe erosion hazards	Clayey typic hapludults Loamy skeletal typic dystrochrepts		Ultisols Inceptisols	744.865
Asm 3	Very deep, well drained, coarse loamy soils occurring on moderately steep sloping side slopes of hills having loamy surface and moderate erosion; associated with: Moderately deep, well drained clayey soils occurring on moderately sloping side slopes of hills with moderate erosion hazard and slight stoniness	Coarse loamy typic dystrochrepts Clayey typic hapludalfs		Alfisols Inceptisols	608.2689

Appendix 1 (contd...)

Description of soil types

Soil type code	Description	Sub group	Order	Area in sq.km
Asm 39	Deep, excessively drained, fine loamy soils occurring on moderately sloping side slopes of hills having loamy surface with moderate erosion; associated with: Deep excessively drained fine loamy soils occurring on steep sloping hills with moderate erosion and slight stoniness	Fine loamy umbric dystrochrepts	Inceptisols	2.016131
		Fine loamy typic udorthents	Entisols	
Asm 40	Very deep, well drained, fine loamy soils occurring on gently sloping to undulating upland having loamy surface with moderate erosion; associated with: Very deep, well drained, clayey soils occurring on undulating plain with slight erosion	Fine loamy typic dystrochrepts	Ultisols	78.69273
		Clayey typic hapludults	Inceptisols	
Asm 41	Very deep, well drained, fine loamy soils occurring on undulating upland having loamy surface with slight erosion; associated with: Very deep, well drained, clayey soils occurring on undulating upland with moderate erosion	Fine loamy umbric dystrochrepts	Ultisols	455.4753
		Clayey typic hapludults	Inceptisols	
Asm 42	Very deep, well drained, coarse loamy soils occurring on undulating upland having sandy surface with moderate erosion; associated with: Very deep moderately well drained, fine loamy soils occurring on gently sloping plain with slight erosion	Coarse loamy typic dystrochrepts	Inceptisols	220.413
		Fine loamy typic dystrochrepts		

Appendix 1 (contd...)

Description of soil types

Soil type code	Description	Sub group	Order	Area in sq.km
Assam 43	Very deep, poorly drained, fine loamy soils occurring on gently sloping subdued plain having clayey surface with slight erosion; associated with: Very deep, poorly drained, coarse loamy soils occurring gently on sloping plain with slight flooding	Fine loamy aeric haplaquepts Coarse loamy aeric udifluvents	Inceptisols Entisols	420.8545
Assam 44	Very deep, well drained, fine loamy soils occurring on gently sloping plain having loamy surface and moderate erosion; associated with: Very deep, poorly drained fine soils occurring on gently sloping subdued plain with slight erosion	Fine loamy typic dystrochrepts Fine typic haplaquepts	Inceptisols	101.8835
Assam 45	Very deep, poorly drained, fine silty soils occurring on nearly flood plain having loamy surface with moderate; Associated with: Deep, poorly drained, coarse loamy soils occurring on gently sloping plain with slight erosion hazard	Fine silty aeric haplaquepts Coarse loamy aeric haplaquepts	Inceptisols entisols	171.173

Appendix 1 (contd...)

Description of soil types

Soil type code	Description	Sub group	Order	Area in sq.km
Assam 46	Very deep, well drained, fine loamy soils occurring on gently sloping plain having loamy surface with slight erosion; associated with: Very deep, poorly drained, fine soils occurring on nearly level plain with slight erosion	Fine loamy typic dystrochrepts Fine silty typic haplaquepts	Inceptisols	93.48389
Assam 47	Very deep, poorly drained, fine loamy soils occurring on very gently sloping plain having loamy surface with slight erosion; associated with Very deep, moderately well drained, coarse loamy soils occurring on gently sloping plain with moderate erosion	Fine loamy aeric haplquepts Coarse loamy typic dystrochrepts	Inceptisols	31.9122
Assam 49	Very deep, imperfectly drained, fine loamy soils occurring on nearly level flood plain having loamy surface with moderate flooding; associated with: Very deep, poorly drained, coarse loamy soils occurring on nearly level flood plain with slight erosion and slight flooding	Fine loamy aeric fluvaquents Coarse loamy aeric haplaquepts	Entisols Inceptisols	4.359247
Assam 51	Very deep, imperfectly drained, fine soils occurring on gently sloping plain having clayey surface with slight erosion and slight flooding; associated with: Deep, poorly drained, fine soils occurring on very gently sloping plain with slight erosion	Fine aquic dystric eutrochrepts Fine fluvaquentic dystrochrepts	Inceptisols	438.8721

Appendix 1 (contd...)

Description of soil types

Soil type code	Description	Sub group	Order	Area in sq.km
Assam 52	Deep, poorly drained, coarse loamy soils occurring on nearly level flood plain having loamy surface with ground water table between one to two meters below the surface and moderate flooding; associated with Very deep, moderately well drained, fine loamy soils occurring on very gently sloping plain with slight erosion and slight flooding	Coarse loamy typic fluvaquents	Entisols	142.9959
		Fine loamy dystic entochrepts	Inceptisols	
Assam 54	Deep, well drained, coarse silty soils occurring on active flood plain having loamy surface with slight erosion and severe flooding; associated with: Moderately deep, imperfectly drained coarse loamy soils with severe erosion and severe flooding	Coarse silty typic udifluvents	Entisols	12.83311
		Coarse loamy typic fluvaquents		
Assam 59	Very deep, imperfectly drained, coarse silty soils occurring on level or nearly level active flood plain having loamy surface with very slight erosion and severe flooding; associated with: Deep, poorly drained fine loamy soils with slight erosion and severe flooding	Coarse Silty, Aquic Udifluvents associated with	Entisols	11.25698
		Fine Loamy Typic Haplaquents		

Appendix 1 (contd...)

Description of soil types

Soil type code	Description	Sub group	Order	Area in sq.km
Assam 61	Moderately deep, moderately well drained, coarse loamy soils occurring on level to nearly level active flood plain and on stable river island having sandy surface with ground water table below one meter of the surface and very severe flooding; associated with Deep, imperfectly drained coarse silty soils occurring on nearly level active flood plain with moderate erosion and very severe flooding	Coarse loamy mollic fluvaquents Coarse silty aeric fluvaquents	Entisols	369.3312
Assam 65	Very deep, excessively drained, fine soils occurring on moderately steep sloping side slopes of hills having clayey surface with severe erosion and moderate erosion hazard; associated with: Very deep, well drained, loamy skeletal soils occurring on gently to moderately sloping side slopes of hills with moderate erosion	Fine ruptic ultic dystrochrepts Loamy skeletal typic udorthents	Inceptisols Entisols	144.8187
Assam 66	Very deep, well drained, fine loamy soils occurring on gently to moderately sloping side slopes of hills having loamy surface with severe erosion; associated with: Very deep, well drained, fine soils occurring on gently sloping side slopes of hills with moderate erosion	Fine loamy mollic hapludalfs Fine typic hapludalfs	Alfisols	102.3316

Appendix 2

RESULTS OF SEIVE ANALYSIS OF SOIL SAMPLES

Location 1: Dhansirimukh (Bank surface) Sample ID: 1

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	0.9	0.45	0.45	99.55
8	150 μ	4.2	2.1	2.55	97.45
9	75 μ	6.5	3.25	5.8	94.2
10	Pan	188.4	94.2	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 94.2% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	61

Appendix 2 (contd...)

Location 2: Kuruabahi (Agricultural land) Sample ID: 2

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	0	0	0	100
8	150 μ	0	0	0	100
9	75 μ	4.0	2.0	2	98.0
10	Pan	196.0	98.0	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 98% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	83

Appendix 2 (contd...)

Location 3: Marangani Tea Estate

Sample ID: 3

Weight of sample taken for analysis: - 200gm

SI No	IS Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	1.0	0.5	0.5	99.5
7	300 μ	14.0	7.0	7.5	92.5
8	150 μ	35.0	17.5	25.0	75.0
9	75 μ	43.0	21.5	46.5	53.5
10	Pan	107.0	53.5	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 53.5% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	36

Appendix 2 (contd...)

Location 4: Ghorial Dubi (Bank Sediment), Bokajan

Sample ID: 4

Weight of sample taken for analysis: - 200gm

SI No	LS Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	0.6	0.3	0.3	99.7
8	150 μ	36.45	18.225	18.525	81.475
9	75 μ	33.10	16.55	35.075	64.925
10	Pan	129.85	64.925	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 64.925% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	18

Appendix 2 (contd...)

Location 5: Ghorial Dubi (Agricultural Land), Poka Ali, Bokajan Sample ID: 5

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	0	0	0	100
8	150 μ	1.0	0.5	0.5	99.5
9	75 μ	30	15	15.5	84.5
10	Pan	169	84.5	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 84.5% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	21

Appendix 2 (contd...)

Location 6: Lakhijan, Bokajan Sample ID: 6

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	0	0	0	100
8	150 μ	10	5	5	95
9	75 μ	41	20.5	25.5	74.5
10	Pan	149	74.5	100	
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 74.5% (ii) Mass of dry soil taken (75 μ passing) in gm = 40gm				% finer w.r.t. total mass
1	2 μ	--	--	--	58

Appendix 2 (contd...)

Location 7: Lange Hanse, Bokjan

Sample ID: 7

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	6	3	3	97
7	300 μ	12	6	9	91
8	150 μ	58	29	38	62
9	75 μ	38	19	57	43
	Pan	86	43	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 43% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	22

Appendix 2 (contd...)

Location 8: Deopani, Golaghat

Sample ID: 8

Weight of sample taken for analysis: - 200gm

Sl No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	14	7	7	93
6	425 μ	20	10	17	83
7	300 μ	14	7	24	76
8	150 μ	23	11.5	35.5	64.5
9	75 μ	18	9	44.5	55.5
	Pan	111	55.5	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing (from sieve analysis) = 55.5% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	43

Appendix 2 (contd...)

Location 9: Dhansirimukh, Golaghat Sample ID: 9

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0.4	0.2	0.2	99.8
7	300 μ	1	0.5	0.7	99.3
8	150 μ	14	7	7.7	92.3
9	75 μ	71	35.5	43.2	56.8
	Pan	113.6	56.8	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 56.8% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	47

Appendix 2 (contd...)

Location 10: Ghorial Dubi, Bokjan Sample ID: 10

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	0	0	0	100
8	150 μ	8	4	4	96
9	75 μ	5	2.5	6.5	93.5
	Pan	187	93.5	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 93.5% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	63

Appendix 2 (contd...)

Location11: Deopani Ghat, Bokjan

Sample ID: 11

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	4	2	2	98
8	150 μ	17	8.5	10.5	89.5
9	75 μ	48	24	34.5	65.5
	Pan	131	65.5	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 65.5% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	--

Appendix 2 (contd...)

Location 12: Behing Numaligarh Tea Estate, Golaghat

Sample ID:12

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	0	0	0	100
8	150 μ	4	2	2	98
9	75 μ	23	11.5	13.5	86.5
	Pan	173	86.5	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 86.5% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	34

Appendix 2 (contd...)

13. Location: Behind Behora Tea Estate, Golaghat

Sample ID: 13

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	0	0	0	100
8	150 μ	0	0	0	100
9	75 μ	8	4	4	96
	Pan	192	96	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 96% (ii) Mass of dry soil taken (75 μ passing) in gm = 50gm				% finer w.r.t. total mass
1	2 μ	--	--	--	76

Appendix 2 (contd...)

Location14: Lakhijan, Bokjan

Sample ID: 14

Weight of sample taken for analysis: - 200gm

SI No	IS Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0.30	0.15	0.15	99.85
6	425 μ	15.0	7.50	7.65	92.35
7	300 μ	20.0	10	17.65	82.35
8	150 μ	31.0	15.5	33.15	66.85
9	75 μ	42.0	21	54.15	45.85
	Pan	91.7	45.85	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 45.85% (ii) Mass of dry soil taken (75 μ passing) in gm = 50 gm				% finer w.r.t. total mass
1	2 μ	--	--	--	19

Appendix 2 (contd...)

Location 15: Ghorial Dubi, Bokjan

Sample ID: 15

Weight of sample taken for analysis: - 200gm

SI No	I.S Sieve size	Mass Retained (gm)	% Retained	Cumulative % Retained	Cumulative % finer
1	4.75mm	0	0	0	100
2	2.36mm	0	0	0	100
3	2.00mm	0	0	0	100
4	1.18mm	0	0	0	100
5	600 μ	0	0	0	100
6	425 μ	0	0	0	100
7	300 μ	0	0	0	100
8	150 μ	1	0.5	0.5	99.5
9	75 μ	30	15	15.5	84.5
	Pan	169	84.5	100	0
Sedimentation analysis (Hydrometer)	(i) Percentage of 75 μ passing(from sieve analysis) = 84.5% (ii) Mass of dry soil taken (75 μ passing) in gm = 30 gm				% finer w.r.t. total mass
1	2 μ	--	--	--	62

Appendix 3

Determination of Liquid Limit & Plastic Limit

Sample ID	Container No.	Wt. of container (W) (gm)	Wt. of container + wet soil(W1) (gm)	Wt. of container + dry soil(W2) (gm)	Wt. of water (W1 – W2) (gm)	Wt. of dry soil(W2-W) (gm)	Moisture content (W1-W2)/(W2-W) (%)	Penetration (mm)	LL & PL (%)
1	2	3	4	5	6	7	8	9	10
1	Liquid Limit:								
	19	19.24	28.41	25.92	2.49	6.44	38.66	16	
	42	19.37	33.91	29.75	4.16	10.38	40.08	19	40.2
	36	19.01	30.51	27.17	3.34	8.16	40.93	22	
	Plastic Limit:								
	33	19.34	24.52	23.64	0.88	4.30	20.46		
	34	18.88	30.81	28.73	2.08	9.85	21.11		21
42	19.32	23.24	22.56	0.68	3.24	20.98			
2	Liquid Limit:								
	3	14.41	24.82	21.28	3.54	6.87	51.53	20	
	124	12.95	19.51	17.18	2.33	4.23	55.08	23	51.5
	370	13.57	27.35	22.30	5.05	8.73	57.85	26	
	Plastic Limit:								
	15	18.24	23.04	22.29	0.75	4.05	18.51		
	33	19.39	22.74	22.11	0.63	2.72	23.16		24
114	17.72	21.73	20.78	0.95	3.06	31.05			
3	Liquid Limit:								
	11	14.68	26.77	24.29	2.48	9.61	25.81	17	
	1	15.29	26.13	23.81	2.31	8.53	27.08	19	30.0
	10	15.90	33.25	29.14	4.11	13.24	31.04	23	
	Plastic Limit:								
	47	19.10	22.57	22.12	0.59	3.02	19.54		
	36	19.07	23.20	22.54	0.66	3.47	19.02		19
32	18.78	24.16	23.32	0.84	4.54	18.50			
4	Liquid Limit:								
	10	15.91	31.40	28.18	12.27	3.22	26.24	17	
	13	18.41	27.02	25.16	6.75	1.86	27.56	20	27.3
	5	14.75	26.66	24.04	9.29	2.62	28.20	23	
	370	13.60	30.68	26.86	13.26	3.82	28.81	26	
	Plastic Limit:								
	9	15.62	19.27	18.87	3.25	0.4	12.31		
90	14.47	17.41	17.07	2.60	0.34	13.08		12	
17	15.47	19.79	19.28	3.81	0.51	13.39			

Appendix 4 (contd.....)

Sample ID	Container No.	Wt. of container (W) (gm)	Wt. of container + wet soil(W1) (gm)	Wt. of container + dry soil(W2) (gm)	Wt. of water (W1 – W2) (gm)	Wt. of dry soil(W2-W) (gm)	Moisture content (W1-W2)/(W2-W) (%)	Penetration (mm)	LL & PL (%)
1	2	3	4	5	6	7	8	9	10
Liquid Limit:									
5	41	18.99	30.56	28.13	2.43	9.14	26.59	17	
	21	19.10	28.25	26.21	2.04	7.11	28.69	20	29.1
	34	18.91	36.91	32.99	4.46	13.54	32.94	23	
	22	19.29	30.22	27.80	2.81	8.12	34.61	27	
Plastic Limit:									
	28	19.13	22.17	21.71	2.58	0.46	17.83		
	40	19.08	21.88	21.45	2.37	0.43	18.14		18
	20	19.30	22.43	21.95	2.65	0.48	18.11		
Liquid Limit:									
6	29	19.30	28.78	26.24	2.54	6.94	36.64	17	
	4	15.67	29.74	25.77	3.94	10.10	39.31	20	39.6
	30	18.45	27.85	25.04	2.81	6.59	42.64	23	
Plastic Limit:									
	5	14.67	25.16	23.46	1.70	8.79	19.34		
	27	19.35	26.35	25.14	1.21	5.79	20.90		21
	14	17.11	27.92	26.10	1.82	9.00	22.22		
Liquid Limit:									
7	750	19.25	34.32	31.05	3.27	11.8	27.71	19	
	128	13.38	27.70	23.86	3.84	10.48	36.64	22	30.4
	9	15.63	25.88	23.11	2.77	7.48	37.03	23	
Plastic Limit:									
	15	18.24	23.04	22.29	0.75	4.05	18.50		
	33	19.39	22.74	22.17	0.57	2.78	20.50		19
	114	17.72	21.73	21.11	0.62	3.39	18.29		
Liquid Limit:									
8	5	14.76	22.92	20.76	2.16	6.00	36.00	15	
	11	14.69	23.43	21.07	2.36	6.38	36.99	18	37.1
	9	15.04	25.41	22.58	2.83	7.54	37.53	21	
Plastic Limit:									
	230	14.48	17.25	16.73	0.52	2.77	18.77		
	329	12.49	15.30	14.82	0.48	2.33	20.66		21
	3	14.54	17.90	17.29	0.61	2.75	22.18		

Appendix 4 (contd.....)

Sample ID	Container No.	Wt. of container (W) (gm)	Wt. of container + wet soil(W1) (gm)	Wt. of container + dry soil(W2) (gm)	Wt. of water (W1 – W2) (gm)	Wt. of dry soil(W2-W) (gm)	Moisture content (W1-W2)/(W2-W) (%)	Penetration (mm)	LL & PL (%)
1	2	3	4	5	6	7	8	9	10
Liquid Limit:									
9	124	12.97	19.34	17.61	1.73	4.64	37.28	18	
	370	13.56	23.36	20.43	2.93	6.87	42.65	21	42.0
	9	15.65	21.49	19.54	1.95	3.89	50.13	23	
Plastic Limit:									
	40	19.08	24.21	23.27	0.94	4.19	22.43		
	37	19.90	23.96	23.23	0.73	3.33	21.92		22
	26	19.17	25.71	24.50	1.21	5.33	22.70		
Liquid Limit:									
10	46	19.28	26.74	24.68	2.06	5.40	38.15	17	
	1	14.88	24.92	21.93	2.99	7.05	42.41	20	42.6
	16	11.54	23.12	19.44	3.68	7.90	46.58	23	
Plastic Limit:									
	25	19.33	27.83	26.27	1.56	6.94	22.48		
	33	19.40	30.76	28.46	2.30	9.06	25.38		23
	13	19.01	20.19	19.98	0.21	0.97	21.64		
Liquid Limit:									
11	29	19.33	29.61	27.64	8.31	1.97	23.70	15	
	44	19.35	28.35	26.57	7.22	1.78	24.65	17	24.9
	46	19.32	34.98	31.85	12.53	3.13	24.98	20	
	18	19.12	35.45	32.15	13.03	3.30	25.32	23	
	23	19.40	31.89	29.33	9.93	2.56	25.78	25	
Plastic Limit:									
									NP
Liquid Limit:									
12	36	19.04	30.54	27.98	8.94	2.56	28.63	15	
	27	19.46	34.08	30.67	11.21	3.41	30.42	18	
	32	18.79	36.25	32.08	13.29	4.17	31.38	21	30.8
	37	19.92	31.94	29.02	9.10	2.92	32.08	24	
Plastic Limit:									
	127	13.60	15.24	14.96	1.36	0.28	20.59		
	38	19.41	21.41	21.08	1.67	0.33	19.76		20
	26	19.21	20.98	20.68	1.47	0.30	20.41		
	35	19.34	21.05	20.77	1.43	0.28	19.58		

Appendix 4 (contd.....)

Sample ID	Container No.	Wt. of container (W) (gm)	Wt. of container + wet soil(W1) (gm)	Wt. of container + dry soil(W2) (gm)	Wt. of water (W1 – W2) (gm)	Wt. of dry soil(W2-W) (gm)	Moisture content (W1-W2)/(W2-W) (%)	Penetration (mm)	LL & PL (%)
1	2	3	4	5	6	7	8	9	
Liquid Limit:									
13	7	14.68	29.04	24.89	4.15	10.21	40.65	16	
	712	14.93	28.67	24.36	4.31	9.43	45.71	19	46.2
	131	14.26	29.00	24.52	4.68	10.06	46.52	21	
Plastic Limit:									
	25	19.33	27.83	26.27	1.56	6.94	22.48		
	33	19.40	30.76	28.46	2.30	9.06	25.38		23
	13	19.01	20.19	19.98	0.21	0.97	21.64		
Liquid Limit:									
14	8	14.82	27.94	25.42	10.60	2.52	23.77	15	
	420	14.65	29.24	26.30	11.65	2.94	25.23	19	
	5	11.99	22.28	20.14	8.15	2.14	26.26	23	25.3
	31	21.45	32.53	30.18	8.73	2.35	26.92	26	
Plastic Limit:									
	45	18.62	20.55	20.22	1.60	0.33	20.62		
	30	18.63	20.92	20.56	1.93	0.36	18.65		19
	39	20.22	22.77	22.35	2.13	0.42	19.72		
Liquid Limit:									
15	7	15.26	24.93	22.31	2.62	7.05	37.16	18	
	222	14.45	22.19	19.81	2.38	5.36	44.40	22	41.1
	320	18.86	34.61	29.59	5.02	10.73	46.78	24	
Plastic Limit:									
	318	14.53	16.84	16.43	0.41	1.90	21.58		
	15	18.24	20.09	19.76	0.33	1.52	21.71		22
	124	12.98	14.80	14.47	0.33	1.49	22.15		

Appendix 4

Tables of AHP Calculation

PAIR-WISE COMPARISON MATRIX OF INDIVIDUAL THEMATIC LAYERS

SLOPE MAP

Sl.No	Class (in degree)	>25°	10°-25°	5°-10°	<5°	weights
1	>25°	1	5	7	9	0.657386
2	10°-25°	1/5	1	3	5	0.202696
3	5°-10°	1/7	1/3	1	3	0.0941926
4	<5°	1/9	1/5	1/3	1	0.0457253

Maximum Eigen Value= 4.17067

CI= 0.0568895

RI=0.90

CR= CI/RI = 0.0632

GEOLOGY MAP

Sl.No.	Class	Fluvial sediments	Cenozoic Sedimentaries	Pre-Cambrian Metamorphic	weights
1	Fluvial sediments	1	3	9	0.655355
2	Cenozoic Sedimentaries	1/3	1	7	0.289744
3	Pre-Cambrian Metamorphic	1/9	1/7	1	0.0549004

Maximum Eigen Value= 3.0803

CI= 0.0401499

RI=0.52

CR= CI/RI = 0.0772

Appendix 4 (contd...)

Tables of AHP Calculation

PAIR-WISE COMPARISON MATRIX OF INDIVIDUAL THEMATIC LAYERS

NDVI MAP

Sl.No.	Class	<0	0-0.1	0.1-0.5	>0.5	weights
1	<0	1	3	7	9	0.583089
2	0-0.1	1/3	1	5	7	0.28953
3	0.1-0.5	1/7	1/5	1	3	0.084896
4	>0.5	1/9	1/7	1/3	1	0.0424852

Maximum Eigen Value= 4.16458

CI= 0.0548589

RI=0.90

CR= CI/RI = 0.0609

SOIL MAP

Sl. No	Class	Severely Erodible Soils	Moderately Erodible Soils	Slightly Erodible Soils	River	weights
1	Severely Erodible Soils	1	5	7	9	0.583089
2	Moderately Erodible Soils	1/5	1	5	7	0.28953
3	Slightly Erodible Soils	1/7	1/5	1	3	0.084896
4	River	1/9	1/7	1/3	1	0.0424852

Maximum Eigen Value= 4.16458

CI= 0.0548589

RI=0.90

CR= CI/RI = 0.0609

Appendix 4 (contd....)

Tables of AHP Calculation

PAIR-WISE COMPARISON MATRIX OF INDIVIDUAL THEMATIC LAYERS

LULC MAP

Sl.No.	Class	Sandbar	Agricultural Cropland	Degraded Forest	Settlement	Forest	Waterbodies	weights
1	Sandbar	1	2	4	5	8	9	0.401518
2	Agricultural Cropland	1/2	1	3	4	6	9	0.276268
3	Degraded Forest	1/4	1/3	1	3	4	9	0.156549
4	Settlement	1/5	1/4	1/3	1	5	9	0.10665
5	Forest	1/8	1/6	1/4	1/5	1	2	0.0366538
6	Waterbodies	1/9	1/9	1/9	1/9	1/2	1	0.0223611

Maximum Eigen Value= 6.4953

CI= 0.09906

RI=1.24

CR= CI/RI = 0.0798871

RAINFALL MAP

Sl.No.	Class (in cm)	200-250	180-200	160-180	140-160	weights
1	200-250	1	1	2	4	0.385819
2	180-200	1	1	1	2	0.274177
3	160-180	1/2	1	1	2	0.22667
4	140-160	1/4	1/2	1/2	1	0.113335

Maximum Eigen Value= 4.06065

CI= 0.202157

RI=0.90

CR= CI/RI = 0.02246189

Appendix 4 (contd.....)

Tables of AHP Calculation

PAIR WISE COMPARISON MATRIX OF THEMATIC LAYERS

Sl.No.		Slope	Geology	NDVI	Soil Type	LULC	Rainfall	weights
1	Slope	1	3	5	6	7	9	0.460753
2	Geology	1/3	1	3	4	5	7	0.244708
3	NDVI	1/5	1/3	1	3	4	5	0.137945
4	Soil Type	1/6	1/4	1/3	1	3	4	0.0809899
5	LULC	1/7	1/5	1/4	1/3	1	3	0.0479045
6	Rainfall	1/9	1/7	1/5	1/4	1/3	1	0.0276993

Maximum Eigen Value= 6.41378

CI= 0.0827557

RI=1.24

CR= CI/RI = 0.06673847

Appendix 5

FLOOD FREQUENCY ANALYSIS BY LOG PEARSON TYPE III METHOD

	Year	HFL(X)	Y= Log X	(Y- \bar{Y})	(Y- \bar{Y}) ²	(Y- \bar{Y}) ³
1	1989	79.68	1.901349325	4.185888x10 ⁻³	0.175216584 x10 ⁻⁴	7.334369942 x10 ⁻⁸
2	1999	79.66	1.901240302	4.076865 x10 ⁻³	0.166208282 x10 ⁻⁴	6.776087287 x10 ⁻⁸
3	2004	79.52	1.900476371	3.312934 x10 ⁻³	0.109755317 x10 ⁻⁴	3.63612121 x10 ⁻⁸
4	1986	79.43	1.899984563	2.821126 x10 ⁻³	0.079587519 x10 ⁻⁴	2.245264193 x10 ⁻⁸
5	1987	79.25	1.898999271	1.835834 x10 ⁻³	0.0337028648 x10 ⁻⁴	0.61872865 x10 ⁻⁸
6	1983	79.21	1.898780013	1.616576 x10 ⁻³	0.02613317964 x10 ⁻⁴	0.42246271 x10 ⁻⁸
7	1985	79.21	1.898780013	1.616576 x10 ⁻³	0.02613317964 x10 ⁻⁴	0.42246271 x10 ⁻⁸
8	2000	79.17	1.898560645	1.397208 x10 ⁻³	0.01952190195 x10 ⁻⁴	0.272761576 x10 ⁻⁸
9	2002	79.17	1.898560645	1.397208 x10 ⁻³	0.01952190195 x10 ⁻⁴	0.272761576 x10 ⁻⁸
10	1993	79.15	1.898450919	1.287482 x10 ⁻³	0.016576099000 x10 ⁻⁴	0.213414291 x10 ⁻⁸
11	2003	79.15	1.898450919	1.287482 x10 ⁻³	0.16576099000 x10 ⁻⁴	0.213414291 x10 ⁻⁸
12	1998	79.03	1.897791982	6.28545 x10 ⁻⁴	0.00395068817 x10 ⁻⁴	0.24831853 x10 ⁻⁸
13	1982	78.97	1.897462138	2.98701 x10 ⁻⁴	0.00089222287 x10 ⁻⁴	0.002665079 x10 ⁻⁸
14	1990	78.92	1.897187077	2.364 x10 ⁻⁵	0.00005588496 x10 ⁻⁴	0.000001322 x10 ⁻⁸
15	1997	78.82	1.896636431	-5.27006 x10 ⁻⁴	0.00277735324 x10 ⁻⁴	-0.014636818 x10 ⁻⁸
16	2005	78.76	1.896305707	-8.5773 x10 ⁻⁴	0.00773570075 x10 ⁻⁴	-0.063103261 x10 ⁻⁸
17	1988	78.62	1.895533039	-1.630398 x10 ⁻³	0.02658197638 x10 ⁻⁴	-0.433392011 x10 ⁻⁸
18	1992	78.59	1.895367289	-1.796148 x10 ⁻³	0.03226147638 x10 ⁻⁴	-0.579463863 x10 ⁻⁸
19	1994	78.5	1.894869657	-2.29378 x10 ⁻³	0.05261426688 x10 ⁻⁴	-1.206855531 x10 ⁻⁸
20	1995	78.48	1.894758994	-2.404443 x10 ⁻³	0.05781346140 x10 ⁻⁴	-1.390091726 x10 ⁻⁸
21	1996	78.38	1.894205259	-2.958178 x10 ⁻³	0.08750817080 x10 ⁻⁴	-2.588647 x10 ⁻⁸
22	1984	78.36	1.894094427	-3.06901 x10 ⁻³	0.09418822380 x10 ⁻⁴	-2.890646007 x10 ⁻⁸
23	1991	78.06	1.892428547	-4.73489 x10 ⁻³	0.22419183310 x10 ⁻⁴	-10.61523669 x10 ⁻⁸
24	2001	77.92	1.891248944	-5.914493 x10 ⁻³	0.34981227450 x10 ⁻⁴	-20.68962249 x10 ⁻⁸
Total Σ			45.53152248		1.778501352 x10 ⁻⁴	-1.779286203 x10 ⁻⁹
			\bar{Y} 1.897163437			

$$\sigma_y = \sqrt{\sum(Y-\bar{Y})^2 / N - 1}$$

$$C_s = \text{Coefficient of skew of variate Y}$$

$$= N \sum(Y-\bar{Y})^3 / (N-1)(N-2)(\sigma_y)^2$$

$$\bar{Y} = \sum Y / N \text{ (mean of Y values)}$$

N= sample size= number of years of record

T= return period

K_y = f(C_s, T), a frequency factor which is a function of T and C_s

Appendix 5 (contd....)

For the given series of data

$$N = 24$$

$$\bar{Y} = 1.897163437$$

$$\sigma_y = 0.000278$$

$$C_s = -0.3$$

The Log-Pearson Type III Equation for calculating design HFL for any return period is given by

$$Y_t = \bar{Y} + K_y * \sigma_y$$

After obtaining the value of Y_t , the design HFL is found out by the following equation

$$X = \text{antilog}(Y_t)$$

For the given series, for $C_s = -0.3$, the value of K_y for return periods 2, 10, 25, 50 and 100 have been found out from the $K_y = F(C_s, T)$ table

$$K_2 = 0.050$$

$$K_{10} = 1.245$$

$$K_{25} = 1.643$$

$$K_{50} = 1.890$$

$$K_{100} = 1.104$$

For the given series following design HFL has been found out for the following return periods

$$X_2 = 78.94$$

$$X_{10} = 79.54$$

$$X_{25} = 79.75$$

$$X_{50} = 79.87$$

$$X_{100} = 85.13$$

Appendix 6
List of Villages Chronically Flooded in Golaghat District falling
in the Dhansiri River Basin under Study

S.No.	Names of Villages	Area in sq.km
1	Bamungaon	10.69560367520
2	Beloguri	0.20477711641
3	Bohikhowa	1.38240424988
4	Betgaon	2.04423444197
5	Bilatiagaon	3.33616228570
6	Polashguri	0.92948536074
7	Nowbhangi	3.99432539245
8	Juganiati	4.34253292475
9	Dhansiri Temera	6.83738570988
10	Dighaliati	2.66477750896
11	Parangana_no.1	2.24971535047
12	Siljuri_Kakajuri	0.92528046552
13	Moriaholla	5.72473541170
14	NC	1.87182690779
15	Nikori	2.21215778196
16	Rowdoor_Pather (a)	0.13756802146
17	Ririgaon	3.87346761429
18	Parangana_no.2	1.24453504462
19	Kuruabahi_satra	4.24523282162
20	Kuruabahigaon	4.83307723262
21	Boraikhowa_Chapori	1.99419717750
22	Bilotia	2.48005151299
23	Goriagaon	0.13802282982
24	Borpak	2.30136014525
25	Behoragrang	0.70198110273
26	Dihingia	4.40789376154
27	Budhbari	3.44776810399
28	Bowdoorgaon	1.36872960545
29	Dhodang	4.92988010813
30	Koroniholla	0.47654031042
31	Bordihigia	2.35239092002
32	Rowdoor_Pather(b)	4.10008919937
33	Baruagaon	0.99561022540
34	Kachupathargaon	2.16311051433

Appendix 6 (contd...)

List of Villages Chronically Flooded in Golaghat District falling in the Dhansiri River Basin under Study

S.No.	Names of Villages	Area in sq.km
35	Chankanagaon	2.40904982081
36	Borahigaon	0.24718309667
37	Khumatai_Grantno.6	0.03424489490
38	Numaligor_Grant	0.29624081832
39	Parghat	2.41109207030
40	Thengalgaon	4.75124949994
41	Kamargaon	1.47926200002
42	Numaligor_Pathar	1.63897680579
43	Sonarigaon	2.25099559346
44	Numaligarh_Block	1.27831925773
45	Helochigaon	0.68032491049
46	Borchapori	4.52668883439
47	Chaukanabilgaon	3.93325550622
48	Kaliyani_block	0.07363584497
49	Kalioni	0.61470522083
50	Rajabari_te	1.00553332267
51	Moranbilpankagaon	0.23173381793
52	Pankapathar	0.52418992524
53	Na_gaon	2.94369824333
54	Borgonia_chapori	1.98359605941
55	Bagariani_chapori	2.93564898587
56	Borgonia	1.67295661169
57	Butalikhawatup	0.78556247066
58	Dhansiri_Chapori	1.96282456273
59	Leteku_Chapori	1.44236595555
60	Chungiholla	2.07347118412
61	Letkubagan	0.97481759755
62	Khumtaigaon	4.27865648057
63	No.2_Hautolihabi	1.21828566508
64	Hautolygaon	0.56882893559
65	Abhayjan_te	1.12240812056
66	Garangagrants(betioni_te)	0.55866055868
67	Hautolygrant	0.62019200071
68	Mithaam_Chapori	2.34597572806
69	Mariangi_te	1.58917947720
70	Butalikhowano.2	0.87035757011

Appendix 6 (contd...)

List of Villages Chronically Flooded in Golaghat District falling in the Dhansiri River Basin under Study

S.No.	Names of Villages	Area in sq.km
71	Jathipotia	0.48699687853
72	No.24_Hautolygrant	0.78947014278
73	Butalikhowano.1	2.15998036233
74	No.2 Senchowagaon	0.33248010117
75	Bholagurigaon	7.96579819867
76	Koibortano.3	2.18448814343
77	Panikora	2.14433609069
78	Chesamukh	1.20193920578
79	Kordoiguri	2.51183503558
80	Kenduguri	2.78493846255
81	Dholagaon	1.50397442561
82	Halowagaon	0.09968742364
83	Teliaigaon	1.44547564975
84	Pankial	1.37983916022
85	Koiborta no.2	1.72915284769
86	Miripathar	0.27877551469
87	Kacharigaon	1.35578623955
88	Nambor rf	11.18203178650
89	Nahoroni_gulungpung	0.92565093170
90	Chakali	2.81755055961
91	Nowjan fv Nambetoni Amguri Sonowal gaon	51.48072232060
92	Nambor_forest	30.61616945880
93	Podumoni	0.10817876028
94	Kachugaon	3.91902478162
95	Khumtaigaon	1.22837801310
96	Bogorijeng	0.42957450932
97	Dolakhoria	0.15453653683
98	Kaboru	4.74536861009
99	Bamungaon	0.49557918360
100	Sialikhati	4.04276135689
101	Dokhora_pathar	0.68195359034
102	Murfulonino.1	1.05181714899
103	Chotiona_pathar	0.00007441968
104	Murfulonino.2	0.89920973999
105	Bhagagaon	2.22946747680
106	Selengi	0.97610431848

Appendix 6 (contd...)

List of Villages Chronically Flooded in Golaghat District falling in the Dhansiri River Basin under Study

S.No.	Names of Villages	Area in sq.km
107	Golaghat_Grant	2.38976975654
108	Gosai_Satra	0.94916533431
109	Maukhowa_Grant	0.59083676666
110	Dhansiripar	0.44365419412
111	Bongaon	3.86325006312
112	Raidangiagaon	0.18850221639
113	Kacharihatgaon	3.14949446990
114	Chinatoligaon	2.13295759304
115	Golaghat_town	4.21181462991
116	Na_pamua	1.61595023207
117	Salmora_grant	0.71668794947
118	Salmora_Mohkhuti	2.98429672969
119	Dhansiripargaon	1.76483436385
120	Salmaratup	1.66673666720
121	Dhuliagaon	3.79730612198
123	Harargaon	4.87774214377
124	Kuruka	1.56416324681
125	Koibarta_no.1	2.28915154909
126	Naragaon	3.20947363738
127	Amulapattygaon	2.80582727805
128	Ahomgaon	0.93224035716
129	Tarphat	3.02437948617
130	Borphukonorkhat	4.32809852887
131	Bamborahi	0.21268919169
132	Tirualgaon	2.78089942926
133	Dolowjan	0.46460022004
134	Bengenakhowagrants	4.79818679251
135	Rupkolia	4.40164986117
136	Chakardhora	6.01401773737
137	Moinapara	1.74179854153
138	Abhoypuria_grant	1.00155676745
139	Rongajan_no.2	1.51429998016
140	Garangajan_bagan	0.79360541422
141	Balijan_no.1	0.73358299238
142	Rongajan_no.1	4.39469526035
143	Kathkotiagaon	2.30221367426

Appendix 6 (contd...)

List of Villages Chronically Flooded in Golaghat District falling in the Dhansiri River Basin under Study

S.No.	Names of Villages	Area in sq.km
144	Kathkotiagaon	0.77688810682
145	Borpotarua	2.09465300607
146	Gojalitup	3.81863008392
147	Chariakhat_grant	1.16539398834
148	Bangkhati_chock	0.64683146836
149	Rangajan_no.4	1.11121698438
150	Follongani	0.16851729370
151	Da_chamua	4.87480405864
152	Babajia_likson	3.24605297965
153	Chariakhat_bagan	0.25874404445
154	Aboijan_bagan	0.91819780908
155	Ultajan_no.1	0.07160978032
156	Naharbari_te	0.48511463520
157	Thurajan_bagan	1.02661880542
158	Kowani_pathar	4.22577973980
159	Chariakhat_te	0.54322501270
160	Potualgaon	1.35056656205
161	Chawdang	0.26277072525
162	Tapara_chuck	0.54976825783
163	No.1_Kochari	2.04332319776
164	Grant_Charipuria	0.01520435690
165	Baijan_kochonihola	0.50923166418
166	Garigaon	0.24993135576
167	Nogoragrant	0.27187655483
168	Aitonia_miri	1.23337414540
169	Oatinggrant	0.01123425465
170	Ghegoragaon	2.52163868577
171	Kalijan	0.23699677056
172	Molohanitup	1.61738645487
173	Borholla	1.38305405758
174	Tengoni_no.2	1.17034403200
175	Tengoni_no.1	1.31749409210
176	Amguri	2.22828500729
177	Herheri_no.1	1.72613258435
178	Tamuligaon_no.2	0.02991414770
179	Herheri_no.2	1.16898693458

Appendix 6 (contd...)

List of Villages Chronically Flooded in Golaghat District falling in the Dhansiri River Basin under Study

S.No.	Names of Villages	Area in sq.km
180	Tamuligaon_no.1	0.44285091267
181	Borpathar	5.05931912943
182	Abong_pathar	2.24813157559
183	Jorhotia	0.80934858738
184	Changpul	0.04368834634
185	Dapathar	0.54817346810
186	Dighali_pathar	1.98882901926
187	Chakali_pathar	2.38541938067
188	Duborani_no.1	2.64419447049
189	Duborani_no.2	0.43620319495
190	Simalu_chapori	1.44066479215
191	Dighali_pathar_matikhola	2.83289130854
192	Bhagaban_tg	0.04074448482
193	Pabhajan	1.60575954416
194	Doyang_rf	12.89836988430
195	Kachomari_forest	1.14951633737
196	Mirigaon	4.60054234252
197	Saru_pabhajan	4.22327259090
198	Bor_chapori	2.69980911474
199	Baromukhia	1.24099935680
200	Nahabari	3.14121971752
201	Borpathar	1.80478461144
202	Singimari	5.34942538859
203	Jalijori	1.37646689124
204	Hazari_gaon	0.33721190475
205	Nabeel	1.82963450249
206	Jaipur_no.2	0.00624393979
207	Jaipur_no.1	0.35087726131
208	Sonali pathar	0.02616106958
209	Lakhipur	1.34371333640
210	Ganeshpur f.f	0.98430940577
211	Narayani gulukpur	2.06933832462
212	Rangagora	2.99917302896
213	Uppor longtha	3.90435520794
214	Gela beel	1.65734353513
215	Bilgaon	0.77511569439

Appendix 6 (contd...)

List of Villages Chronically Flooded in Golaghat District falling in the Dhansiri River Basin under Study

S.No.	Names of Villages	Area in sq.km
216	Bordubi gaon	1.24400138166
217	Rengma bagan	4.65245458631
218	Bar bali	1.96625860857
219	Kharuwa	2.75538320682
220	Tengrajan no.2	2.57274413065
221	Padumani no.2	2.15143666880
222	Dhansiripar	2.63070820072
223	Paraghat no.1	0.65793303425
224	Lengtha	1.12709927964
225	Kordoiguri	2.69030447673
226	Bor pabhajan	2.62496568955
227	Saru lengtha	1.18452603020
228	Garh gaon	1.57580143538
229	Saru sewaguri	2.88184494104
230	Moran gaon	3.97641847051
231	Latajuri	2.73960844845
231	Padumani no.1	4.29204982513
234	Paraghat no.2	0.39189199900
235	Premhora gaon	1.13922233302
236	Naharani	3.81090836528
237	Tengarajan no.1	0.84088303317
238	Tengaholla no.2	2.42119563635
239	Bebejia	2.99384235594
240	Premhora no.2	3.47272383285
241	Gohain gaon	2.18935186277
242	Tengabari	2.36833064442
243	Ekorani	4.12189886521
244	Baraghorla	4.62964506680
245	Kachamari	4.52972528578
246	Tengaholla no.1	2.71935949862
247	Sarupathar	1.27037760169
248	Nagajari	4.27206607530
249	Chatiani	0.87544932551
250	Gandhkarai no.1	5.12509660824
251	Khanikar	2.65171745521
252	Panjan no.1	0.98586763497

Appendix 6 (contd...)

List of Villages Chronically Flooded in Golaghat District falling in the Dhansiri River Basin under Study

253	Panjan no.2	0.68599994757
254	Panjan	4.73303769723
255	Nalani pathar gaon	4.81838161794
256	Rengmai	3.08176810468
257	Gandhakori no.2	4.79829167310
258	Raja pukhuri no.1	5.39275278038
259	Saru pathar	4.77451516841
260	Chukia pathar	3.32423221546
261	Koiri no.2	5.54203440597
262	Koiri no.1	0.77214877659
263	Betonijan	3.43844949097
264	Betoni pathar	5.57447160742
265	Naojan gaon	2.37560023642
266	Beel pathar	3.70021881325
267	Santipur	6.76167392251
268	Santipur	1.62814100662
269	Sitovi	0.44148561424
270	Changajan	14.36236448680
271	Sungajan no.1	1.70257882225
272	Sungajan no.2	2.90475720593
273	Sungajan no.3	1.12200592382
274	Sungajan no.4	1.18820058686
275	Sungajan no.5	1.21192585644
276	Sungajan no.6	1.32814688601