

LIST OF FIGURES

Fig. no.	Title	Page no.
1	Map of Kokrajhar District, Assam	23
2.i, 2.ii	Sattlite image and Changing Morphology of Diplai Beel (circular rings) area in 3 decades	84
3	Land use/Land cover change of 2 Km buffer area of Diplai Beel	85
4	Bank line changes of Diplai Beel in 1988, 1998, 2008 and 2016	86
5	Macrophyte flora of Diplai Beel in 2014-15, 2015-16 and 2016-17	88
6	Diversity Indices representation of 2014-15	93
7	Diversity representation Indices of 2015-16	94
8	Diversity representation Indices of 2016-17	95
9	Pre Monsoon Density of <i>Eichhornia crassipes</i> (Mart.) Solms	96
10	Monsoon Density of <i>Eichhornia crassipes</i> (Mart.) Solms.	133
11	Post Monsoon Density of <i>Eichhornia crassipes</i> (Mart.) Solms.	133
12	Winter Density of <i>Eichhornia crassipes</i> (Mart.) Solms.	134
10.i.a	Pre Monsoon Density of <i>Floating</i> Macrophytes	135

10.ii.	Monsoon Density of <i>Floating</i> Macrophytes Sl.no.2 to 8	136
10.iii.	Post Monsoon Density of <i>Floating</i> Macrophytes Sl. no. 2 to 8	137
10.iv	Winter Density of <i>Floating</i> Macrophytes Sl. No. 2 to 8	138
11.i.a	Pre Monsoon Density of <i>Submerged (anchored)</i> Macrophytes Sl.no.9 to 12	139
11.ii.	Monsoon Density of <i>Submerged (anchored)</i> Macrophytes (Sl.no.9 to 12)	140
11.iii.	Post Monsoon Density of <i>Submerged (anchored)</i> Macrophytes (Sl.no.9 to 12)	141
11.iv.	Winter Density of <i>Submerged (anchored)</i> Macrophytes (Sl.No. 9 to 12)	142
12.i.a	Pre Monsoon Density of <i>Submerged (suspended)</i> Macrophytes (Sl.no.13 and 14)	143
12. ii.	Monsoon Density of <i>Submerged (suspended)</i> Macrophytes (Sl.no.13 and 14)	144
12. iii.	Post Monsoon Density of <i>Submerged (suspended)</i> Macrophytes (Sl.no.13 and 14)	144
12. iv.	Winter Density of <i>Submerged (suspended)</i> Macrophytes (Sl.no. 13 and 14)	145
13.i.a	Pre Monsoon Density of <i>Rooted Floating Shoot</i> Macrophyte (Sl.no.15 to 16)	146
13. ii.	Monsoon Density of <i>Rooted Floating Shoot</i> Macrophytes (Sl.no.15 to 16)	147

13.iii.A	Post Monsoon Density of <i>Rooted Floating Shoot</i> Macrophytes (Sl.no.15 to 16)	147
13.iv.a	Winter Density of <i>Rooted Floating Shoot</i> Macrophytes (Sl.no.15 to 16)	148
14.i.a	Pre Monsoon Density of <i>Rooted Floating Leaves</i> Macrophytes (Sl.no.17 to 19)	149
14.ii.	Monsoon Density of <i>Rooted Floating Leaves</i> Macrophytes (Sl.no.17 to 19)	150
14.iii.	Post Monsoon Density of <i>Rooted Floating Leaves</i> Macrophytes (Sl. no.17 to 19)	151
14.iv.	Winter Density of <i>Rooted Floating Leaves</i> Macrophytes (Sl.No.17 to 19)	152
15.a.i.A	Pre Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.20 to 26)	153
15.a.ii.	Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.20 to 26)	154
15.a.iii.	Post Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.20 to 26)	155
15.a.iv.	Winter Density of <i>Emergent</i> Macrophytes (Sl.No.20 to 26)	156
15.b. i.A	Pre Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.27 to 33)	157
15.b.ii.A	Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.27 to 33)	158
15.b.iii.	Post Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.27 to 33)	160

15.b.iv.A	Winter Density of <i>Emergent</i> Macrophytes (Sl.No.27 to 33)	161
15.c.i.A	Pre Monsoon Density of <i>Emergent</i> Macrophytes (Sl.No.34 to 40)	163
15.c.ii.	Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.34 to 40)	164
15.c.iii.A	Post Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.34 to 40)	165
15.c.iv.A	Winter Density of <i>Emergent</i> Macrophytes (Sl.no.34 to 40)	167
15.d.i.A	Pre Monsoon Density of Emergent Macrophytes (Sl. no.41 to 47)	168
15.d.ii.A	Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.41 to 40)	170
15.d.iii.A	Post Monsoon Density of <i>Emergent</i> Macrophytes (Sl.no.41 to 47)	171
15. d. iv.	Winter Density of <i>Emergent</i> Macrophytes (Sl.No.41 to 47)	172
16.i.	Pre monsoon Abundance of <i>Eichhornia crassipes</i> (Mart.) Solms. in Diplai Beel (Sl no.1)	173
16.ii.	Monsoon Abundance of <i>Eichhornia crassipes</i> (Mart.) Solms.in Diplai Beel (Sl no.1)	174
16.iii.	Post monsoon Abundance of <i>Eichhornia crassipes</i> (Mart.) Solms.in Diplai Beel (Sl no.1)	174
6.iv.	Winter Abundance of <i>Eichhornia crassipes</i> (Mart.) Solms.in Diplai Beel (Sl no.1)	175
17.i.A	Pre Monsoon Abundance of <i>Floating</i> Macrophytes (Sl no. 2 to 8)	176

17.ii.	Monsoon Abundance of <i>Floating</i> Macrophytes (Sl no. 2 to 8)	177
17.iii. A	Post Monsoon Abundance of <i>Floating</i> Macrophytes (Sl no. 2 to 8)	178
17.iv.	Winter Abundance of <i>Floating</i> Macrophytes (Sl no. 2 to 8)	179
18.i.	Pre Monsoon Abundance of <i>Submerged (anchored)</i> Macrophytes (Sl. No.9 to 12)	180
18.ii.	Monsoon Abundance of <i>Submerged (anchored)</i> Macrophytes (Sl. No.9 to 12)	180
18.iii. A	Post Monsoon Abundance of <i>Submerged (anchored)</i> Macrophytes (Sl. No.9 to 12)	181
18.iv.	Winter Abundance of <i>Submerged (anchored)</i> Macrophytes (Sl. No.9 to 12)	182
19.i.	Pre Monsoon Abundance of <i>Submerged (suspended)</i> Macrophytes (Sl no.13 and 14)	183
19.ii.	Monsoon Abundance of <i>Submerged (suspended)</i> Macrophytes (Sl no. 13 and 14)	183
19.iii.	Post Monsoon Abundance of <i>Submerged (suspended)</i> Macrophytes (Sl no.13 and 14)	184
19.iv.	Winter Abundance of <i>Submerged (suspended)</i> Macrophytes (Sl no. 13 and 14)	185
20.i.A	Pre Monsoon Abundance of Rooted Floating Shoot Macrophytes (Sl no.15 and 16)	185

20. ii.A	Monsoon Abundance of Rooted Floating Shoot Macrophytes (Sl no. 15 and 16)	186
20. iii.	Post Monsoon Abundance of Rooted Floating Shoot Macrophytes (Sl no.15 and 16)	187
20.iv.	Winter Abundance of Rooted Floating Shoot Macrophytes (Sl no. 15 and 16)	188
21.i.	Pre Monsoon Abundance of Rooted Floating Leaves Macrophytes (Sl.no.17, 18 and 19)	188
21.ii.	Monsoon Abundance of Rooted Floating Leaves Macrophytes (Sl.no.17, 18 and 19)	189
21.iii.	Post Monsoon Abundance of Rooted Floating Leaves Macrophytes (Sl.no.17, 18 and 19)	190
21.iv.	Winter Abundance of Rooted Floating Leaves Macrophytes (Sl.no.17, 18 and 19)	190
22. i.A	Pre Monsoon Abundance of Emergent Macrophytes (Sl. no. 20 to 26)	191
22.ii.	Monsoon Abundance of Emergent Macrophytes (Sl. no. 20 to 26)	192
22.iii.A	Post Monsoon Abundance of Emergent Macrophytes (Sl. no. 20 to 26)	193
22.iv.	Winter Abundance of Emargents Macrophytes (Sl. no. 20 to 26)	194
23.i. A	Pre Monsoon Abundance of Emargents Macrophytes (Sl. no. 27 to 33)	195

23.ii.	Monsoon Abundance of <i>Emergent</i> Macrophytes (Sl. no. 27 to 33)	196
23. iii.	Post Monsoon Abundance of <i>Emergent</i> Macrophytes (Sl. no. 27 to 33)	197
23. iv.	Winter Abundance of <i>Emergent</i> Macrophytes (Sl. no. 27 to 33)	198
24.i.A	Pre Monsoon Abundance of <i>Emergent</i> Macrophytes (Sl. no. 34 to 40)	199
24 .ii.	Monsoon Abundance of <i>Emergent</i> Macrophytes (Sl. no.34 to sl no 40)	201
24. iii.A.	Post Monsoon Abundance of <i>Emergent</i> Macrophytes (Sl. no. 34 to 40)	202
24. iv.A	Winter Abundance of <i>Emergent</i> Macrophytes (Sl. no. 34 to 40)	203
25. i.A	Pre Monsoon Abundance of <i>Emergent</i> Macrophytes (Sl. no. 41 to 47)	204
25.ii.	Monsoon Abundance of <i>Emergent</i> Macrophytes (Sl. no. 41 to 47)	205
25.iii.	Post Monsoon Abundance of <i>Emergent</i> Macrophytes (Sl. no. 41 to 47)	206
25.iv.A	Winter Abundance of <i>Emergent</i> Macrophytes (Sl. no. 41 to 47)	207
26.i.	Water Temperature (°C)	209
26.ii.	Diplai Beel Atmospheric Temperature in 2014-15, 2015-16 and 2016-17	210

26.iii.	Diplai Beel Water colour in 2014-15, 2015-16 and 2016-17	211
26.v.	Total Suspended Solids (T S S) mg/L	212
26.vi.	Total Dissolved Solid (TDS) mg/L	213
26.vii.	Tubidity (NTU)	214
26.viii.	Transparency (Secchi Disc)	215
26.ix.	pH (Potant of Hydrogen)	216
26.x.	Electrical Conductance ($\mu\text{S}/\text{cm}$)	217
26.xi.	Total alkality as CaCO_3 (mg/L)	218
26.xii.	Biological Oxygen Demand, BOD (mg/L)	219
26.xiii.	Chemical Oxygen Demand as COD (mg/L)	220
26.xiv.	Dissolved Oxygen as DO (mg/L)	221
26.xv.	Sulphate as SO_4 (mg/L)	222
26.xvi.	Nitrate as NO_3 (mg/L)	223
26.xvii.	Nitrite as NO_2 (mg/L)	224
26.xviii.	Ammonia as NH_4 (mg/L)	225
26.xix.	Chloride as Cl (mg/L)	226
26.xx.	Phosphate as PO_4 (mg/L)	227

26.xxi.	Sodium as Na (mg/L)	228
26.xxii.	Potassium as K (mg/L)	229
26.xxiii.	Calcium as Ca (mg/L)	230
26.xxiv.	Magnesium as Mg (mg/L)	231
26.xxv.	Iron as Fe (mg/L)	232
27.i.	Pb in Diplai Beel Water	233
27.ii.	Cu in Diplai Beel Water	233
27.iii.	Zn in Diplai Beel Water	234
28	IVI ascending order of macrophyte species in Pre- Monsoon, 2014-15	350
29	IVI ascending order of macrophyte species in Monsoon, 2014-15	351
30	IVI ascending order of macrophyte species in Post- Monsoon, 2014-15	352
31	IVI ascending order of macrophyte species in Winter, 2014-15	353
32	IVI ascending order of macrophyte species in Pre Monsoon, 2015-16	354
33	IVI ascending order of macrophyte species in Monsoon, 2015-16	355

34	IVI ascending order of macrophyte species in Post Monsoon, 2015-16	356
35	IVI ascending order of macrophyte species in Winter, 2015-16	357
36	IVI ascending order of macrophyte species in Pre-Monsoon,2016-17	358
37	IVI ascending order of macrophyte species in Monsoon, 2016-17	359
38	IVI ascending order of macrophyte species in Post-Monsoon, 2016-17	360
39	IVI ascending order of macrophyte species in Winter, 2016-17	361