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Appendices

Appendix 1 Field sampling protocols

The following protocols were developed for the lagoon sampling program and provide a basis for further efforts.

General information

- 1** A sampling grid at 1' intervals is placed over each lagoon and each sampling site given a discrete code and coordinates (see 1:50 000 topographical map) and a table of codes and coordinates prepared. Each sampling site can be identified from these data.
- 2** Data sheets are completed for all samples/sites and descriptive information (site code and coordinates, date and name of recorder) recorded at the top of each sheet. All samples should be labelled with the site code and, if applicable, replicate number and species name.
- 3** The wetland vegetation will be sampled by one team with two teams attending to the aquatic sampling. The latter will work in unison but attend to different samples. Individual sampling protocols are attached. Sampling locations for each parameter are shown on separate maps and in a site/parameter matrix.
- 4** Data recording is to be entered onto spread sheets the evening of collection and a disk back-up made.
- 5** Names and model numbers of all equipment must be noted in the sampling record/diary (see below) along with any information on accuracy or range or limits of operation.
- 6** A daily record of all sampling and sample data will be compiled. Information in this record will include sites/transects completed, samples collected and processed, samples despatched to Legon for further analysis, and results received from Legon analysts. A mastercopy of the sampling map and matrix will be maintained separately from the daily working copies. Observations and variations in sampling strategy or procedures should be recorded along with the reasons.

Groundwater and domestic water supply sampling protocols

- 1** Refer to the topographical map and site/sampling matrix for sampling locations and take a record of these into the field.
- 2** At each sampling site locate the nearest village well, record location details and GPS reading. Note the model name and number of the GPS.
- 3** Record the depth of water in the well from ground level.
- 4** Collect a 250 ml water sample in a poly-bottle and take a conductivity sample back at the field base. Do not leave the sample in direct sunlight. Note the name and model number of the conductivity meter.

Wetland vegetation transect protocols

- 1** Refer to the topographical map and site/sampling matrix for sampling locations and take a record of these into the field.
- 2** Record GPS at the waterline and note the model name and number of the GPS.

- 3 Position transect perpendicular to the shoreline and commence sampling from the waterline in both directions. Record the compass bearing taken.
- 4 Record the species hit by a dropped pin at each one metre (1 m) interval. The sampling interval could be varied in relation to the length of the transect. Stop sampling at commencement of the terrestrial vegetation.
- 5 At every five metre (5 m) interval place a one square metre (1 m²) quadrat and record all plant species present as relative abundance on a descending scale for most dominant 5–6 species, % ground cover scaled 1–6, and proportional phenological state scaled 1–6. A key to the proportional scales is given on each data sheet and is repeated below.

Scale	1	2	3	4	5	6
Percentage	1%	2–25%	26–50%	51–75%	76–99%	100%

- 6 Within each major species association along the transect collect all the above-ground biomass of each species from five (5) replicate 0.25 m² randomly placed quadrats. Place this material in labelled paper envelopes, sun dry at field base and return to Legon for oven drying 65°C and recording of dry weight.
- 7 Retain the dried plant material for possible nutrient analysis.
- 8 The areal extent of large stands of vegetation (eg *Typha*) should be determined by separate GPS mapping of the perimeter.
- 9 Collect and press two specimens of each plant species located in the survey of each lagoon. Record collection and locations information (GPS reading and a general description of the location) for these specimens.

Aquatic vegetation sampling protocols – abundance, phenology and biomass (g m⁻²)

- 1 Refer to the topographic map and site/sampling matrix for sampling locations and take a record of these into the field.
- 2 Take GPS reading at the site. Note the model and number of the GPS.
- 3 Position five (5) one metre square (1 m²) quadrats at the site – one centrally and the others approximately ten metres (10 m) away along the four cardinal compass bearings.
- 4 Note the species present as relative abundance on a descending scale for the most dominant 5–6 species, % ground cover scaled 1–6, and proportional phenological state scaled 1–6. A key to the proportional scales is given on each data sheet and is given below.

Scale	1	2	3	4	5	6
Percentage	1%	2–25%	26–50%	51–75%	76–99%	100%

- 5 Collect all above-ground macrophytic material in each quadrat, place into labelled bags and return to field base for sun drying and despatch to Legon for oven drying at 65°C and weighing. Separate the species present for weighing.

- 6 Retain the dried plant material for future nutrient analysis.

Aquatic vegetation – microphytic/algal mats biomass

- 1 Refer to the topographic map and site/sampling matrix for sampling locations and take a record of these into the field.
- 2 Take GPS reading at the site. Note the model and number of the GPS.
- 3 Position five (5) 10 by 10 cm (0.01 m²) quadrats at the site – one centrally and the others approximately ten metres (10 m) away along the four cardinal compass bearings.
- 4 Carefully collect the layer of algal material overlaying the substrate of the lagoon and place into labelled plastic bags for sun drying at the field base and oven drying at 65°C at Legon.
- 5 Collect a separate sample of the algal mat and place in a tube and cover with methanol for taxonomic identification.

Aquatic vegetation – microphytes/phytoplankton

- 1 Refer to the topographical map and site/sampling matrix for sampling locations and take a record of these into the field.
- 2 Take GPS reading at the site. Note the model and number of the GPS.
- 3 At each site filter one litre (1L) of water, collected from approximately 5–10 cm depth, through a Whatman GFC paper. Place the filtrate and paper in a labelled tube (or insert a paper label with pencil writing into the tube), cover with methanol, place in dark and in ice.
- 4 Return samples to laboratory (or use HACH kit) for spectrophotometric readings for chlorophyll (a,b, c₁ and c₂) estimations. Record the volume of ethanol in the tube and/or make up to a standard volume.
- 5 Filter a further one litre (1 L) of water, collected from 5–10 cm depth, through a Whatman GFC paper. Place the filtrate in Lugol's solution.
- 6 Return samples to laboratory for species identification and density counting using a microscope and haemocytometer.

Water quality – physico-chemistry

- 1 Refer to the topographical map and site/sampling matrix for sampling locations and take a record of these into the field.
- 2 Take GPS reading at the site. Note the model and number of the GPS.
- 3 At each side record water depth, pH, conductivity/salinity, total dissolved solids, dissolved oxygen, temperature at 5–10 cm depth. Record name and model of meter used for each record.
- 4 Collect water samples for nutrient (ortho-phosphate, total phosphorus, nitrate and Kjeldahl nitrogen), major cations (sodium, potassium, magnesium and calcium) and anions (bicarbonate, sulphate and chloride), and selected trace metals. Place in labelled poly-bottles and in the dark in ice. Return to Legon for analysis after appropriate preservation.

Appendix 2 Water chemistry of Keta and Songor lagoons

Keta Lagoon																									
Site	Distance from site	Date	Time	Temp (°C)	DO (mgL ⁻¹)	DO (% sat)	TDS (mgL ⁻¹)	Cond (mS)	pH	Salinity (ppt)	Depth (cm)	Secchi depth (cm)	Zn (mgL ⁻¹)	Pb (mgL ⁻¹)	Cu (mgL ⁻¹)	SS (mgL ⁻¹)	Na (mgL ⁻¹)	K (mgL ⁻¹)	Ca (mgL ⁻¹)	Mg (mgL ⁻¹)	Cl (mgL ⁻¹)	SO ₄ (mgL ⁻¹)	PO ₄ (mgL ⁻¹)	CO ₄ (mgL ⁻¹)	
KC17	<300m	18/11	13.38	35.2	3.4	48	24000	36.9	8.46	23.5	23	14	0.09	<0.03	<0.03	274	6900	268.5	424.8	1956	12710	1560	0.06	178	
KD17	<100m	18/11	13.00	32.4	2.3	31	16200	29.1	8.21	17.9	52	30													
KD18	<200m	18/11	12.25	33.1	2.6	35	16100	28.9	8.25	17.9	45	17													
KD19	<300m	16/11	9.50	29.4	3.2	41	E20	52.2	8.2	34.6	35	30	0.04	<0.03	<0.03	282.5	6000	223.5	387.9	854	10540	1080	0.03	156	
KD20	<300m	16/11	10.45	33.3	3.8	53	E20	128.8	8.2	E20	22	CTB													
KD21	<300m	16/11	12.45	34.5	2.7	39	E20	164.3	8	E20	15	8	0.04	<0.03	<0.03	214	2125	885	1987.9	2888	41300	2460	0.03	108	
KD22	<600m	18/11	10.00	30.7	3.2	42	56700	104.8	6.71	77.6	12	CTB													
KE15	<300m	18/11	16.10	32.4	2.7	37	19700	35.1	8.31	22.2	37	30	0.04	<0.03	<0.03	71	6900	249	396.8	1052	11960	2000	0.03	144	
KE16	<100m	18/11	15.30	32	2.4	33	16900	30.2	8.35	18.8	58	18													
KE17	<200m	18/11	14.56	31.9	2.3	32	16900	30.3	8.32	18.9	43	18	0.06	<0.03	<0.03	166	6150	226.5	380.8	902	10520	1280	0.03	148	
KE18	<400	23/11	11.05	36.1	0.9	13	15700	28.1	8.11	17.4	5	CTB													
KF13	<300	22/11	11.20	31	1.4	19	E20	36.6	8.02	23	35	22					7750	317.5	533.1		13700	2070	0.07	104	
KF14	<100	22/11	12.00	30.7	1.8	24	17400	31.1	8.01	19.4	65	40													
KF15	<300m	18/11	17.00	31	2.5	34	16800	30	8.32	18.7	65	25	0.04	<0.03	<0.03	93	6400	216	347.1	834	10200	1520	0.03	146	
KF18	<300	22/11	14.24	32.1	1.7	22	15000	26.8	8.2	16.5	40	20													
KF19	<100	23/11	10.05	29.9	1.2	16	14900	26.6	8.34	16.3	74	CTB													
KF20	<100	23/11	9.23	29.8	1.1	13	14600	26	8.64	15.9	50	CTB													
KG13	<100	22/11	10.45	30.2	1.4	18	17300	31	8.15	19.4	58	22													
KG14	<100	22/11	12.19	31.8	1.7	24	17600	31.6	7.95	19.7	50	22					8688	225	481		11880	1745	0.1	157	
KG15	<100	22/11	12.37	31	2	26	16000	28.7	7.45	17.8	63	49													
KG16	<100	22/11	12.58	30.9	1.8	23	15300	27.4	8.15	16.9	80	43													
KG17	<100	19/11	13.35	30.9	1.7	23	14200	25.3	8.6	15.5	60	45	0.04	<0.03	<0.03	79	4425	192	274.1	709	8200	1240	0.03	3080	
KG18	<100	19/11	14.39	31.1	2.2	29	13900	24.8	7.28	15.1	80	65	0.04	<0.03	<0.03	125	4225	187.5	254.9	665	815	1260	0.03	146	

Site	Distance from site	Date	Time	Temp (°C)	DO (mgL ⁻¹)	DO (% sat)	TDS (mgL ⁻¹)	Cond (mS)	pH	Salinity (ppt)	Depth (cm)	Secchi depth (cm)	Zn (mgL ⁻¹)	Pb (mgL ⁻¹)	Cu (mgL ⁻¹)	SS (mgL ⁻¹)	Na (mgL ⁻¹)	K (mgL ⁻¹)	Ca (mgL ⁻¹)	Mg (mgL ⁻¹)	Cl (mgL ⁻¹)	SO4 (mgL ⁻¹)	PO4 (mgL ⁻¹)	CO4 (mgL ⁻¹)	
KP16	<300	20/11	12.30	31	1.4	19	13500	24	7.3	14.6	51	47													
KQ10.5	<200	20/11	9.23	29.7	0.5	6	3640	6.81	7.51	3.7	110	CTB													
KQ11	<200	20/11	9.47	29.5	0.6	8	4100	7.61	7.44	4.2	57	CTB													
KQ12	<100	20/11	10.14	30.4	0.2	2	5370	9.81	7.76	5.5	95	CTB													
KQ14	<300	23/11	14.56	31.8	1.4	20	17400	31.2	7.66	19.5	52	CTB													

Songor Lagoon												
Site	Distance from site	Date	Time	Temp (°C)	DO (mgL ⁻¹)	DO (% sat)	TDS (mgL ⁻¹)	Cond (mS)	pH	Salinity (ppt)	Depth (cm)	Secchi depth (cm)
SB6	<100	25/11	9.50	29.1	1.4	17	E20	64.5	7.04	43.9	30	18
SB7	<100	25/11	10.53	31	1.5	20	E20	64.9	7.02	44.2	40	16
SB13	N 5 51 09 E 0 34 08*	11-Dec	14.50	31.9	11	150	14700	26.4	8.6	16.2	40	CTB
SC3	<100	8-Dec	11.13	29.3	8	102	70800	83.9	7.8	59.7	60	17
SC4	<100	8-Dec	11.56	29.6	17.9	224	64000	85.2	7.2	60.6	65	18
SC5	<100	8-Dec	12.55	30.6	12.3	159	62000	84.9	7.85	60.7	55	19
SC6	<100	8-Dec	13.42	30.8	7.7	102	68000	81.7	7.52	58.1	49	16
SC8	<200	8-Dec	17.14	31	13.5	180	51200	65	6.83	44.3	40	25
SC9	<100	25/11	12.38	31.1	2.1	27	E20	64.2	6.98	43.9	36	16
SC10	<100	25/11	14.26	31	N/A	N/A	E20	71	6.98	49	25	10
SC12.5	N 5 50 00 E 0 33 22.9*	11-Dec	13.51	33.60	7.70	104	E20	69.70	8.29	48.10	5	CTB
SD2	<300	8-Dec	9.46	28.2	7.9	100	4560	8.41	7.64	4.7	57	20
SD3	<100	9-Dec	8.53	28.3	4.3	55	64800	86	5.57	61.2	60	24

* actual coordinates of the sampling location

Site	Distance from site	Date	Time	Temp (°C)	DO (mgL ⁻¹)	DO (% sat)	TDS (mgL ⁻¹)	Cond (mS)	pH	Salinity (ppt)	Depth (cm)	Secchi depth (cm)
SD4	<100	9-Dec	9.22	28.4	4.1	53	66800	85.3	5.27	60.4	53	21
SD5	<100	9-Dec	9.47	29.1	4.7	60	56000	85.1	5.33	60.4	60	19
SD6	<100	9-Dec	10.10	28.9	4.6	60	58800	86.3	5.14	61.4	45	20
SD7	<100	9-Dec	11.56	31.8	6.5	90	50000	68.1	5.36	46.8	25	17
SD8	<100	9-Dec	15.56	30.5	5.9	76	50800	67.6	5.52	46.4	50	20
SD9	<200	9-Dec	15.12	31	7.3	100	40400	63.2	5.55	43	40	19
SD10	<100	25/11	15.32	31.4	N/A	N/A	E20	59.8	7.2	40.2	30	16
SD11	N 5 49 14.3 E 0 31 51.7*	11-Dec	13.10	34.00	7.60	106	E20	68.10	8.32	46.90	15	CTB
SE6	N 5 48 14 E 0 26 53*	9-Dec	10.38	29.5	5.4	70	e20	86	5.19	61.2	48	20
SE7	<200	9-Dec	12.51	30.7	6.7	89	47200	66.7	5.11	45.7	40	19
SE8	<100	9-Dec	13.32	31.1	7.2	98	49200	66.6	5.59	45.6	35	18
SE9	<100	9-Dec	14.33	31.5	11.5	154	41200	63.5	5.6	43.1	30	CTB
SE10	<100	11-Dec	12.33	31.90	9.90	132	E20	61.70	7.88	41.70	35	CTB
SF9	N 5 47 14.3 E 0 30 00*	12-Dec	0.39	29.6	9.6	124	E20	70.9	7.73	49	5	CTB
SF10	<100	11-Dec	9.36	28.70	9.60	124	E20	60.10	7.07	40.60	25	CTB
SF11	N 5 47 07.8 E 0 31 58.4*	11-Dec	10.14	30.6	9.8	128	E20	59.1	7.53	39.5	10	CTB
SF12	N 5 47 06.1 E 0 33 05.9*	11-Dec	10.44	32	7.6	107	E20	54.4	7.85	36.3	7	CTB

* actual coordinates of the sampling location

Appendix 3 Chlorophyll concentrations ($\mu\text{g L}^{-1}$) in water collected from Keta and Songor lagoons

Keta sites	Chloro a	Chloro b	Chloro c	Total
KC17	18	12	8	38
KD17	9	8	10	27
KD18	7	–	–	7
KD19	34	20	10	64
KD20	22	17	19	58
KD21	–	–	–	–
KE15	38	27	80	145
KE16	22	5	–	27
KE17	37	25	7	69
KE18	9	6	11	26
KF13	7	–	2	9
KF14	9	6	–	15
KF15	19	7	12	38
KF18	11	4	4	19
KF19	10	9	5	24
KF20	5	5	3	13
KG13	–	3	5	8
KG14	–	–	–	–
KG15	2	12	4	18
KG16	–	–	–	–
KG17	16	11	–	27
KG18	15	15	1	31
KG19	10	7	–	17
KG20	10	4	–	14
KG21	23	25	5	53
KH12	5	5	3	13
KH13	5	5	3	13
KH14	4	2	3	9
KH15	3	7	–	10
KH16	13	6	–	19
KH17	–	–	–	–
KH18	18	14	–	32
KH19	15	9	–	24
KH20	2	5	25	32
KI14	–	4	–	4
KI16	12	8	–	20
KI19	16	10	–	26
KJ13	–	–	–	–
KJ14	8	–	1	9
KJ15	1	5	–	6
KJ16	25	25	1	51
KJ17	8	10	–	18
KJ18	19	16	4	39
KJ19	6	3	6	15
KK12	2	2	3	7
KK13	–	–	–	–
KK14	–	–	–	–
KK15	–	–	–	–
KK16	6	7	–	13
KK17	3	4	2	9

Keta sites	Chloro a	Chloro b	Chloro c	Total
KK18	9	6	–	15
KL13	9	13	19	41
KL15	17	6	–	23
KL16	11	10	–	21
KL17	–	6	–	6
KL18	–	4	6	10
KM12	3	3	1	7
KM16	7	2	–	9
KM17	3	1	–	4
KN11	2	2	–	4
KN15	1	1	–	2
KN16	3	7	–	10
KO13	3	3	–	6
KO14	–	17	–	17
KO16	–	24	–	24
KO17	–	17	–	17
KP13	39	–	–	39
KP15	1	4	–	5
KP16	2	6	–	8
KQ10	2	2	–	4
KQ11	2	7	–	9
KQ12	11	3	-	14
KQ14	14	8	6	28
KR09	8	41	–	49
KR10	8	–	–	8
Songor sites	Chloro a	Chloro b	Chloro c	Total
SC3	9	13	4	26
SC4	6	7	–	13
SC5	31	22	–	53
SC6	29	36	21	86
SC8	16	2	–	18
SD2	11	15	–	26
SD3	3	7	–	10
SD4	9	20	6	35
SD5	1	–	–	1
SD6	5	6	8	19
SD7	10	5	–	15
SD8	21	1	–	22
SD9	11	15	12	38
SD11	–	–	–	–
SE6	–	12	5	17
SE7	2	9	2	13
SE8	11	2	1	14
SE9	7	6	–	13
SE10	2	3	–	5
SC12	12	5	–	17
SB13	15	18	–	33
SF9	26	17	8	51
SF10	6	1	11	18
SF11	3	7	4	14
SF12	9	20	11	40

Appendix 4 Diversity indices for macroinvertebrate fauna in Keta and Songor lagoons

Keta site	Total species	Total indices	Richness	Shannon	Evenness	Simpson
KP15	2	4102	0.12	0.681	0.982	0.512
KH20	2	633	0.155	0.503	0.726	0.677
KI15	2	420	0.166	0.668	0.964	0.525
KJ18	2	322	0.173	0.672	0.969	0.521
KJ19	2	296	0.176	0.573	0.827	0.615
KF13	3	10 791	0.215	0.705	0.642	0.593
KD21	3	3596	0.244	0.843	0.767	0.479
KO17	3	3244	0.247	0.819	0.746	0.489
KH17	3	2634	0.254	0.733	0.667	0.596
KK12	3	2291	0.259	0.401	0.365	0.808
KF14	3	2266	0.259	0.941	0.857	0.441
KG18	3	2097	0.261	0.837	0.762	0.499
KK17	3	603	0.312	0.866	0.788	0.497
KP13	3	542	0.318	0.794	0.723	0.553
KE15	3	532	0.319	0.802	0.73	0.547
KH12	3	459	0.326	1.02	0.929	0.382
KG13	3	373	0.338	0.964	0.878	0.43
KQ14	4	6061	0.344	0.735	0.53	0.644
KK11	3	231	0.367	1.1	1	0.333
KG16	4	2719	0.379	1.03	0.739	0.407
KJ16	4	2042	0.394	1.09	0.783	0.399
KI18	4	1710	0.403	1.22	0.883	0.312
KH13	4	1612	0.406	1.11	0.801	0.384
KI15	5	17 908	0.408	0.335	0.208	0.868
KK13	5	15 230	0.415	0.452	0.281	0.809
KK15	4	1189	0.424	0.945	0.682	0.511
KP14	4	1154	0.425	0.911	0.657	0.535
KL16	4	1047	0.431	1.28	0.924	0.292
KE17	4	904	0.441	1.22	0.881	0.326
KD20	5	8343	0.443	1.19	0.741	0.387
KJ15	5	7612	0.448	1.15	0.712	0.421
KP15	4	735	0.455	1.13	0.813	0.395
KN17	4	699	0.458	1.29	0.928	0.3
KK16	4	664	0.462	1.29	0.933	0.295
KO16	5	5184	0.468	1.11	0.687	0.424
KI16	5	3950	0.483	1.3	0.809	0.345
KL17	5	3873	0.484	0.917	0.57	0.502
KN15	5	3642	0.488	1.3	0.809	0.338
KO13	6	25 854	0.492	0.458	0.255	0.772
KD22	5	2659	0.507	1.27	0.788	0.347
KJ14	6	16 387	0.515	1.36	0.76	0.318
KC17	5	2240	0.519	1.36	0.845	0.305
KI17	6	14 484	0.522	0.898	0.501	0.532
KG14	5	1980	0.527	1.22	0.756	0.389
KM17	6	12 257	0.531	0.999	0.557	0.492
KL13	6	10 953	0.538	1.23	0.686	0.415
KH15	5	1567	0.544	1.36	0.842	0.301
KN11	6	7602	0.56	0.556	0.31	0.772
KK18	6	6449	0.57	1.46	0.816	0.277

Keta site	Total species	Total indices	Richness	Shannon	Evenness	Simpson
KG19	5	1097	0.571	1.45	0.902	0.277
KF18	5	1077	0.573	1.52	0.945	0.231
KM12	6	5388	0.582	1.37	0.765	0.287
KH18	5	936	0.585	1.35	0.839	0.305
KD19	6	3449	0.614	0.966	0.539	0.568
KF15	5	604	0.625	1.48	0.921	0.258
KE18	6	2327	0.645	1.48	0.828	0.279
KI19	7	9393	0.656	1.6	0.82	0.254
KM16	7	8836	0.66	1.16	0.596	0.469
KF19	7	7796	0.67	1.48	0.763	0.287
KG15	7	7648	0.671	1.64	0.843	0.229
KF20	6	1699	0.672	1.51	0.843	0.268
KD18	6	1664	0.674	1.67	0.932	0.207
KH19	8	20 347	0.706	1.45	0.699	0.276
KG17	7	3476	0.736	1.06	0.546	0.531
KJ17	7	3267	0.742	1.61	0.829	0.251
KH14	7	2594	0.763	1.3	0.668	0.387
KL15	7	2446	0.769	1.51	0.777	0.291
KK14	9	27 165	0.784	1.05	0.478	0.507
KO14	9	23 714	0.794	1.68	0.764	0.241
KL18	7	1904	0.795	1.67	0.86	0.223
KP16	8	5302	0.816	1.64	0.787	0.246
KN16	8	2792	0.882	1.76	0.848	0.218
KI14	9	2868	1	1.96	0.89	0.165
KE16	10	7537	1.01	1.59	0.692	0.314
KD17	10	5057	1.06	1.73	0.75	0.263
Songor site	Total species	Total indices	Richness	Shannon	Evenness	Simpson
SE7	2	2189	0.13	0.152	0.22	0.932
SE6	2	1026	0.144	0.693	0.999	0.501
SD9	2	831	0.149	0.495	0.714	0.685
SC12	2	622	0.155	0.649	0.936	0.544
SD3	2	347	0.171	0.658	0.95	0.534
SD4	2	240	0.182	0.627	0.905	0.564
SC6	2	205	0.188	0.662	0.955	0.531
SD2	2	205	0.188	0.662	0.955	0.531
SC4	2	154	0.199	0.693	1	0.5
SE8	3	3974	0.241	0.658	0.599	0.633
SD7	3	3797	0.243	0.898	0.817	0.442
SD11	3	2454	0.256	0.478	0.435	0.753
SD6	3	2088	0.262	0.314	0.286	0.861
SC9	3	1454	0.275	1.08	0.987	0.342
SB13	3	541	0.318	1	0.912	0.389
SF10	3	449	0.327	1.02	0.928	0.383
SC10	3	373	0.338	0.964	0.878	0.43
SB6	4	3479	0.368	1.06	0.768	0.399
SD8	4	2587	0.382	0.498	0.359	0.776
SF9	4	1684	0.404	1.13	0.814	0.365
SC8	5	2354	0.515	0.634	0.394	0.724
SE10	5	2229	0.519	1.52	0.945	0.239

Songor site	Total species	Total indices	Richness	Shannon	Evenness	Simpson
SE9	5	807	0.598	1.46	0.908	0.264
SB7	6	1425	0.689	1.33	0.74	0.367
SF11	7	4266	0.718	1.46	0.749	0.319

Appendix 5 Macro-zoobenthos collected from Keta and Songor lagoons

Site	Genera	Numbers per core			Numbers per metre square		
		Lower	Mean	Upper	Lower	Mean	Upper
KC17	Melanoides	0	0.15	0.69	0	77	352
KC17	Nereis	0	0.15	0.69	0	77	352
KC17	Notomastus	0	0.64	2.86	0	327	1459
KC17	Tympanotonos	0	0.15	0.69	0	77	352
KC17	Urothoe	0	0.74	4.35	0	378	2219
KD14	Corbula	0	0.15	0.69	0	77	352
KD14	Melanoides	0	0.15	9.32	0	77	4755
KD14	Oligochaete	0	0.86	0.69	0	439	352
KD14	Tivela	0	0.15	0.69	0	77	352
KD14	Tympanotonos	0	0.52	3.81	0	265	1944
KD17	Boccardiella	0	0.25	1.29	0	128	658
KD17	Capitellid	0	0.15	0.69	0	77	352
KD17	Dipsio	0	1.61	6.82	0	821	3480
KD17	Eunice	0	1.35	6.19	0	689	3158
KD17	Glycera	0	0.32	1.85	0	163	944
KD17	Hydrobia	0	0.25	1.29	0	128	658
KD17	Nereis	0	0.3	1.38	0	153	704
KD17	Notomastus	0	1.49	30.16	0	760	15 388
KD17	Tivela	0	0.43	1.7	0	219	867
KD17	Tympanotonos	0	0.84	8.97	0	429	4577
KD17	Urothoe	0.68	4.53	17.18	347	2311	8765
KD18	Boccardiella	0	0.89	3.13	0	454	1597
KD18	Capitellid	0	0.25	1.29	0	128	658
KD18	Corbula	0	0.55	4.26	0	281	2173
KD18	Eunice	0	0.25	1.29	0	128	658
KD18	Nereis	0	0.89	4.64	0	454	2367
KD18	Urothoe	0	0.43	1.7	0	219	867
KD19	Boccardiella	0	0.4	1.98	0	204	1010
KD19	Eunice	0	0.48	3.35	0	245	1709
KD19	Nereis	0	0.38	2.37	0	194	1209
KD19	Notomastus	0	0.15	0.69	0	77	352
KD19	Tivela	1.13	5.03	16.07	577	2566	8199
KD19	Urothoe	0	0.32	1.85	0	163	944
KD20	Boccardiella	0	0.89	3.13	0	454	1597
KD20	Hydrobia	0.27	2.95	11.24	138	1505	5735
KD20	Melanoides	0	0.15	0.69	0	77	352
KD20	Notomastus	0	0.15	0.69	0	77	352
KD20	Tivela	0	0.15	0.69	0	77	352
KD20	Tympanotonos	0	0.64	1.99	0	327	1015
KD20	Urothoe	0	0.15	0.69	0	77	352
KD21	Boccardiella	0.41	4.24	18.54	209	2163	9459
KD21	Nereis	0	2.38	11.82	0	1214	6031
KD21	Urothoe	0	0.43	2.87	0	219	1464
KD22	Boccardiella	0	0.15	0.69	0	77	352
KD22	Dipsio	0	0.15	0.69	0	77	352
KD22	Eunice	0	0.32	1.11	0	163	566
KD22	Nereis	0.55	2.65	7.58	281	1352	3867
KD22	Oligochaete	0	0.64	5.53	0	327	2821

Site	Genera	Numbers per core			Numbers per metre square		
		Lower	Mean	Upper	Lower	Mean	Upper
KD22	Tivela	0	0.25	1.29	0	128	658
KD22	Urothoe	0	1.35	5.41	0	689	2760
KE15	Boccardiella	0	0.7	3.48	0	357	1776
KE15	Eunice	0	0.74	4.35	0	378	2219
KE15	Glycera	0	0.15	0.69	0	77	352
KE15	Melanoides	0	0.15	0.69	0	77	352
KE15	Nereis	0	1.16	6.36	0	592	3245
KE15	Oligochaete	0	0.32	1.85	0	163	944
KE15	Tivela	0	0.15	0.69	0	77	352
KE15	Urothoe	0.87	3.65	10.57	444	1862	5393
KE16	Boccardiella	0	0.84	3.38	0	429	1724
KE16	Eunice	0	0.89	5.04	0	454	2571
KE16	Melanoides	0	0.15	0.69	0	77	352
KE16	Nereis	0	2.46	15.38	0	1255	7847
KE16	Notomastus	0	1.09	6.45	0	556	3291
KE16	Oligochaete	0	0.43	2.87	0	219	1464
KE16	Tivela	0	0.25	1.29	0	128	658
KE16	Tympanotonos	0	0.15	0.69	0	77	352
KE16	Urothoe	4.8	7.67	11.96	2449	3913	6102
KE17	Corbula	0	0.25	1.29	0	128	658
KE17	Notomastus	0	0.67	5.94	0	342	3031
KE17	Tivela	0	0.15	0.69	0	77	352
KE17	Urothoe	0	0.7	6.34	0	357	3235
KE18	Boccardiella	0	0.58	2.39	0	296	1219
KE18	Eunice	0	0.52	2.27	0	265	1158
KE18	Nereis	0	1.07	3.69	0	546	1883
KE18	Tivela	0.19	1.99	6.51	97	1015	3321
KE18	Tympanotonos	0	0.25	1.29	0	128	658
KE18	Urothoe	0	0.15	0.69	0	77	352
KF13	Boccardiella	0	1.35	5.5	0	689	2806
KF13	Dipsio	0	0.95	5.21	0	485	2658
KF13	Nereis	1.26	4.39	11.59	643	2240	5913
KF13	Tivela	0	1.12	7.2	0	571	3673
KF13	Tympanotonos	0	15.64	2.68	0	7980	1367
KF14	Boccardiella	0	0.15	0.69	0	77	352
KF14	Dipsio	0	0.15	0.69	0	77	352
KF14	Nereis	0	0.64	3.35	0	327	1709
KF14	Tivela	0.16	2.63	10.35	82	1342	5281
KF14	Urothoe	0	1.17	3.82	0	597	1949
KF15	Boccardiella	0	0.48	3.35	0	245	1709
KF15	Eunice	0	0.15	0.69	0	77	352
KF15	Nereis	0	0	0	0	0	0
KF15	Notomastus	0	0.25	1.29	0	128	658
KF15	Tympanotonos	0	0.15	0.69	0	77	352
KF15	Urothoe	0	0.15	0.69	0	77	352
KF18	Boccardiella	0	0.58	2.82	0	296	1439
KF18	Capitellid	0	0.32	1.85	0	163	944
KF18	Nereis	0	0.58	2.39	0	296	1219
KF18	Tivela	0	0.15	0.69	0	77	352
KF18	Tympanotonos	0	0.48	3.35	0	245	1709

		Numbers per core				Numbers per metre square		
KF19	Dipsio	0	0.52	3.81		0	265	1944
KF19	Glycera	0	0.25	1.29		0	128	658
KF19	Melanoides	0	0.15	0.69		0	77	352
KF19	Nereis	0.92	3.16	7.96		469	1612	4061
KF19	Tivela	0	3.74	6.41		0	1908	3270
KF19	Tympanotonos	2.16	2.78	11.07		1102	1418	5648
KF19	Urothoe	0	0.48	3.35		0	245	1709
KF20	Boccardiella	0	0.32	1.11		0	163	566
KF20	Corbula	0	0.32	1.11		0	163	566
KF20	Melanoides	0	0.25	1.29		0	128	658
KF20	Nereis	0	0.97	3.83		0	495	1954
KF20	Neritina	0	0.15	0.69		0	77	352
KF20	Tympanotonos	0	1.32	5.4		0	673	2755
KG13	Corbula	0	0.15	0.69		0	77	352
KG13	Tivela	0	0.15	0.69		0	77	352
KG13	Tympanotonos	0	0.43	1.7		0	219	867
KG14	Boccardiella	0	0.32	1.85		0	163	944
KG14	Corbula	0	0.58	2.28		0	296	1163
KG14	Eunice	0	0.15	0.69		0	77	352
KG14	Tivela	1.11	2.25	3.98		566	1148	2031
KG14	Tympanotonos	0	0.58	3.56		0	296	1816
KG15	Boccardiella	0	1.27	8.01		0	648	4087
KG15	Capitellid	0	0.78	2.54		0	398	1296
KG15	Corbula	0.3	4.97	26.3		153	2536	13 418
KG15	Melanoides	0	3.75	29.1		0	1913	14 847
KG15	Nereis	0	0.58	2.82		0	296	1439
KG15	Tivela	0	0.48	3.35		0	245	1709
KG15	Tympanotonos	0	3.16	20.28		0	1612	10 347
KG16	Nereis	0	0.3	1.38		0	153	704
KG16	Tivela	0.38	2.39	7.33		194	1219	3740
KG16	Tympanotonos	0	0.25	1.29		0	128	658
KG16	Urothoe	0	2.39	0.69		0	1219	352
KG17	Corbula	3.44	0.38	2.37		1755	194	1209
KG17	Melanoides	0	0.7	6.34		0	357	3235
KG17	Nereis	0	0.3	1.38		0	153	704
KG17	Neritina	0	0.15	0.69		0	77	352
KG17	Notomastus	0	0.25	1.29		0	128	658
KG17	Tivela	0	4.88	6.78		0	2490	3459
KG17	Tympanotonos	0	0.15	0.69		0	77	352
KG18	Corbula	0	1.14	4.27		0	582	2179
KG18	Melanoides	0	0.32	1.11		0	163	566
KG18	Tympanotonos	0	2.65	14.85		0	1352	7577
KG19	Boccardiella	0	0.93	3.08		0	474	1571
KG19	Corbula	1.88	1.99	9.69		959	1015	4944
KG19	Nereis	0	0.86	4.57		0	439	2332
KG19	Neritina	0	0.25	1.29		0	128	658
KG19	Tivela	0	5.19	12.31		0	2648	6281
KG19	Tympanotonos	1.31	3.42	7.17		668	1745	3658
KH12	Boccardiella	0	0.32	1.85		0	163	944
KH12	Melanoides	0	0.43	1.7		0	219	867
KH12	Tympanotonos	0	0.15	0.69		0	77	352
KH13	Boccardiella	0	0.9	4.13		0	459	2107

		Numbers per core				Numbers per metre square		
KH13	Melanoides	0	0.15	0.69		0	77	352
KH13	Tivela	0	1.68	14.82		0	857	7561
KH13	Tympanotonos	0	0.43	1.7		0	219	867
KH14	Boccardiella	4.02	2.42	10		2051	1235	5102
KH14	Corbula	0	9.37	20.88		0	4781	10 653
KH14	Nereis	0.28	2.67	9.16		143	1362	4673
KH14	Tivela	0	1.64	6.04		0	837	3082
KH14	Tympanotonos	0	0.25	1.29		0	128	658
KH15	Boccardiella	0	0.95	5.21		0	485	2658
KH15	Capitellid	0	0.25	1.29		0	128	658
KH15	Eunice	0	0.15	0.69		0	77	352
KH15	Nereis	0	0.43	2.87		0	219	1464
KH15	Tivela	0	1.29	8.41		0	658	4291
KH16	Boccardiella	0.13	0.15	0.69		66	77	352
KH16	Tivela	0	1.35	3.59		0	689	1832
KH16	Tympanotonos	0.21	1.42	4.44		107	724	2265
KH17	Corbula	1.4	0.64	2.86		714	327	1459
KH17	Sarotherondon	0	0.15	0.69		0	77	352
KH17	Tivela	0	3.88	8.92		0	1980	4551
KH17	Tympanotonos	0	0.64	3.35		0	327	1709
KH18	Boccardiella	0	0.15	0.69		0	77	352
KH18	Eunice	0	0.15	0.69		0	77	352
KH18	Melanoides	0.04	0.25	1.29		20	128	658
KH18	Nereis	0	0.4	1.98		0	204	1010
KH18	Neritina	0	0.58	2.82		0	296	1439
KH18	Tivela	0.73	1.99	7.62		372	1015	3888
KH18	Tympanotonos	0	1.17	1.72		0	597	878
KH19	Boccardiella	0	0.93	3.23		0	474	1648
KH19	Capitellid	8.01	10.61	13.95		4087	5413	7117
KH19	Corbula	0.09	1	2.68		46	510	1367
KH19	Eunice	0	0.25	1.29		0	128	658
KH19	Nereis	0	0.67	296		0	342	151 020
KH19	Notomastus	8.4	12.71	19		4286	6485	9694
KH19	Tivela	0	12.71	19		0	6485	9694
KH19	Tympanotonos	0	1	2.68		0	510	1367
KH20	Corbula	0	0.99	12.37		0	505	6311
KH20	Tivela	0	0.25	1.29		0	128	658
KI14	Boccardiella	0	1.15	4.68		0	587	2388
KI14	Capitellid	0	0.82	4.07		0	418	2077
KI14	Corbula	0	0.43	1.7		0	219	867
KI14	Glycera	0	0.43	1.7		0	219	867
KI14	Nereis	0	1.46	6		0	745	3061
KI14	Neritina	0	0.15	0.69		0	77	352
KI14	Notomastus	0	0.78	3.99		0	398	2036
KI14	Tivela	0	0.15	0.69		0	77	352
KI14	Tympanotonos	0	0.25	1.29		0	128	658
KI15	Triv Tup	14.24	0.74	73.42		7265	378	37 459
KI15	Boccardiella	0	0.15	0.69		0	77	352
KI15	Corbula	0	0.25	2.58		0	128	1316
KI15	Melanoides	0	1.15	1.29		0	587	658
KI15	Nereis	0	0.32	1.11		0	163	566
KI15	Tivela	0	32.68	3.86		0	16 673	1969

		Numbers per core				Numbers per metre square		
KI15	Tympanotonos	0	0.7	5.24		0	357	2673
KI16	Boccardiella	0	0.47	6.35		0	240	3240
KI16	Corbula	0	4.09	0.69		0	2087	352
KI16	Nereis	0	1.05	3.86		0	536	1969
KI16	Tivela	0	1.49	15.13		0	760	7719
KI16	Tympanotonos	0	0.64	2.86		0	327	1459
KI17	Boccardiella	0	2.14	10.24		0	1092	5224
KI17	Corbula	0.64	5.54	25.03		327	2827	12 770
KI17	Eunice	0	2	18.86		0	1020	9622
KI17	Nereis	0	0.57	2.4		0	291	1224
KI17	Notomastus	0	0.15	0.69		0	77	352
KI17	Tivela	0	0.15	0.69		0	77	352
KI18	Corbula	0	1.17	10.98		0	597	5602
KI18	Neritina	0	0.86	5.74		0	439	2929
KI18	Tivela	0	1.17	4.92		0	597	2510
KI18	Tympanotonos	0	0.15	0.69		0	77	352
KI19	Boccardiella	0	1.32	4.97		0	673	2536
KI19	Corbula	0.08	2.84	12.67		41	1449	6464
KI19	Eunice	0	1.4	7.14		0	714	3643
KI19	Melanoides	2.16	3.79	6.26		1102	1934	3194
KI19	Nereis	0.66	7.65	40.3		337	3903	20 561
KI19	Notomastus	0	0.25	1.29		0	128	658
KI19	Tympanotonos	0	1.16	5.63		0	592	2872
KJ14	Boccardiella	0.58	2.65	6.94		296	1352	3541
KJ14	Corbula	7.11	15.69	33.34		3628	8005	17 010
KJ14	Eunice	0	0.15	0.69		0	77	352
KJ14	Melanoides	3.77	6.71	11.48		1923	3423	5857
KJ14	Nereis	2.46	5.11	9.78		1255	2607	4990
KJ14	Tivela	0.21	1.81	5.25		107	923	2679
KJ15	Boccardiella	0.88	9.02	52.47		449	4602	26 770
KJ15	Corbula	0	0.7	6.34		0	357	3235
KJ15	Nereis	0	1.07	4.86		0	546	2480
KJ15	Tivela	0	3.13	6.84		0	1597	3490
KJ15	Tympanotonos	0	1	3.73		0	510	1903
KJ16	Boccardiella	0	2.24	10.96		0	1143	5592
KJ16	Eunice	0	0.64	3.35		0	327	1709
KJ16	Nereis	0	0.15	0.69		0	77	352
KJ16	Tympanotonos	0	0.97	3.71		0	495	1893
KJ17	Corbula	0	0.78	2.54		0	398	1296
KJ17	Dipsio	0	0.38	2.37		0	194	1209
KJ17	Glycera	0	0.15	0.69		0	77	352
KJ17	Hydrobia	0	0.25	1.29		0	128	658
KJ17	Nereis	0	1.35	6.08		0	689	3102
KJ17	Neritina	0	0.64	2.96		0	327	1510
KJ17	Notomastus	0	2.65	15.83		0	1352	8077
KJ17	Tivela	0	0.58	2.39		0	296	1219
KJ18	Boccardiella	0	0.38	2.37		0	194	1209
KJ18	Tympanotonos	0	0.25	1.29		0	128	658
KJ19	Eunice	0	0.43	2.87		0	219	1464
KJ19	Tivela	0	0.15	0.69		0	77	352
KK11	Boccardiella	0	0.15	0.69		0	77	352
KK11	Corbula	0	0.15	0.69		0	77	352

		Numbers per core				Numbers per metre square		
KK11	Eunice	0	0.15	0.69		0	77	352
KK11	Notomastus	0	0.64	5.53		0	327	2821
KK11	Tivela	0	0.15	0.69		0	77	352
KK12	Boccardiella	0	4.02	32.5		0	2051	16 582
KK12	Melanoides	0	0.32	1.11		0	163	566
KK12	Tympanotonos	0	0.15	0.69		0	77	352
KK13	Boccardiella	0	1.26	8.6		0	643	4388
KK13	Corbula	0	1.06	4.43		0	541	2260
KK13	Eunice	0	0.58	4.69		0	296	2393
KK13	Melanoides	1.07	26.8	371.46		546	13 673	189 520
KK13	Nereis	0	0	0		0	0	0
KK13	Notomastus	0	0.15	0.69		0	77	352
KK14	Boccardiella	0	0.58	2.82		0	296	1439
KK14	Corbula	5.21	8.49	13.51		2658	4332	6893
KK14	Eunice	1.06	2.95	6.56		541	1505	3347
KK14	Hydrobia	0	0.32	1.11		0	163	566
KK14	Melanoides	10.74	36.67	119.87		5480	18 709	61 158
KK14	Nereis	0	0.15	0.69		0	77	352
KK14	Neritina	0	0.74	2.58		0	378	1316
KK14	Tivela	1.22	3.19	6.91		622	1628	3526
KK14	Tympanotonos	0	0.15	0.69		0	77	352
KK15	Boccardiella	0.18	1.61	4.73		92	821	2413
KK15	Eunice	0	0.25	1.29		0	128	658
KK15	Tivela	0	0.32	1.11		0	163	566
KK15	Tympanotonos	0	0.15	0.69		0	77	352
KK16	Boccardiella	0	0.38	2.37		0	194	1209
KK16	G3	0	0.15	0.69		0	77	352
KK16	Nereis	0	0.25	1.29		0	128	658
KK16	Tivela	0	0.52	2.27		0	265	1158
KK16	Tympanotonos	0	0.15	0.69		0	77	352
KK17	Eunice	0	0.78	2.54		0	398	1296
KK17	Neritina	0	0.15	0.69		0	77	352
KK17	Tivela	0	0.25	1.29		0	128	658
KK17	Tympanotonos	0	0.15	0.69		0	77	352
KK18	Corbula	0	0.96	11.72		0	490	5980
KK18	G4	0	0.15	0.69		0	77	352
KK18	Melanoides	0	0.32	1.85		0	163	944
KK18	Nereis	0	0.25	1.29		0	128	658
KK18	Neritina	0	0.32	1.85		0	163	944
KK18	Tympanotonos	0	0.3	1.38		0	153	704
KL13	Glycera	0	0.78	2.54		0	398	1296
KL13	Nereis	0.95	2.47	5.17		485	1260	2638
KL13	Oligochaete	79.57	141.65	251.57		40 597	72 270	128 352
KL13	Tivela	0	1.95	7.86		0	995	4010
KL13	Urothoe	0.41	2.55	7.92		209	1301	4041
KL15	Corbula	0	1.51	6.18		0	770	3153
KL15	Eunice	0	0.15	0.69		0	77	352
KL15	Melanoides	0	0.55	2.28		0	281	1163
KL15	Nereis	0	2.26	14.56		0	1153	7429
KL15	Tivela	0	0.89	4.64		0	454	2367
KL15	Tympanotonos	0	0.15	0.69		0	77	352
KL15	Urothoe	0	0.64	1.99		0	327	1015

		Numbers per core				Numbers per metre square		
KL16	Capitellid	0	0.64	1.99		0	327	1015
KL16	Melanoides	0	0.64	3.35		0	327	1709
KL16	Tivela	0	0.62	5.12		0	316	2612
KL16	Tympanotonos	0	0.15	0.69		0	77	352
KL16	Urothoe	0	0.15	0.69		0	77	352
KL17	Brachidontes	0	0.15	0.69		0	77	352
KL17	Nereis	1.67	4.98	12.52		852	2541	6388
KL17	Neritina	0.35	1.99	5.62		179	1015	2867
KL17	Tivela	0	0.32	1.11		0	163	566
KL17	Tympanotonos	0	0.15	0.69		0	77	352
KL18	Boccardiella	0	0.32	1.85		0	163	944
KL18	Melanoides	0	1.29	5.43		0	658	2770
KL18	Nereis	0	0.83	3.57		0	423	1821
KL18	Neritina	0	0.15	0.69		0	77	352
KL18	Tivela	0	0.74	4.35		0	378	2219
KL18	Tympanotonos	0	0.15	0.69		0	77	352
KL18	Urothoe	0	0.25	1.29		0	128	658
KM12	Glycera	0	0.32	1.11		0	163	566
KM12	Melanoides	0.18	0.74	1.56		92	378	796
KM12	Nereis	1.86	6.15	19.36		949	3138	9878
KM12	Oligochaete	0	0.89	3.13		0	454	1597
KM12	Tivela	0	0.52	2.27		0	265	1158
KM12	Tympanotonos	2.1	4.96	10.43		1071	2531	5321
KM12	Urothoe	0.15	1.7	5.33		77	867	2719
KM16	Corbula	0	0.62	5.12		0	316	2612
KM16	G3	0	0.25	1.29		0	128	658
KM16	Glycera	0	0.32	1.11		0	163	566
KM16	Melanoides	0	1.46	6.15		0	745	3138
KM16	Nereis	0.77	2.26	5.22		393	1153	2663
KM16	Neritina	0	0.32	1.11		0	163	566
KM16	Tivela	0.56	11.5	85.35		286	5867	43 546
KM16	Tympanotonos	0	0.84	3.38		0	429	1724
KM17	Boccardiella	0	0.15	0.69		0	77	352
KM17	Brachidontes	0	0.32	1.11		0	163	566
KM17	Capitellid	3.1	4.96	7.65		1582	2531	3903
KM17	Eunice	0	0.15	0.69		0	77	352
KM17	Nereis	0	1	3.73		0	510	1903
KM17	Neritina	0	0.32	1.11		0	163	566
KM17	Tympanotonos	0	1.6	5.95		0	816	3036
KN11	Boccardiella	0	0.15	0.69		0	77	352
KN11	Excirolana	0	0.32	1.11		0	163	566
KN11	Hydrobia	0	0.25	1.29		0	128	658
KN11	Melanoides	1.42	5.65	17.23		724	2883	8791
KN11	Odonata I	0	0.4	1.98		0	204	1010
KN11	Oligochaete	0	0.15	0.69		0	77	352
KN11	Tivela	26.09	44.15	74.24		13 311	22 526	37 878
KN11	Urothoe	0	0.32	1.11		0	163	566
KN15	Boccardiella	0	0.57	3.14		0	291	1602
KN15	Corbula	0	3.67	37.05		0	1872	18 903
KN15	Nereis	0	1.29	6.4		0	658	3265
KN15	Neritina	0	0.32	1.11		0	163	566
KN15	Tivela	0	1.29	7.14		0	658	3643

		Numbers per core				Numbers per metre square		
KN16	Boccardiella	0	1.05	6.29		0	536	3209
KN16	Brachidontes	0	2.06	12.81		0	1051	6536
KN16	Corbula	0	0.64	3.35		0	327	1709
KN16	Eunice	0	0.25	1.29		0	128	658
KN16	Nereis	0	0.3	1.38		0	153	704
KN16	Neritina	0	0.32	1.85		0	163	944
KN16	Tivela	0	0.7	3.86		0	357	1969
KN16	Tympanotonos	0	0.15	0.69		0	77	352
KN17	Boccardiella	0	0.32	1.85		0	163	944
KN17	Nereis	0	0.58	2.39		0	296	1219
KN17	Tivela	0	0.15	0.69		0	77	352
KN17	Tympanotonos	0	0.32	1.85		0	163	944
KO13	Brachidontes	0	0.15	0.69		0	77	352
KO13	Corbula	5.45	13.06	29.66		2781	6663	15 133
KO13	G3	0.61	2.29	5.73		311	1168	2923
KO13	Melanoides	0	0.32	1.85		0	163	944
KO13	Nereis	0	0.75	2.81		0	383	1434
KO13	Neritina	0	0.32	1.11		0	163	566
KO13	Tivela	0	0	0		0	0	0
KO13	Tympanotonos	0	0.3	1.38		0	153	704
KO14	Boccardiella	0	2.02	9.61		0	1031	4903
KO14	Brachidontes	0	1	3.73		0	510	1903
KO14	Callinectes	0	0.32	1.11		0	163	566
KO14	Corbula	7.84	12.68	20.15		4000	6469	10 281
KO14	Excirolana	0	2.85	17.45		0	1454	8903
KO14	Glycera	0	0.15	0.69		0	77	352
KO14	Neritina	0.1	2.59	10.77		51	1321	5495
KO14	STP	0	0.72	3.43		0	367	1750
KO14	Tilapia	0	0.15	0.69		0	77	352
KO14	Tivela	1.11	2.25	3.98		566	1148	2031
KO14	Tympanotonos	5.63	17.19	45.97		2872	8770	23 454
KO14	Urothoe	0	1.99	9.69		0	1015	4944
KO16	Melanoides	0.14	6.13	31.5		71	3128	16 071
KO16	Nereis	0	0	0		0	0	0
KO16	Neritina	0	0.52	1.43		0	265	730
KO16	Tivela	1.05	2.06	3.59		536	1051	1832
KO16	Tympanotonos	0.12	1.3	3.72		61	663	1898
KO17	Neritina	0	0.32	1.11		0	163	566
KO17	Oligochaete	0.15	2.17	7.73		77	1107	3944
KO17	PT	0	1.51	9.02		0	770	4602
KO17	Tivela	1.3	3.87	9.31		663	1974	4750
KP13	Boccardiella	0	0.15	0.69		0	77	352
KP13	Melanoides	0	0.76	7.5		0	388	3827
KP13	Tympanotonos	0	0.15	0.69		0	77	352
KP13	Urothoe	0	0.15	0.69		0	77	352
KP14	Corbula	0	0.25	1.29		0	128	658
KP14	Melanoides	0	1.61	13.42		0	821	6847
KP14	Nereis	0	0.25	1.29		0	128	658
KP14	Tympanotonos	0	0.15	0.69		0	77	352
KP15	Brachidontes	0	0.15	0.69		0	77	352
KP15	Glycera	0	0.15	0.69		0	77	352
KP15	Melanoides	0.36	3.39	13.2		184	1730	6735

		Numbers per core				Numbers per metre square		
KP15	Nereis	0	0.32	1.11		0	163	566
KP15	Neritina	0	0.82	3.14		0	418	1602
KP15	Tivela	0.79	1.35	2.1		403	689	1071
KP15	Tympanotonos	1.56	4.65	11.46		796	2372	5847
KP16	Boccardiella	0	1.07	4.55		0	546	2321
KP16	Corbula	0	0.32	1.11		0	163	566
KP16	Eunice	0	0.15	0.69		0	77	352
KP16	Melanoides	0	4.18	30.22		0	2133	15 418
KP16	Nereis	0.12	1.94	7.07		61	990	3607
KP16	Tivela	0	0.72	3.43		0	367	1750
KP16	Tympanotonos	0.19	1.86	5.89		97	949	3005
KQ14	Corbula	0	0.82	3.14		0	418	1602
KQ14	Hydrobia	0	0.89	5.04		0	454	2571
KQ14	Melanoides	0.9	9.43	56.34		459	4811	28 745
KQ14	Tympanotonos	0	0.74	2.58		0	378	1316
KR10	Glycera	0	0.52	2.27		0	265	1158
KR10	Oligochaete	0	0.43	1.7		0	219	867
KR10	Urothoe	1.1	7.19	30.98		561	3668	15 806
Q3	Eunice	0	0.15	0.69		0	77	352
Q3	Tympanotonos	0	0.15	0.69		0	77	352
R1	Boccardiella	0	0.32	1.11		0	163	566
R1	Hermit crab	0	0.15	0.69		0	77	352
R1	Nereis	0.8	2.24	2.27		408	1143	1158
R1	Notomastus	0	0.15	0.69		0	77	352
R7	Nereis	0	0.9	4.67		0	459	2383
R7	Notomastus	0	0.43	2.87		0	219	1464
R7	Tivela	0	0.15	0.69		0	77	352
R9	Boccardiella	0	0.15	0.69		0	77	352
R9	Dipsio	0	0.15	0.69		0	77	352
R9	Nereis	0	0.89	3.13		0	454	1597
R9	Urothoe	0	0.15	0.69		0	77	352
SB13	Boccardiella	0	0.43	1.7		0	219	867
SB13	Urothoe	0	0.15	0.69		0	77	352
SB6	Boccardiella	0	1.2	6.61		0	612	3372
SB6	Eunice	0	1.7	7.96		0	867	4061
SB6	Nereis	0	0.15	0.69		0	77	352
SB6	Notomastus	0.33	3.77	16.03		168	1923	8179
SB7	Boccardiella	0	0.15	0.69		0	77	352
SB7	Capitellid	0	0.15	0.69		0	77	352
SB7	Eunice	0	0.25	1.29		0	128	658
SB7	Notomastus	0	1.57	8.08		0	801	4122
SB7	Tympanotonos	0	0.15	0.69		0	77	352
SB7	Urothoe	0	0.52	1.43		0	265	730
SC10	Boccardiella	0	0.43	1.7		0	219	867
SC10	Notomastus	0	0.15	0.69		0	77	352
SC12	Boccardiella	0	0.75	3.55		0	383	1811
SC12	Eunice	0	0.43	1.7		0	219	867
SC12	Nereis	0	0.79	3.65		0	403	1862
SC3	Notomastus	0	0.15	0.69		0	77	352
SC4	Nereis	0	0.15	0.69		0	77	352
SC4	Notomastus	0	0.15	0.69		0	77	352
SC6	Boccardiella	0	0.15	0.69		0	77	352

		Numbers per core				Numbers per metre square		
SC6	Nereis	0	0.25	1.29		0	128	658
SC8	Boccardiella	0	0.25	1.29		0	128	658
SC8	Nereis	2.22	3.91	6.93		1133	1995	3536
SC8	Notomastus	0	0.15	0.69		0	77	352
SC8	Tympanotonos	0	0.15	0.69		0	77	352
SC8	Urothoe	0	0.15	0.69		0	77	352
SC9	Boccardiella	0	0.73	3.15		0	372	1607
SC9	Nereis	0.13	1.17	3.15		66	597	1607
SC9	Notomastus	0	1.05	4.28		0	536	2184
SD10	Boccardiella	0	0.25	1.29		0	128	658
SD10	Capitellid	0	0.15	0.69		0	77	352
SD11	Nereis	1.7	4.14	8.78		867	2112	4480
SD11	Urothoe	0	0.15	0.69		0	77	352
SD2	Corbula	0	0.25	1.29		0	128	658
SD2	Melanoides	0	0.15	0.69		0	77	352
SD3	Nereis	0	0.43	1.7		0	219	867
SD3	Tympanotonos	0	0.25	1.29		0	128	658
SD4	Boccardiella	0	0.32	1.11		0	163	566
SD4	Notomastus	0	0.15	0.69		0	77	352
SD6	Nereis	0	0.15	0.69		0	77	352
SD6	Notomastus	0.25	3.79	17.31		128	1934	8832
SD6	Tympanotonos	0	0.15	0.69		0	77	352
SD7	Boccardiella	1.12	2.99	6.51		571	1526	3321
SD7	Capitellid	1.65	3.9	8.06		842	1990	4112
SD7	Nereis	0	0.55	2.28		0	281	1163
SD8	Boccardiella	0	0.15	0.69		0	77	352
SD8	Nereis	0	0.15	0.69		0	77	352
SD8	Notomastus	0.42	4.45	19.84		214	2270	10 122
SD8	Tympanotonos	0	0.32	1.11		0	163	566
SD9	Notomastus	0	0.32	1.11		0	163	566
SD9	Tympanotonos	0	1.31	6.91		0	668	3526
SE10	Boccardiella	0	0.32	1.11		0	163	566
SE10	Nereis	0	0.72	3.43		0	367	1750
SE10	Notomastus	0.18	1.61	4.73		92	821	2413
SE10	Tympanotonos	0	0.86	5.74		0	439	2929
SE10	Urothoe	0	0.48	3.35		0	245	1709
SE6	Nereis	0	1.04	5.33		0	531	2719
SE6	Notomastus	0	0.97	3.71		0	495	1893
SE7	Boccardiella	0	0.15	0.69		0	77	352
SE7	Notomastus	1.28	4.14	10.59		653	2112	5403
SE8	Capitellid	1.88	6.04	16.19		959	3082	8260
SE8	Nereis	0.13	1.32	3.84		66	673	1959
SE8	Tympanotouns	0	0.43	1.7		0	219	867
SE9	Boccardiella	0	0.15	0.69		0	77	352
SE9	Capitellid	0	0.64	1.99		0	327	1015
SE9	Nereis	0	0.32	1.11		0	163	566
SE9	Urothoe	0	0.32	1.85		0	163	944
SF10	Boccardiella	0	0.15	1.7		0	77	867
SF10	Capitellid	0	0.43	34.01		0	219	17 352
SF10	Nereis	0	0.3	1.38		0	153	704
SF11	Boccardiella	0.65	0.47	1.8		332	240	918
SF11	Capitellid	0	1.64	3.23		0	837	1648

		Numbers per core				Numbers per metre square		
SF11	Nereis	0	0.64	1.99		0	327	1015
SF11	Tivela	0	0.32	1.11		0	163	566
SF11	Tympanotonus	0	0.15	0.69		0	77	352
SF11	Urothoe	0	4.25	34.01		0	2168	17 352
SF12	Notomastus	0	0.32	1.11		0	163	566
SF9	Nereis	0	0.15	0.69		0	77	352
SF9	Notomastus	0	1.17	4.28		0	597	2184
SF9	Tympanotonus	0	1.55	2.36		0	791	1204
SF9	Urothoe	0	0.43	1.7		0	219	867

Appendix 6 Dominant plant species recorded at the wetland sites surrounding Keta and Songor lagoons and in the Angor channel connecting Keta to the Volta River

Keta lagoon

Site	Date	Coordinates*		Dominant species (Top 5)	Comments
		N	E		
KB17	16/11	06 03.4	00 56.9	<i>Typha domingensis</i> <i>Paspalum vaginatum</i> <i>Cyperus articulatus</i> <i>Cyperus distans</i>	Inundated
KB23	16/11	06 02.9	01 03.0	<i>Sesuvium portulacastrum</i> <i>Avicennia nitida</i> <i>Sporobolus pyramidalis</i>	Dry land
KC16	16/11	06 02.0	00 55.8	<i>Paspalum vaginatum</i> <i>Avicennia nitida</i> <i>Cyperus articulatus</i> <i>Nymphaea micrantha</i> <i>Sesuvium portulacastrum</i>	Dry land
KC18	16/11	06 01.8	00 58.0	<i>Sesuvium portulacastrum</i> <i>Paspalum vaginatum</i> <i>Philoxerus vermicularis</i> <i>Cyperus articulatus</i> <i>Typha domingensis</i>	Dry land
KC20	16/11	06 01.4	01 00.0	<i>Sesuvium portulacastrum</i> <i>Sporobolus pyramidalis</i> <i>Chloris gayana</i> <i>Cocos nucifera</i> <i>Commelina sp</i>	Dry drainage depression
KC22	16/11	06 01.7	01 02.1	<i>Sesuvium portulacastrum</i> <i>Sporobolus pyramidalis</i> <i>Chloris gayana</i> <i>Crotalaria retusa</i> <i>Philoxerus vermicularis</i>	Dry land
KC23	27/11	06 02.0	01 03.0	<i>Sporobolus pyramidalis</i> <i>Paspalum vaginatum</i> <i>Cyperus articulatus</i> <i>Azadirachta indica</i> <i>Borassus aethiopum</i>	Island with pronounced elevation hence less hydrophilic vegetation; would only experience very brief inundation.
KC24	16/11	06 02	01 04.0	<i>Sesuvium portulacastrum</i> <i>Andropogon gayanus</i> <i>Avicennia nitida</i> <i>Borassus aethiopum</i> <i>Cocos nucifera</i>	Dry land
KD15	16/11	06 00.9	00 55.0	<i>Sesuvium portulacastrum</i> <i>Cyperus articulatus</i> <i>Cyperus distans</i> <i>Fimbristylis small</i> <i>Paspalum vaginatum</i>	Dry land
KD22	27/11	06 01.0	01 02.1	<i>Paspalum vaginatum</i> <i>Cyperus articulatus</i> <i>Sesuvium portulacastrum</i> <i>Philoxerus vermicularis</i> <i>Sporobolus pyramidalis</i>	Expanse of dry flat country 100 m from edge of lagoon. <i>Paspalum</i> with <i>Sporobolus</i> dominates

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
KD23	16/11	06 01.0	01 03.0	<i>Sesuvium portulacastrum</i> <i>Cyperus rotundus</i> <i>Sporobolus pyramidalis</i> <i>Cyperus articulatus</i>	Dry land
KE14	17/11	05 59.8	00 53.9	<i>Cyperus articulatus</i> <i>Philoxerus vermicularis</i> <i>Paspalum vaginatum</i> <i>Nymphaea micrantha</i>	Dry land
KE15	27/11	06 00.2	00 54.9	<i>Sesuvium portulacastrum</i> <i>Philoxerus vermicularis</i> <i>Sporobolus pyramidalis</i> <i>Fimbristylis dichotoma</i> <i>Cyperus articulatus</i>	Site in lagoon; sampling took place on edge of lagoon 400 m to west.
KE19	27/11	06 00.0	00 59.0	<i>Sesuvium portulacastrum</i> <i>Cyperus distans</i> <i>Scirpus cubensis</i> <i>Philoxerus vermicularis</i> <i>Sporobolus pyramidalis</i>	Mud flats on edge of island; higher ground is dominated by <i>Sporobolus pyramidalis</i>
KE20	19/11	06 00.0	01 00.0	<i>Paspalum vaginatum</i> <i>Lonyia taxifolia</i> <i>Vernonia</i> sp <i>Sesuvium portulacastrum</i> <i>Ruppia maritima</i> (in lagoon)	Dry sandy edge of lagoon within 10 m of water.
KE21	19/11	06 00.0	01 01.00	<i>Sesuvium portulacastrum</i> <i>Philoxerus vermicularis</i> <i>Sporobolus pyramidalis</i> <i>Cyperus distans</i> <i>Fimbristylis</i> sp	Extensive dry pan
KE22	27/11	06 00.0	01 02.0	<i>Paspalum vaginatum</i> <i>Cyperus distans</i> <i>Cyperus articulatus</i> <i>Sesuvium portulacastrum</i> <i>Philoxerus vermicularis</i>	Dry plain on island subject to inundation. Cassava and coconut plantation on higher elevation to the west.
KF11	17/11	05 59.1	00 51.7	<i>Eleocharis dulcis</i> <i>Paspalum vaginatum</i> <i>Cyperus distans</i>	Inundated (depth 9 cm)
KF16	27/11	05 59.1	00 56.0	<i>Sesuvium portulacastrum</i> <i>Avicennia</i> sp <i>Conocarpus</i> sp <i>Crotalaria retusa</i> <i>Imperata cylindrica</i>	Mud flats on Island; higher ground dominated by <i>Sporobolus pyramidalis</i> and <i>Paspalum vaginatum</i>
KF21	19/11	05 59.0	01 00.0	<i>Sesuvium portulacastrum</i> <i>Cyperus</i> sp <i>Ruppia maritima</i> (senesced) <i>Philoxerus vermicularis</i>	Extensive area of dry flats
KF22	16/11	05 59.1	01 01.7	<i>Paspalum vaginatum</i> <i>Sesuvium portulacastrum</i> <i>Philoxerus vermicularis</i> <i>Avicennia nitida</i> <i>Ruppia maritima</i> (senesced)	Moist ground (depth 1 cm)

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
KG01	9/12	05 58.1	00 41.0	<i>Ipomea aquatica</i> <i>Salvinia nymphellula</i> <i>Ludwigia erecta</i> <i>Nymphaea lotus</i> <i>Pistia stratiotes</i>	
KG09	6/12	05 58.0	00 49.0	<i>Sporobolus</i> sp <i>Sphenoeclea</i> sp <i>Ipomea aquatica</i> <i>Ludwigia leptocarpa</i> <i>Scirpus cubensis?</i>	Note surrounding area disturbed by sugar cane growing.
KG12	21/11	05 57.9	00 52.0	<i>Sesuvium portulacastrum</i> <i>Avicennia nitida</i> <i>Paspalum vaginatum</i>	Dry land
KH08	6/12	05 57.1	00 47.0	No dominant species – see comments <i>Andropogon gayanus</i> <i>Cyperus articulatus</i> <i>Cyperus distans</i> <i>Fimbristylis dichotoma</i> <i>Imperata cylindrica</i>	Whole area for 500 m in any direction is being cultivated under sugar cane. Remnant wetland vegetation in channels and beside paths.
KH11	17/11	05 57.2	00 51.0	<i>Paspalum vaginatum</i> <i>Cyperus articulatus</i> <i>Cyperus distans</i>	Dry land
KI01	9/12	05 56.1	00 41.0	<i>Typha domingensis</i> <i>Paspalum vaginatum</i> <i>Ludwigia leptocarpa</i>	Inundated site (depth 65 cm). Slightly (150 m) north of site. Sampling took place 50 m into the stand.
KI09	6/12	05 56.0	00 49.0	<i>Ipomea aquatica</i> <i>Ceratophyllum demersum</i> <i>Eclipta prostrata</i> <i>Ludwigia erecta</i> <i>Ludwigia leptocarpa</i>	Area disturbed by human activity; sugar cane growing.
KI11	6/12	05 56.0	00 50.9	<i>Eleocharis dulcis</i> <i>Cyperus articulatus</i> <i>Ipomea aquatica</i> <i>Ludwigia stolonifera</i> <i>Nymphaea lotus</i>	Boat trip from Atiavi through a very diverse range of wetland flora; it seems that everything is here. However, there is a virtual monoculture of <i>Eleocharis dulcis</i> at the site.
KI12	21/11	05 56.6	00 52.1	<i>Paspalum vaginatum</i> <i>Sporobolus pyramidalis</i> <i>Phloxeris vermicularis</i> <i>Sesuvium portulacastrum</i> <i>Cyperus articulatus</i>	Dry land
KI13	21/11	05 56.4	00 52.9	<i>Paspalum vaginatum</i> <i>Cynodon</i> sp (not flowering) <i>Sesuvium portulacastrum</i>	Dry land
KJ02	9/12	05 55.1	00 42.2	<i>Typha domingensis</i> <i>Paspalum vaginatum</i> <i>Ipomea aquatica</i>	Site is 200 m further west in an extensive <i>Typha</i> stand. Sampling took place 50 m into the stand. Very moist soil (av depth only 1 cm).
KJ12	21/11	05 54.5	00 52.6	<i>Paspalum vaginatum</i> <i>Sesuvium portulacastrum</i> <i>Ceratophyllum demersum</i> <i>Cyperus distans</i> <i>Nymphaea lotus</i>	Water and dry land site

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
KK03	9/12	05 54.0	00 42.0	<i>Cyperus articulatus</i> <i>Paspalum vaginatum</i> <i>Brachiaria pyramidalis</i> <i>Cyperus distans</i> <i>Typha domingensis</i>	Extensive <i>Typha</i> bed 100 m to the NE of site.
KK11	18/11	05 54.1	00 51.0	<i>Brachiaria mutica</i> <i>Cyperus articulatus</i> <i>Andropogon gayanus</i> <i>Azolla africana</i> <i>Borassus aethiopum</i>	Dry stream bank and stream
KK12	21/11	05 53.9	00 51.0	<i>Typha domingensis</i> <i>Paspalum vaginatum</i> <i>Nymphaea lotus</i> <i>Sesuvium portulacastrum</i>	Inundated (av depth 56 cm)
KK19	19/11	05 54.0	00 59.0	<i>Sesuvium portulacastrum</i> <i>Ruppia maritima</i> <i>Typha domingensis</i> <i>Paspalum vaginatum</i>	Flats with moist soil
KL04	9/12	05 53.1	00 44.0	<i>Vetiveria vulvibarbis</i> <i>Paspalum vaginatum</i> <i>Andropogon gayanus</i> <i>Azaraachtea indica</i> <i>Bacopa crenata</i>	Drainage line through savanna area 100 m from site. Area recently burnt.
KL10	18/11	05 53.0	00 50.1	<i>Paspalum vaginatum</i> <i>Nymphaea micrantha</i> <i>Sesuvium portulacastrum</i> <i>Philoxerus vermicularis</i> <i>Typha domingensis</i>	Dry land
KL11	21/11	05 53.0	00 51.0	<i>Paspalum vaginatum</i> <i>Sesuvium portulacastrum</i>	Dry land
KL12	18/11	05 53.0	00 52.0	<i>Paspalum vaginatum</i> <i>Cyperus articulatus</i> <i>Sesuvium portulacastrum</i> <i>Typha domingensis</i>	Inundated (av depth 4 cm)
KL14	15/11	05 53.0	00 54.0	<i>Cyperus articulatus</i> <i>Sesuvium portulacastrum</i> <i>Philoxerus vermicularis</i> <i>Nymphaea micrantha</i> <i>Paspalum vaginatum</i>	No water on site
KM07	28/11	05 52.0	00 47.0	<i>Andropogon gayanus</i> <i>Sporobolus</i> sp <i>Borassus aethiopum</i> <i>Cyperus distans</i> <i>Sporobolus pyramidalis</i>	Higher elevation drier country; > 1 km of <i>Andropogon gayanus</i>
KM10	18/11	5 51.0	0 49.9	<i>Paspalum vaginatum</i> <i>Cyperus articulatus</i> <i>Sesuvium portulacastrum</i> <i>Typha domingensis</i>	Dry land
KM11	20/11	05 53.1	00 50.9	<i>Paspalum vaginatum</i> <i>Philoxerus vermicularis</i> <i>Typha domingensis</i> <i>Najas</i> sp	Inundated (depth 24–33 cm)

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
KM13	15/11	05 52.0	0053.0	<i>Paspalum vaginatum</i> / <i>Sesuvium portulacastrum</i> / <i>Cyperus water association</i> (av depth 19 cm) <i>Cyperus water/Paspalum</i> <i>vaginatum/ Sesuvium</i> <i>portulacastrum association</i> (av depth 30 cm) Others: <i>Algal scum</i> <i>Nymphaea lotus</i> <i>Nymphaea micrantha</i> <i>Typha domingensis</i>	Inundated
KM15	20/11	05 52.1	00 55.0	<i>Cyperus water/Sesuvium</i> <i>portulacastrum association</i> (Av depth 20 cm) <i>Sesuvium portulacastrum</i> <i>monoculture</i> (Av depth 20 cm) Others: <i>Avicennia nitida</i> <i>Nymphaea micrantha</i> <i>Paspalum vaginatum</i> <i>Sesuvium white</i>	Inundated
KM18	19/11	05 52.0	00 58.0	<i>Sesuvium portulacastrum</i> / <i>Cyperus water association</i> <i>Cyperus water/Sesuvium</i> <i>portulacastrum association</i> Others: <i>Cyperus distans</i> <i>Cyperus 2</i> <i>Paspalum vaginatum</i> <i>Ruppia maritima (senesced)</i> <i>Sesuvium white</i> <i>Typha domingensis</i>	Moist ground
KN06	28/11	05 51.0	00 46.0	<i>Paspalum vaginatum</i> <i>monoculture</i> Others: <i>Avicennia sp</i> <i>Sesuvium portulacastrum</i> <i>Typha domingensis</i>	Site near drainage line containing <i>Avicennia</i> and <i>Typha</i>
KN08	28/11	05 51.0	00 47.9	<i>Sporobolus</i> <i>pyramidalis/Sesuvium</i> <i>white/Cyperus articulatus</i> <i>association</i> Others: <i>Cyperus distans</i> <i>Paspalum vaginatum</i> <i>Shrub A</i>	Dry plain subject to inundation
KN10				Others:	
KN12	15/11	05 51.2	00 51.9	<i>Paspalum vaginatum/Cyperus</i> <i>2/ Nymphaea micrantha</i> <i>association</i> (Av depth 5 cm) Others: <i>Andropogon gayanus</i> <i>Cyperus articulatus</i> <i>Cyperus distans</i>	Inundated
KN14				Others:	Not sampled, too dry

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
KO07	28/11	05 50.0	00 47.0	<i>Sesuvium portulacastrum</i> monoculture <i>Paspalum vaginatum</i> / <i>Cyperus articulatus</i> association Others: <i>Cyperus articulatus</i> <i>Sesuvium white</i> <i>Sporobolus pyramidalis</i>	Flat dry floodplain. Adjacent drainage line contains <i>Avicennia</i> and <i>Typha</i> .
KO09	28/11	05 50.0	00 49.0	<i>Sporobolus pyramidalis</i> <i>Imperata cylindrica</i> / <i>Paspalum vaginatum</i> / <i>Fimbristylis dichotoma</i> association Others: <i>Borassus aethiopum</i> <i>Cyperus articulatus</i> <i>Cyperus distans</i> Dodder yellow <i>Sesuvium white</i> <i>Scoparia</i> ? Wine palm	Very gently sloping plain
KO11	15/11	05 50.1	00 51.0	<i>Nymphaea micrantha</i> / <i>Cyperus water</i> / <i>Paspalum vaginatum</i> association (av depth 28 cm) <i>Paspalum vaginatum</i> / <i>Nymphaea micrantha</i> association (av depth 24 cm) <i>Cyperus water</i> / <i>Nymphaea</i> association (av depth 20 cm) Others: <i>Sesuvium portulacastrum</i> <i>Sesuvium white</i> <i>Sporobolus pyramidalis</i>	Inundated
KO12	20/11	05 50.0	00 52.0	<i>Paspalum vaginatum</i> monoculture (av depth 8 cm) Others: <i>Avicennia nitida</i> Cassia round <i>Cyperus articulatus</i> <i>Nymphaea micrantha</i> <i>Sesuvium portulacastrum</i> <i>Scirpus cubensis</i>	Inundated
KO17	20/11	05 49.9	00.57.1	<i>Paspalum vaginatum</i> monoculture (Av depth 11 cm) Others: <i>Cyperus 1</i> <i>Cyperus articulatus</i> <i>Typha domingensis</i>	Edge of lagoon in water
KP08	28/11	05 49.0	00 48.0	<i>Paspalum vaginatum</i> <i>Cyperus articulatus</i> association Others: <i>Cyperus 1</i> <i>Cyperus 2</i> <i>Sporobolus pyramidalis</i> <i>Typha domingensis</i> <i>Sesuvium white</i>	Floodplain of grasses and sedges with edge of extensive stand of <i>Typha</i> 300 m to west.

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
KP10	15/11	05 50.0	00 49.8	<p><i>Cyperus 2/Nymphaea micrantha</i> association (av depth 21 cm)</p> <p><i>Eleocharis/ Cyperus 1</i> association (av depth 35 cm)</p> <p><i>Cyperus water/Cyperus 2</i> association (av depth 1 cm)</p> <p>Others:</p> <p><i>Azolla africana</i></p> <p><i>Cyperus distans</i></p> <p><i>Paspalum vaginatum</i></p> <p><i>Sporobolus pyramidalis</i></p> <p><i>Utricularia</i> sp</p>	Inundated
KP12	20/11	05 49.3	00 52.2	<p><i>Cyperus water/Sesuvium portulacastrum</i> association (av depth 1 cm)</p> <p><i>Paspalum vaginatum monoculture</i> (No water but moist soil)</p> <p>Others:</p> <p><i>Avicennia nitida</i></p> <p><i>Nymphaea micrantha</i></p>	Partially inundated site on edge of lagoon 900 m short of designated site which is blocked by an extensive stand of <i>Cyperus</i> water. 50 m strip of <i>Paspalum</i> on edge of lagoon.
KP13	20/11	05 49.0	00.52.0	<p><i>Paspalum vaginatum/Cyperus water</i> association (Av depth 27 cm)</p> <p><i>Cyperus water/ Nymphaea micrantha</i> association (Av depth 30.4)</p> <p>Others:</p> <p><i>Avicennia nitida</i></p>	Inundated
KP16	20/11	05 49.0	00 56.1	<p><i>Paspalum vaginatum</i> monoculture</p> <p>Others:</p> <p><i>Cyperus articulatus</i></p> <p><i>Cyperus distans</i></p> <p><i>Eclipta prostratas</i></p> <p><i>Ludwigia erecta</i></p> <p><i>Passiflora foetida</i></p> <p>Succulent 1</p> <p><i>Typha domingensis</i></p>	Dry land on edge of lagoon.
KQ03	5/12	05 48.0	00 42.9	<p><i>Paspalum vaginatum</i> monoculture</p> <p><i>Typha domingensis/ Paspalum vaginatum</i> association</p> <p>Others:</p> <p><i>Acrochaetium areum</i></p> <p>Sedge 1</p> <p><i>Rhizophora racemosa</i></p>	Near Keta/Volta Channel
KQ05	5/12	05 48.0	00 45.0	<p><i>Typha</i> monoculture</p> <p>Others:</p> <p>No others</p>	Bank of Keta/Volta Channel

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
KQ11	15/11	05 47.3	00 51.0	<i>Paspalum vaginatum</i> monoculture (Depth zero) <i>Cyperus water/ Nymphaea micrantha</i> association (av depth 15 cm) Others: <i>Algal scum</i> <i>Avicennia nitida</i> <i>Ceratophyllum demersum</i> <i>Lemna paucicostata</i> <i>Ruppia maritima</i> (in pans of water) <i>Sesuvium white</i> <i>Typha domingensis</i>	Dry land with pans of water
KQ13	14/11	05 48.0	00 53.0	<i>Typha domingensis/Paspalum vaginatum</i> association (av depth 42 cm) <i>Paspalum vaginatum</i> monoculture (av depth 25 cm) <i>Cyperus water, Nymphaea micrantha/ Paspalum vaginatum</i> association (av depth 33 cm) Others: <i>Algal scum</i> <i>Avicennia nitida</i> <i>Azolla africana</i> <i>Chara sp</i> <i>Pistia stratiotes</i> <i>Ruppia maritima</i> <i>Sesuvium portulacastrum</i> <i>Sesuvium white</i>	Inundated
KQ15	9/12	05 48.2	00 55.0	<i>Paspalum vaginatum</i> monoculture Others: <i>Bloomia (Hairy Herb)</i> <i>Cyperus articulatus</i> <i>Cyperus distans</i> <i>Eclipta prostrata</i> <i>Fimbristylis tall (KQ15)</i> <i>Passiflora glabra</i> <i>Pentadon pentandrus</i> <i>Physalis micrantha</i> <i>Scirpus cubensis</i> <i>Sesbania sesbans</i> <i>Sesuvium potulacastrum</i> <i>Sesuvium white</i>	Site near Anloga Camp. Actual site in market gardens so walked beyond them toward the lagoon.
KQ9	14/11	05 48.0	00 48.8	<i>Typha domingensis Paspalum vaginatum</i> association Others: <i>Creepers 3</i> <i>Cyperus articulatus</i> <i>Gossypium sp.</i> <i>Indigofera 1</i> <i>Mimosa pudica</i>	Water depth zero but ground moist

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
KR02	5/12	05 47.2	00 42.0	<i>Rhizophora racemosa</i> monoculture Others: No others	Near Keta/Volta Channel
KR06	5/12	05 47.0	00 46.0	<i>Rhizophora racemosa</i> monoculture Others: <i>Acrochaetium areum</i>	Bank of Keta/Volta Channel
KR08	5/12	05 46.8	00 48.0	<i>Typha domingensis</i> monoculture <i>Rhizophora racemosa</i> monoculture Others: <i>Ceratophyllum demersum</i> <i>Nymphaea lotus</i> <i>Paspalum vaginatum</i>	
KR10	28/11	05 47.0	00 50.0	<i>Typha domingensis</i> Fern association <i>Paspalum vaginatum</i> monoculture Others: <i>Avicennia</i> sp <i>Cyperus articulatus</i> <i>Dodder cuscatha</i> <i>Fimbristylis small</i> <i>Imperata cylindrica</i> <i>Sesuvium portulacastrum</i> <i>Sesuvium white</i> <i>Sporobolus maritima</i> <i>Sporobolus pyramidalis</i>	Side of channel leading to Volta R from Keta Lagoon. Channel lined with <i>Typha</i> interspersed with Fern ?. Outside the <i>Typha</i> is an extensive floodplain of grasses and <i>Sesuvium portulacastrum</i> .

* Coordinates were initially read from 1:50 000 Ghana topographical maps (sheets 0600D4, 0500B2, E0601C3 & E0501A1 based on air photography December 1974) and in the field taken with a hand-held GPS (*Garmin GPS 45*) with an accuracy of about 100 m.

Songor lagoon

Site	Date	Coordinates*		Dominant species (Top 5)	Comments
		N	E		
SA07				Dominant: Others:	Terrestrial site – not sampled
SA13	26/11	00 51.7	00 34.0	Dominant: <i>Cyperus 2 Paspalum</i> <i>vaginatum</i> association Others: <i>Cyperus articulatus</i> <i>Sesuvium white</i>	Moist soil
SB04	22/11	5 51.0	00 25.0	Dominant: <i>Sesuvium portulacastrum</i> / <i>Sesuvium white</i> association Others: <i>Sporobolus pyramidalis</i>	Very dry

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
SB05	22/11	5 51.0	00 26.1	Dominant: <i>Typha domingensis</i> / <i>Neptunia oleracea</i> / <i>Paspalum vaginatum</i> association (Av depth 37 cm) Others: <i>Azolla africana</i> <i>Cyperus articulatus</i> <i>Lemna</i> sp <i>Mimosa pigra</i> <i>Nymphaea micrantha</i> <i>Parkinsonia aculeata</i> <i>Scirpus cubensis</i> <i>Utricularia inermis</i> <i>Wolfia</i> sp	Inundated
SB06	22/11	05 51.3	00 27.1	Dominant: <i>Sesuvium portulacastrum</i> / <i>Cyperus distans</i> association Others: <i>Chloris gayana</i> <i>Parkinsonia aculeata</i>	Very dry
SB07	22/11	05 51.1	00 28.0	Dominant: <i>Sesuvium portulacastrum</i> monoculture Others: <i>Sporobolus pyramidalis</i>	Very dry and heavily grazed by cattle
SB08	22/11	05 51.0	00 29.1	Dominant: <i>Cyperus 2</i> / <i>Sporobolus pyramidalis</i> / <i>Sesuvium white</i> association Others: <i>Cyperus articulatus</i> Dry herb <i>Paspalum vaginatum</i> <i>Typha domingensis</i>	Very dry
SB09	22/11	5 51.0	00 30.0	Dominant: <i>Cyperus 2</i> / <i>Cyperus water</i> association Others: <i>Cyperus articulatus</i> <i>Nymphaea micrantha</i> <i>Paspalum vaginatum</i> <i>Typha domingensis</i>	Very dry
SB10	22/11	5 50.9	00 31.0	Dominant: <i>Cyperus 5</i> / <i>Grass 1</i> / <i>Sesuvium white</i> association Others: <i>Cyperus articulatus</i> <i>Cyperus 2</i> <i>Fimbristylis small</i> <i>Ludwigia erecta</i> <i>Sesuvium portulacastrum</i> <i>Sporobolus pyramidalis</i>	Very dry

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
SB11	25/11	05 50.9	00 32.0	Dominant: <i>Cyperus water/ Sesuvium portulacastrum</i> association Others: <i>Chara</i> (senesced) - ordinary <i>Cyperus articulatus</i> <i>Cyperus 2</i> <i>Nymphaea micrantha</i> <i>Paspalum vaginatum</i> <i>Sesuvium white</i> <i>Typha domingensis</i>	Moist soil
SB12	25/11	05 50.9	00 30.0	Dominant: <i>Typha domingensis/ Cyperus articulatis/ Nymphaea micrantha/ Paspalum vaginatum</i> association. <i>Paspalum vaginatum/ Cyperus articulatis</i> association. <i>Cyperus articulatis/ Nymphaea micrantha/ Paspalum vaginatum</i> association. Others: Dry herb	Inundated. Within 50 m of a new road.
SB13	26/11	05 50.0	00 34.0	Dominant: <i>Cyperus water/ Sesuvium white</i> association Others: <i>Cyperus 2</i> <i>Nymphaea micrantha</i> <i>Paspalum vaginatus</i> <i>Sesuvium portulacastrum</i>	Edge of Truku lagoon. Wet
SB14	26/11	05 51.0	00 35.0	Dominant: <i>Cyperus water/ Sesuvium white/ Paspalum vaginatum/ Nymphaea micrantha</i> association. Others: <i>Avicennia</i> sp <i>Cassia</i> round <i>Cyperus articularis</i> <i>Cyperus distans</i> <i>Cyperus 2</i> <i>Fimbristylis dichotoma</i> <i>Sesuvium portulacastrum</i> <i>Sporobolus maritima</i> <i>Typha domingensis</i>	Inundated
SC03	22/11	5 58.1	00 24.1	Dominant: <i>Sesuvium portulacastrum</i> monoculture Others: <i>Cornocarpus</i> sp <i>Opuntia</i> sp <i>Sesuvium white</i> <i>Sporobolus pyramidalis</i>	Very dry

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
SC05	26/11	05 50.1	00 26.0	Dominant: <i>Sporobolus maritima</i> / <i>Sesuvium portulacastrum</i> association Others: <i>Cornocarpus</i> sp	Dry sand
SC11	25/11	05 50.1	00 32.2	Dominant: <i>Cyperus water</i> / <i>Nymphaea micrantha</i> / <i>Cyperus 2</i> association Others: <i>Paspalum vaginatum</i> <i>Typha domingensis</i>	200 m short of site inundated site - deep
SC12	25/11	05 50.0	00 33.0	Dominant: <i>Cyperus articulatus</i> monoculture Others: <i>Cyperus distans</i> <i>Cyperus 2</i> <i>Paspalum vaginatum</i> <i>Sesuvium portulacastrum</i> <i>Sesuvium white</i>	Dry land. Grazed. Little biomass
SC13	26/11	05 49.9	00 33.9	Dominant: <i>Sesuvium portulacastrum</i> / <i>Sesuvium white</i> association Others: <i>Cyperus articulatus</i> <i>Paspalum vaginatum</i>	Dry cracked pan near lagoon
SC14	26/11	05 50.1	00 34.9	Dominant: <i>Cyperus 2</i> monoculture Others: <i>Cyperus water</i> <i>Nymphaea micrantha</i>	Extensive swamp
SC15	26/11	05 50.0	00 36.0	Dominant: <i>Fimbristylis tall</i> / <i>Sporobolus pyramidalis</i> / <i>Grass 1</i> / <i>Cyperus distans</i> association Others: <i>Cyperus 1</i>	Grazed plain
SD01	23/11	5 49.0	00 22.0	Dominant: <i>Sporobolus pyramidalis</i> / <i>Cyperus articulatus</i> association Others: Grass 1 Grass 2 <i>Sesuvium white</i>	Very dry and area had been burnt. Some regrowth after fire.
SD09	26/11	05 49.1	00 30.1	Dominant: <i>Sesuvium portulacastrum</i> monoculture	Dry sand
SD10	26/11	05 49.0	00 31.0	Dominant: <i>Sesuvium portulacastrum</i> / <i>Sporobolus maritima</i> association Others: <i>Cassia</i> round <i>Sesuvium white</i>	Dry sand

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
SD11	25/11	05 49.0	00 32.0	Dominant: <i>Fimbristylis dichotoma</i> / <i>Sporobolus pyramidalis</i> / <i>Cyperus 1</i> association. Others: <i>Cyperus articulatus</i> Grass 1 (see SD01) <i>Sesuvium white</i>	Dry site
SD12	25/11	05 49.1	00 32.9	Dominant: <i>Typha domingensis</i> / <i>Cyperus articulatus</i> / <i>Nymphaea micrantha</i> association Others: <i>Cyperus 1</i> <i>Cyperus 2</i> <i>Eleocharis</i> <i>Ludwigia erecta</i> <i>Nymphaea micrantha</i> <i>Paspalum vaginatum</i> Succulent 1 Shrub	Isolated stands of <i>Typha</i> in depressions. Moist ground.
SD13	26/11	05 48.9	00 34.0	Dominant: <i>Sporobolus pyramidalis</i> / <i>Paspalum vaginatum</i> / <i>Sesuvium white</i> association Others: <i>Cyperus articulatus</i> <i>Cyperus distans</i> <i>Ludwigia erecta</i> Shrub A	Subject to inundation. Flat – open
SD14	26/11	05 48.6	00 34.9	Dominant: <i>Cyperus 2</i> / <i>Paspalum vaginatum</i> association Others: <i>Algal scum</i> <i>Avicennia juvenile</i>	Some distance from site - access difficulties
SD15	26/11	05 49.0	00 35.9	Dominant: <i>Sporobolus pyramidalis</i> / <i>Sesuvium white</i> association Others: <i>Cyperus articulatus</i> <i>Paspalum vaginatum</i>	Dry floodplain
SE01	23/11	5 48.0	00 22.1	Dominant: <i>Grass 1</i> / <i>Cyperus articulatus</i> / <i>Sporobolus pyramidalis</i> association Others: <i>Cassia round</i> <i>Ludwigia erecta</i>	Very dry

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
SE02	23/11	5 48.3	00 23.1	Dominant: <i>Sporobolus pyramidalis</i> / <i>Sesuvium white</i> / <i>Cyperus articulatus</i> association <i>Cyperus articulatus</i> / <i>Paspalum vaginatum</i> / <i>Sporobolus pyramidalis</i> association Others: <i>Cassia</i> round <i>Cyperus 1</i> <i>Paspalum vaginatum</i> <i>Sesuvium portulacastrum</i>	Very dry; a long way from lagoon
SE05	23/11	5 48.0	00 26.1	Dominant: <i>Paspalum vaginatum</i> / <i>Sesuvium portulacastrum</i> / <i>Cyperus distans</i> association. Others: <i>Andropogon gayanus</i> <i>Avicennia nitida</i> <i>Brachiaria mutica</i> <i>Cyperus articulatus</i> <i>Sesuvium white</i> <i>Sporobolus pyramidalis</i> <i>Vernonia</i> sp Woody herb (KE20)	On edge of lagoon 150 m from designated point. Very dry.
SE06	23/11	5 48.0	00 27.0	Dominant: <i>Fimbristylis tall</i> / <i>Sporobolus pyramidalis</i> association Others: <i>Andropogon contortus</i> Grass 2 (SD01) Herb woody sida-like <i>Sesuvium portulacastrum</i> <i>Sesuvium white</i>	Very dry.
SE10	25/11	05 48.1	00 31.1	Dominant: <i>Sesuvium portulacastrum</i> / <i>Sporobolus maritima</i> association Others: <i>Avicennia nitida</i> (juveniles) <i>Chloris gayana</i> <i>Cyperus articulatus</i> <i>Paspalum vaginatum</i> <i>Sesuvium white</i> Shrub A	Edge of lagoon short of the site.
SE11	25/11	05 47.9	00 32.0	Dominant: <i>Typha domingensis</i> / <i>Cyperus articulatus</i> / <i>Paspalum vaginatum</i> association. <i>Paspalum vaginatum</i> / <i>Cyperus articulatus</i> association. Others: <i>Cyperus 1</i> <i>Cyperus 2</i> <i>Cyperus distans</i>	Small depression in a grassy plain containing a stand of <i>Typha</i> surrounded by <i>Paspalum vaginatum</i> . Moist soil

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
SE12	25/11	05 48.0	00 33.0	Dominant: <i>Sporobolus pyramidalis</i> monoculture Others: <i>Cyperus articulatus</i> <i>Cyperus 1</i> Dry herb <i>Paspalum vaginatum</i> <i>Sesuvium white</i> <i>Typha domingensis</i>	Dry grassy plain of <i>Sporobolus</i> and <i>Paspalum</i>
SE13	26/11	05 48.0	00 33.9	Dominant: <i>Cyperus water/ Sesuvium</i> <i>white/ Paspalum vaginatum</i> association Others: <i>Avicennia sp</i> <i>Cyperus 2</i> <i>Nymphaea micrantha</i> <i>Sesuvium portulacastrum</i>	200 m short of site. Deep water
SE14	26/11	05 48.0	00 34.9	Dominant: <i>Sesuvium white/ Fimbristylis</i> <i>tall</i> association Others: <i>Sporobolus pyramidalis</i> Wine palms	Dry plain subject to inundation
SE15	26/11	05 48.0	00 36.0	Dominant: <i>Cyperus articulatus/ Paspalum</i> <i>vaginatum</i> association. Others: Shrub A	Dry plain subject to inundation
SE16	24/11	05 48.0	00 37.0	Dominant: <i>Fimbristylis dichotoma/</i> <i>Sporobolus pyramidalis</i> association Others: <i>Paspalum vaginatum</i> <i>Sesuvium white</i>	Dry land
SF08	24/11	05 47.3	00 29.0	Dominant: <i>Sporobolus pyramidalis</i> monoculture Others: <i>Avicennia nitida</i> <i>Euphorbia sp</i> <i>Coranarpus sp</i>	Dry land

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
SF09	24/11	05 47.1	00 29.9	Dominant: <i>Sesuvium portulacastrum</i> / <i>Sporobolus pyramidalis</i> association (av depth 2 cm) <i>Sporobolus pyramidalis</i> / <i>Sesuvium portulacastrum</i> association (av depth 2 cm) Others: <i>Avicennia nitida</i> <i>Canavalia rosea</i> <i>Cocos nucifera</i> <i>Fimbristylis short</i> <i>Paspalum vaginatum</i> <i>Remerea maritima</i> <i>Sesuvium white</i> <i>Sporobolus maritima</i>	Inundated
SF10	24/11	05 47.16	00 31.0	Dominant: No dominant plants Others: Scattered <i>Sesuvium portulacastrum</i> <i>Sporobolus pyrimidalis</i>	Dry land
SF11	24/11	05 47.0	00 31.9	Dominant: <i>Sporobolus pyramidalis</i> monoculture Others: <i>Fimbristylis tall</i> <i>Fimbristylis short</i> <i>Remerea maritima</i> <i>Sesuvium portulacastrum</i> <i>Sesuvium white</i>	Dry land
SF12	24/11	05 47.0	00 33.0	Dominant: <i>Sesuvium portulacastrum</i> / <i>Sesuvium white</i> / <i>Sporobolus</i> <i>pyramidalis</i> association Others: <i>Avicennia nitida</i> <i>Cassia round</i> <i>Climber</i> <i>Crotalaria retusa</i> <i>Cyperus articulatus</i> <i>Cyperus distans</i> <i>Fimbristylis tall</i> <i>Imperata cylindrica</i> <i>Paspalum vaginatum</i> <i>Short woody herb</i> <i>Vernonia sp</i>	Dry land

Site	Date	Coordinates		Dominant species (Top 5)	Comments
		N	E		
SF13	24/11	05 47.1	00 34.1	Dominant: <i>Paspalum vaginatis</i> monoculture Others: <i>Azolla africana</i> <i>Brachiaria mutica</i> <i>Cyperus 2</i> <i>Cyperus articulatus</i> <i>Cyperus distans</i> <i>Eclipta prostrata</i> <i>Ludwigia erecta</i> <i>Nymphaea micrantha</i> <i>Pistia stratiotes</i> <i>Eleocharis</i> sp <i>Typha domingensis</i>	Moist soil Market gardens pushing out in lagoon
SF14	24/11	05 47.1	00 35.1	Dominant: <i>Paspalum vaginatis</i> momoculture Others: <i>Cyperus distans</i> <i>Eclipta prostrata</i> <i>Nymphaea lotus</i> <i>Paspalum 2</i> inflorescences (see SF13) <i>Pistia stratiotes</i> <i>Sphenoclea zeylanica</i> <i>Typha domingensis</i>	Moist soil Market gardens pushing out in lagoon
SF15	24/11	05 47.2	00 36.1	Dominant: <i>Paspalum vaginatum</i> / <i>Cyperus articulatus</i> /Succulent 1 association Others: <i>Cyperus distans</i> <i>Ludwigia erecta</i> <i>Typha domingensis</i>	Dry land Market gardens pushing out in lagoon
SF16	24/11	05 47.2	00 37.0	Dominant: <i>Typha domingensis</i> / <i>Cyperus articulatus</i> association (av. depth 24 cm) Others: <i>Azolla africana</i> <i>Pistia stratiotes</i>	Inundated Market gardens pushing out in lagoon

* Coordinates were initially read from 1:50 000 Ghana topographical maps (sheets 0600D4, 0500B2, E0601C3 & E0501A1 based on air photography December 1974) and in the field taken with a hand-held GPS (*Garmin GPS 45*) with an accuracy of about 100 m.

Angor channel

Site	Date	Coordinates		Species list	Comments
		N	E		
C1	6/12	05 46.7	00 41.0	Dominant: <i>Paspalum vaginatum</i> / <i>Ipomea pes-caprae</i> /Creeper 1 association Others: <i>Brachiaria</i> ? <i>Canavalia rosea</i> <i>Combretum</i> ? <i>Commelina</i> (common, blue flowers) <i>Cyperus articulatus</i> <i>Cyperus distans</i> ? <i>Fimbristylis tall</i> Grass 1 Herb 1 <i>Momordica</i> ? <i>Nauclea</i> ? <i>Remerea maritima</i> Sedge 1 (round stem, composite head) <i>Sesbania</i> <i>Sphenoclea</i> sp <i>Sporobolus pyramidalis</i> <i>Vossia</i>	Near mouth of river. Beach like edge to Channel
C2	6/12	05 46.8	00 42.0	Dominant: <i>Acrochetium areum</i> / <i>Sesbania</i> ? association Others: <i>Cyperus distans</i> <i>Fimbristylis tall</i> (see R1) Grass 1 <i>Laguncularia</i> sp <i>Nauclea</i> <i>Paspalum vaginatum</i> <i>Rhizophora racemosa</i> <i>Typha domingensis</i> <i>Vossia</i>	
C3	6/12	05 46.9	00 43.0	Dominant: <i>Typha domingensis</i> Others: <i>Acrochetium areum</i> <i>Ipomea aquatica</i> <i>Ludwigia stolonifera</i> <i>Rhizophora racemosa</i> <i>Sphenoclea</i> <i>Vossia</i>	

Site	Date	Coordinates		Species list	Comments
		N	E		
C4	6/12	05 47.7	00 43.0	Dominant: <i>Vossia sp monoculture</i> Others: <i>Acrochetium areum</i> <i>Brachiaria sp</i> <i>Paspalum vaginatum</i> <i>Rhizophora racemosa</i> <i>Sesbania ?</i> <i>Typha domingensis</i>	
C5	6/12	05 48.6	00 43.0	Dominant: <i>Rhizophora racemosa monoculture</i> Others: <i>Acrochaetium areum</i> <i>Typha domingensis</i> <i>Vossia</i>	
C6	6/12	05 48.2	00 44.0	Dominant: <i>Typha domingensis monoculture</i> Others: <i>Rhizophora racemosa</i> <i>Vossia</i>	
C7	6/12	05 48.0	00 45.0	Dominant: <i>Typha domingensis monoculture</i> Others: No others	
C8	6/12	05 47.0	00 46.0	Dominant: <i>Rhizophora racemosa monoculture</i> Others: <i>Acrochetium areum</i>	
C9	6/12	05 46.6	00 47.0	Dominant: <i>Rhizophora racemosa regrowth</i> Others: <i>Acrochaetium areum</i> <i>Paspalum vaginatum</i> Sedge 1 <i>Typha domingensis</i>	Regrowth of juvenile <i>Rhizophora</i> following harvest
C10	6/12	05 46.8	00 48.0	Dominant: <i>Typha domingensis monoculture</i> <i>Rhizophora racemosa monoculture</i> Others: <i>Ceratophyllum demersum</i> <i>Nymphaea lotus</i> <i>Paspalum vaginatum</i>	On channel edge; impenetrable <i>Typha</i> stand. 300 m south of site.
C11	6/12	05 46.8	00 49.0	Dominant: <i>Typha domingensis monoculture</i> Others: <i>Ceratophyllum demersum</i> Fern (marsilea like) <i>Nymphaea lotus</i> <i>Rhizophora racemosa</i>	

Site	Date	Coordinates		Species list	Comments
		N	E		
C12	6/12	05 47.0	00 50.0	Dominant: <i>Typha domingensis</i> monoculture Others: <i>Ceratophyllum demersum</i> <i>Rhizophora racemosa</i>	

* Coordinates are given as degrees and minutes with the latter having an integer and decimal component (eg 05 48.4 N = 05° 48.4' N)

