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The relationship between catchment characteristics and lake chemistry in the Republic of Ireland

Volume II of II

By

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Thesis submitted in fulfilment for the degree of Doctor in Philosophy
to Trinity College, University of Dublin.

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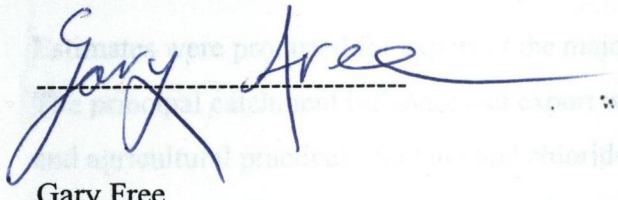

Gary Free

Summary

The purpose of this thesis was to examine the relationships between catchment characteristics and lake chemistry in the Republic of Ireland. Additional aims were to examine the seasonal variation in water chemistry and, where possible, variation over a period of years. The impetus for this research came from draft work on the European Union's Water Framework Directive which currently requires catchment information to be used for the definition of lake types, risk assessment, and the design of monitoring programmes.

Thirty-one lakes were sampled monthly or approximately quarterly during 1996 and 1997. This sample contained a wide range of the types of catchments and lakes found in Ireland. In addition, a more limited suite of information on 189 lakes and catchments was examined.

Estimates were produced for export of the major ions Na^+, Cl^-, K^+, Mg^{2+}, Ca^{2+} and SO_4^{2-}. The principal catchment influences on export were rock type, deposition of marine salts and agricultural practices. Sodium and chloride had a curvilinear decline from the west coast indicating that aerosol deposition of sea-salts was an important factor. Examining export rates led to the discovery of a good curvilinear fit whereas previous work that used concentration found only an approximate trend. A highly significant relationship between K^+ fertiliser application and non-marine K^+ export indicted that agricultural practices were an important controlling factor. The similarity of the Cl^- to SO_4^{2-} ratio between atmospheric deposition and export indicated that SO_4^{2-} inputs and outputs were in balance with the exception of lakes in Cavan and Monaghan where SO_4^{2-} export was substantially higher than atmospheric deposition. This was attributed to a higher soil organic S pool and increased mineralisation in this region following the drought of 1995. The amount of chemical weathering in catchments located on resistant rock types was investigated by calculating the export of non-marine base cations (C_B). Catchment area (m^2) divided by mean catchment relief explained 94% of the variation in C_B ($r^2 = 0.94$, $p \leq 0.0001$, $n = 13$).

Colour was found to be highest in lakes with peatland catchments, short residence times and few upstream lakes. In addition, lakes receiving high rainfall (> 1800 mm) in peatland catchments typically had low colour. This may suggest that there is a finite 'store' of colour available for release in catchments and that high rainfall dilutes this store resulting

in low colour. Examination of 10 years of data on colour and rainfall in Lough Pollaphuca revealed that the variation in colour was mainly caused by variation in rainfall with no obvious influence of dry periods in the summer as found in England. Negative relationships were found between colour and sunshine hours and sheep density. Colour was found to significantly reduce transparency and in certain cases decrease the dissolved oxygen concentration.

In contrast to national trends, no increase in TP concentration was found in three lakes in County Clare since 1981. Catchment characteristics that described agriculture (mainly pasture) were the most strongly correlated with TP export and concentration in both the 31 and 189 lake data-sets. Wet soils tended to export more TP than dry soils. Two published export coefficient models were used to predict TP export. Overall, the performances of the models were not adequate for them to be used as predictive tools. However, coefficients applied to a subset of six lakes that had agricultural catchments resulted in the explanation of 93% of the variation between observed and predicted export. However, the export was substantially overestimated but the significant relationship indicated that the model might be useful if the magnitude of the coefficients were reduced.

The seasonal variation in the concentration and fractional composition of nitrogen was examined. An 81 - 105% increase in TN, mainly in the NO_3^- fraction, was found between 1981-2 and 1996-7 in four Clare lakes. This was attributed to increased fertiliser application although higher mineralisation following a drought in 1995 may also have been responsible. Multiple regression explained 83% of the variation in TN and indicated that concentrations were highest in catchments that received large amounts of N fertiliser, low precipitation and where lakes were a small proportion of the catchment area.

Factors that were important throughout the thesis included the influence of drought, effect of elevated summer rainfall, and the unique behaviour of lake chemistry in limestone catchments.

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Plate 1.5 Lough Caragh.



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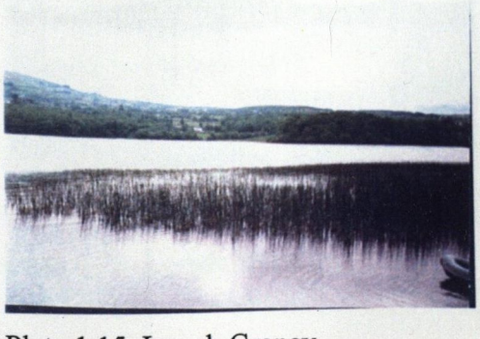

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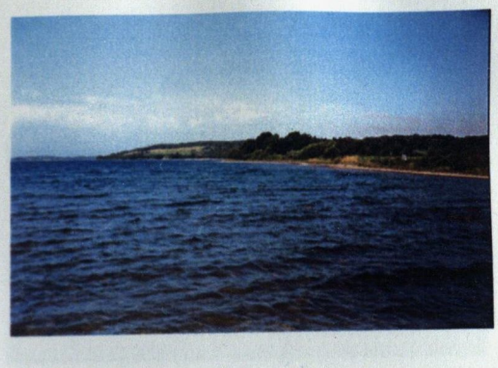

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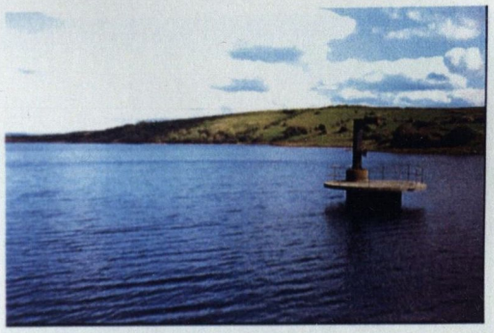

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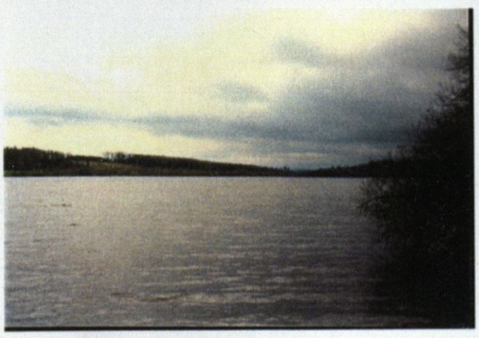

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APPENDIX 2 CHEMICAL AND PHYSICAL DATA FOR 31 LAKES

Table 2.1 Temperature °C profiles of Lough Ballycullinan.

Depth (m)	10 Apr 96	10 Jun 96	08 Jul 96	09 Sep 96	13 Jan 97	08 Apr 97	02 Jun 97	30 Jun 97	17 Sep 97	08 Dec 97
0	11.1	16.9	17.5	18.6	4.8	11.8	19.5	15.8	14.9	7.4
1		16.9	17.5					15.8	14.9	7.4
2	9.4	16.8	17.3	18.2	4.7		19.4	15.8	14.9	7.4
3		15.9	16.6	17.7			16.5	15.4	14.9	7.4
4	9.0	15.8	16.3	17.1	4.6		14.9	15.2	14.9	7.4
5		14.8	15.2	15.8			13.9	14.9	14.9	7.4
6	8.0	13.0	13.1	13.1	4.6		13.4	14.9	14.8	7.4
7		11.7	11.1	11.3				14.6	14.8	7.4
8	6.9	9.8		10.3	4.6				14.7	
9		9.7		9.4	4.5				11.8	
10									10.9	

Table 2.2 Oxygen mg l^{-1} profiles of Lough Ballycullinan.

Depth (m)	10 Apr 96	10 Jun 96	08 Jul 96	09 Sep 96	13 Jan 97	08 Apr 97	02 Jun 97	30 Jun 97	17 Sep 97	08 Dec 97
0	-	11.0	13.8	11.2	9.5	-	9.3	9.8	6.0	8.8
1		10.9	14.0					9.6	5.9	8.8
2		10.8	13.7	11.1	9.5		9.8	9.6	5.7	8.8
3		9.4	8.1	6.7			11.6	8.8	5.7	8.8
4		9.2	5.7	0.2	9.5		10.1	8.6	5.6	8.8
5		3.3	0.2	0.0			6.0	8.0	5.5	8.8
6		0.2	0.1	0.0	9.5		2.8	7.2	5.4	8.8
7		0.1	0.1	0.0				6.4	5.3	8.8
8		0.0		0.0	9.5				4.8	
9		0.0		0.0	8.9				0.1	
10									0.1	

Table 2.3 Values of pH, alkalinity, conductivity and colour recorded in Lough Ballycullinan between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
10/04/96	8.36	198	465	19
10/06/96	8.25	171	401	17
08/07/96	8.55	155	374	17
09/09/96	8.46	145	363	15
13/01/97	7.97	198	490	26
08/04/97	8.19	179	460	22
02/06/97	8.34	181	405	23
30/06/97	8.21	181	401	21
17/09/97	7.95	192	439	29
08/12/97	8.10	232	511	24

Table 2.4 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Ballycullinan between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	$SO^2{}_4^-$ mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
10/04/96	23.5	7.5	4.8	13.1	3.3	74.6
10/06/96	22.0	6.0	4.6	12.5	2.9	62.1
08/07/96	22.4	5.8	4.8	12.7	2.8	56.1
09/09/96	22.8	5.3	4.7	12.3	2.8	53.9
13/01/97	24.0	8.9	4.7	11.9	3.4	80.6
08/04/97	29.3	8.9	4.4	14.0	3.2	72.0
02/06/97	27.7	7.1	4.3	14.1	2.6	70.6
30/06/97	27.4	6.9				
17/09/97	23.5	5.8				
08/12/97	20.2	6.6				

Table 2.5 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Ballycullinan between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
10/04/96	31	3	2.16	1.87	1.19	0.30	0.02	0.02
10/06/96	52	3	0.79	0.50	<.05	0.50	0.48	0.48
08/07/96	47	5	1.31	0.54	<.05	0.68	0.65	0.66
09/09/96	26	4	0.76	0.56	<.05	0.49	0.43	0.43
13/01/97	31	17	1.97	1.89	1.35	1.96	1.95	1.94
08/04/97	16	4	1.49	1.46	1.02	0.15	0.11	0.11
02/06/97	16	4	0.66	0.59	<.05	0.74	0.63	0.65
30/06/97	24	7	0.72	0.59	<.05	1.11	1.07	1.10
17/09/97	32	7	0.65	0.36	<.05	1.87	1.62	1.62
08/12/97	38	35	1.11	1.06	0.42	2.83	2.82	2.92

Table 2.6 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Ballycullinan.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
10/04/96	35.8	-	1.8
10/06/96	28.4	-	1.2
08/07/96	68.2	17.10	0.6
09/09/96	18.2	1.96	1.7
13/01/97	9.5	1.12	3.0
08/04/97	7.1	0.80	5.6
02/06/97	6.7	1.38	2.9
30/06/97	16.3	1.33	2.9
17/09/97	20.6	2.97	1.8
08/12/97	1.7	0.68	5.1

Table 2.7 Summary statistics of Lough Ballycullinan.

	Mean	95% C.I.	n	Max.	Min.
pH	8.20	0.14	10	8.55	7.95
Alkalinity mg l^{-1} $CaCO_3$	183	15	10	232	145
Conductivity µS cm^{-1}	431	31	10	511	363
Turbidity NTU	3.42	3.86	8	17.10	0.68
Colour mg l^{-1} PtCo	21	3	10	29	15
Chlorophyll *a* µg l^{-1}	21.3	12.1	10	68.2	1.7
MRP µg l^{-1}	9	6	10	35	3
TP µg l^{-1}	31	7	10	52	16
TDP µg l^{-1}	14	6	10	38	8
NO_3^--N mg l^{-1}	0.40	0.35	10	1.35	< .05
TN mg l^{-1}	1.16	0.34	10	2.16	0.65
TDN mg l^{-1}	0.94	0.37	10	1.89	0.36
SiO_2-Si mg l^{-1}	0.99	0.57	10	2.92	0.02
TSi mg l^{-1}	1.06	0.54	10	2.83	0.15
TDSi mg l^{-1}	0.98	0.55	10	2.82	0.02
Cl^- mg l^{-1}	24.3	1.8	10	29.3	20.2
SO_4^{2-} mg l^{-1}	6.9	0.8	10	8.9	5.3
Mg^{2+} mg l^{-1}	4.6	0.1	7	4.8	4.3
Na^+ mg l^{-1}	12.9	0.6	7	14.1	11.9
K^+ mg l^{-1}	3.0	0.2	7	3.4	2.6
Ca^{2+} mg l^{-1}	67.1	7.4	7	80.6	53.9

Table 2.8 Temperature °C profiles of Lough Ballyquirke.

Depth (m)	12 Apr 96	08 May 96	12 Jun 96	11 Jul 96	14 Aug 96	12 Sep 96	16 Oct 96	15 Jan 97	11 Mar 97	10 Apr 97	06 May 97	04 Jun 97	03 Jul 97	10 Aug 97	18 Sep 97	14 Oct 97	11 Dec 97
0	10.0	12.8	16.1	17.5	20.1	16.8	11.6	5.6	7.7	12.2	12.6	19.3	13.8	17.3	14.4	11.2	8.5
1				15.5	18.1									17.3	14.4	11.2	8.5
2	10.0	11.6	16.0	17.4	17.8	16.8	11.6	5.6	7.6		12.6	19.0	13.8	17.3	14.4	11.2	8.4
3				17.4	17.7							18.1		17.1	14.4	11.2	8.4
4	9.9	10.7	16.0	17.5	17.4	16.8	11.5	5.6	7.5		12.6	15.0	13.7	16.6	14.4	11.2	8.4
5				17.4	17.2							13.9		15.8	14.3	11.2	8.4
6	9.9	10.2	15.9	17.4	17.1	16.8	11.5	5.6	7.3		12.6	13.5	13.7	15.5	14.3	11.2	8.4
7				17.4	17.0							13.1		15.3	14.2	11.2	
8	9.9	10.1	15.7	16.7	16.9	16.7	11.5	5.6	7.2		12.6	12.7	13.7	15.2	14.1		8.4
9					16.9		11.5	5.6				12.4			14.1		8.4
10	9.9	10.0	15.5		16.8	16.7			7.2		12.6	12.3	13.7		14.1		8.4
11			15.4		16.8	16.7			7.2			12.3	13.7				8.4
12	8.1	9.9									12.6	12.1					8.4
13	7.4																

Table 2.9 Oxygen mg l^{-1} profiles of Lough Ballyquirke.

Depth (m)	12 Apr 96	08 May 96	12 Jun 96	11 Jul 96	14 Aug 96	12 Sep 96	16 Oct 96	15 Jan 97	11 Mar 97	10 Apr 97	06 May 97	04 Jun 97	03 Jul 97	10 Aug 97	18 Sep 97	14 Oct 97	11 Dec 97
0	12.2	11.9	10.0	10.1	12.1	8.8	10.2	12.8	11.8	-	10.5	10.4	11.5	8.8	8.9	9.3	10.5
1				10.0	12.2									8.8	8.9	9.2	10.4
2	12.3	11.6	9.9	9.9	10.9	8.6	10.1	12.8	11.9		10.7	10.3	11.0	8.8	8.9	9.2	10.4
3				9.9	9.4							9.5		8.7	8.9	9.2	10.4
4	12.0	11.0	9.9	9.8	8.7	8.5	10.0	12.9	11.8		10.8	8.0	11.0	8.7	8.9	9.2	10.4
5				9.8	8.0							7.5		8.0	9.0	9.2	10.4
6	12.0	10.5	9.8	9.8	7.8	8.5	10.0	12.8	11.7		11.1	7.2	10.9	7.6	8.9	9.2	10.4
7				9.8	8.0							6.5		7.3	8.8	9.2	
8	12.2	10.4	9.6	8.7	7.4	7.9	10.0	12.8	11.4		11.2	5.7	10.9	7.0	8.7		10.4
9					7.0		10.0	12.8				4.6			8.6		10.4
10	12.2	10.1	9.2		6.6	7.5			11.2		11.5	3.5	11.0		8.6		10.3
11			8.9		5.7	7.5			11.2			3.1	10.7				10.3
12	11.2	9.7									11.5	2.3					10.3
13	9.9																

Table 2.10 Values of pH, alkalinity, conductivity and colour recorded in Lough Ballyquirke between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
12/04/96	7.91	45	177	84
08/05/96	7.79	48	180	94
12/06/96	7.94	50	179	71
11/07/96	8.17	61	201	48
14/08/96	8.06	66	213	43
12/09/96	8.00	69	221	36
16/10/96	7.47	33	156	119
15/01/97	7.74	51	195	89
11/03/97	7.37	40	210	67
10/04/97	7.90	50	226	51
06/05/97	7.84	51	201	46
04/06/97	8.14	56	204	46
03/07/97	7.86	48	178	77
10/08/97	7.57	36	155	143
18/09/97	7.67	35	143	169
14/10/97	7.47	35	141	165
11/12/97	7.61	37	149	154

Table 2.11 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Ballyquirke between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
12/04/96	18.1	7.4	1.9	10.3	1.1	20.0
08/05/96	17.6	6.6	2.0	10.3	1.0	20.0
12/06/96	17.4	7.0	2.1	11.5	1.1	20.0
11/07/96	18.6	7.2	2.3	11.8	1.1	24.0
14/08/96	19.1	7.0	2.5	11.0	1.1	25.7
12/09/96	19.8	7.0	2.6	11.9	1.1	27.0
16/10/96	18.7	8.2	2.1	11.1	1.1	14.3
15/01/97	20.2	8.2	2.3	11.2	1.1	23.4
11/03/97	28.7	8.0	2.5	15.6	1.2	19.1
10/04/97	29.7	8.4	2.7	15.7	1.3	22.4
06/05/97	29.9	8.3	2.6	15.6	1.2	20.1
04/06/97	29.8	8.0	2.7	15.5	1.1	23.1
03/07/97	23.3	6.9				
10/08/97	18.9	5.7				
18/09/97	17.4	4.7				
14/10/97	17.3	4.3				
11/12/97	17.5	5.3				

Table 2.12 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Ballyquirke between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
12/04/96	19	4	1.05	0.98	0.68	0.86	0.73	0.72
08/05/96	18	3	0.98	0.98	0.46	0.57	0.47	0.44
12/06/96	21	2	0.64	0.52	0.14	0.23	0.07	0.05
11/07/96	24	4	0.72	0.46	0.01	0.45	0.33	0.33
14/08/96	18	5	0.63	0.45	0.07	0.66	0.57	0.58
12/09/96	16	3	0.64	0.52	0.01	0.60	0.48	0.45
16/10/96	20	4	0.91	0.80	0.22	0.91	0.83	0.81
15/01/97	17	12	1.12	1.09	0.63	1.53	1.52	1.51
11/03/97	21	6	1.00	0.97	0.58	1.04	0.97	0.91
10/04/97	13	5	0.91	0.79	0.41	0.53	0.38	0.38
06/05/97	20	4	0.74	0.60	0.23	0.36	0.18	0.16
04/06/97	16	3	0.64	0.25	0.05	0.32	0.23	0.21
03/07/97	23	8	0.85	0.75	0.20	0.87	0.72	0.70
10/08/97	22	6	0.93	0.85	0.20	0.88	0.82	0.78
18/09/97	25	7	0.99	0.86	0.22	1.04	0.99	0.91
14/10/97	23	6	0.81	0.74	0.26	1.17	1.11	1.03
11/12/97	21	11	0.97	0.92	0.40	1.37	1.33	1.32

Table 2.13 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Ballyquirke.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
12/04/96	10.9	-	1.0
08/05/96	10.9	-	1.3
12/06/96	18.9	-	1.0
11/07/96	23.1	8.55	1.0
14/08/96	21.2	7.34	1.0
12/09/96	15.2	5.75	1.4
16/10/96	5.2	4.49	1.0
15/01/97	2.3	2.45	1.5
11/03/97	5.2	1.95	1.6
10/04/97	10.1	2.63	1.8
06/05/97	10.0	3.63	1.7
04/06/97	12.4	4.90	1.6
03/07/97	12.0	4.33	1.4
10/08/97	6.1	3.03	1.0
18/09/97	8.5	4.18	0.9
14/10/97	3.5	3.86	0.9
11/12/97	1.9	3.91	0.9

Table 2.14 Summary statistics of Lough Ballyquirke.

	Mean	95% C.I.	n	Max.	Min.
pH	7.73	0.14	17	8.17	7.37
Alkalinity mg l^{-1} $CaCO_3$	48	5	17	69	33
Conductivity µS cm^{-1}	184	13	17	226	141
Turbidity NTU	4.36	0.96	14	8.55	1.95
Colour mg l^{-1} PtCo	88	22	17	169	36
Chlorophyll *a* µg l^{-1}	10.4	3.0	17	23.1	1.9
MRP µg l^{-1}	5	1	17	12	2
TP µg l^{-1}	20	2	17	25	14
TDP µg l^{-1}	8	2	17	15	4
NO_3^--N mg l^{-1}	0.28	0.10	17	0.68	< .05
TN mg l^{-1}	0.86	0.08	17	1.12	0.63
TDN mg l^{-1}	0.74	0.11	17	1.09	0.25
SiO_2-Si mg l^{-1}	0.66	0.19	17	1.51	0.05
TSi mg l^{-1}	0.79	0.18	17	1.53	0.23
TDSi mg l^{-1}	0.69	0.19	17	1.52	0.07
Cl^- mg l^{-1}	21.3	2.3	17	29.9	17.3
SO_4^{2-} mg l^{-1}	7.0	0.6	17	8.4	4.3
Mg^{2+} mg l^{-1}	2.3	0.2	12	2.7	1.9
Na^+ mg l^{-1}	12.6	1.3	12	15.7	10.3
K^+ mg l^{-1}	1.1	0.0	12	1.3	1.0
Ca^{2+} mg l^{-1}	21.6	1.9	12	27.0	14.3

Table 2.15 Temperature °C profiles of Lough Bray.

Depth (m)	25 Apr 96	25 Jun 96	25 Jul 96	24 Sep 96	27 Jan 97	18 Apr 97	17 Jun 97	10 Jul 97	23 Sep 97	02 Dec 97
0	5.7	17.2		12.4	3.7	10.7	14.3	18.5	12.8	8.0
1								18.0	12.8	8.0
2	5.7	16.8	16.3	12.4	3.6		13.4	14.9	12.7	8.0
3		14.6						12.8	12.7	8.0
4	5.8	13.9	15.8	12.4	3.6		12.6	12.1	12.7	8.0
5		11.9						11.9	12.7	8.0
6	5.7	11.5	13.9	12.4	3.6		12.3	11.7	12.7	8.0
7		11.3						11.5	12.3	8.0
8	5.7	11.1	13.5	12.4	3.6		11.9	11.3	12.3	8.0
9							11.3		12.2	8.0
10	5.7	10.5	13.0	12.3	3.6		10.7	10.8	12.2	8.0
11							9.3		12.2	8.0
12	5.7	9.3	12.7	12.3	3.5		8.8	10.6	12.2	8.0
13									12.2	8.0
14	5.7	8.9	12.0	12.3	3.5		8.3	10.1	12.2	8.0
15									12.1	8.0
16	5.7	8.6	9.8	12.3	3.5		8.1	9.2	12.1	8.0
17				12.3					12.1	8.0
18	5.7	8.2	8.3	9.2	3.5		8.0	8.3	12.0	8.0
19				8.2					11.9	8.0
20	5.7	7.8	7.7	7.9	3.5		7.9	8.1	11.7	8.0
21				7.6					10.3	8.0
22	5.7	7.3	7.6		3.5		7.9	7.9	8.8	8.0
23				7.4					8.3	8.0
24	5.7	7.0	7.6	7.3	3.5		7.8	7.8	8.2	8.0
25									8.1	8.0
26	5.7	6.8	7.2	7.3	3.5		7.8	7.7	8.0	8.0
27				7.3					8.0	8.0
28	5.7	6.8	7.1	7.2	3.5		7.7	7.7	7.9	8.0
29									7.9	8.0
30	5.7	6.8	7.0		3.5		7.7	7.7	7.9	8.0
31					3.5		7.7	7.7	7.9	8.0
32	5.7	6.8	7.0		3.5		7.7		7.9	8.0
33									7.9	
34									7.8	
35									7.8	
36									7.8	
37									7.8	
38									7.8	

Table 2.16 Oxygen mg l^{-1} profiles of Lough Bray.

Depth (m)	25 Apr 96	25 Jun 96	25 Jul 96	24 Sep 96	27 Jan 97	18 Apr 97	17 Jun 97	10 Jul 97	23 Sep 97	02 Dec 97
0	12.2	13.0		12.6	13.2	-	12.0	9.1	9.8	10.5
1								9.2	9.8	10.4
2	12.3	13.1	9.8	12.6	13.7		12.0	9.5	9.8	10.4
3		13.7						9.8	9.8	10.4
4	12.4	13.0	9.8	12.6	13.7		11.6	9.3	9.8	10.4
5		13.4						9.5	9.8	10.4
6	12.4	13.3	9.7	12.5	13.7		11.3	9.4	9.7	10.3
7		13.5						9.5	9.6	10.3
8	12.3	13.5	9.7	12.6	13.5		11.2	9.4	9.6	10.3
9							11.1		9.5	10.3
10	12.3	13.4	9.4	12.6	13.6		11.2	9.3	9.5	10.3
11							11.4		9.5	10.3
12	12.4	13.6	9.3	12.5	13.7		11.5	9.3	9.5	10.3
13									9.5	10.2
14	12.3	13.7	9.4	12.5	13.5		11.9	9.4	9.5	10.2
15									9.5	10.2
16	12.3	13.8	10.2	12.5	13.6		11.9	9.1	9.5	10.2
17				12.5					9.4	10.2
18	12.4	14.1	10.5	11.9	13.7		11.9	9.2	9.4	10.2
19				11.9					9.4	10.1
20	12.3	13.9	10.5	12.0	13.7		12.1	9.4	9.3	10.1
21				12.2					8.9	10.1
22	12.3	13.9	10.5		13.7		12.1	9.4	8.6	10.1
23				11.9					8.5	10.1
24	12.3	13.9	10.5	11.9	13.5		12.1	9.2	8.3	10.1
25									8.3	10.1
26	12.3	13.8	10.3	11.9	13.7		11.9	9.2	8.3	10.1
27				11.8					8.2	10.1
28	12.3	13.9	10.4	11.8	13.6		11.8	9.3	8.1	10.1
29									8.1	10.1
30	12.3	13.9	10.3		13.6		11.8	9.3	8.0	10.1
31					13.5		11.8	9.1	7.9	10.1
32	12.3	13.8	10.3		13.4		11.8		7.8	10.1
33									7.7	
34									7.7	
35									7.6	
36									7.5	
37									7.4	
38									7.2	

Table 2.17 Values of pH, alkalinity, conductivity and colour recorded in Lough Bray between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity $\mu S\ cm^{-1}$	Colour mg l^{-1} PtCo
25/04/96	4.74	-1	48	56
25/06/96	4.88	-2	46	54
25/07/96	4.96	-1	45	51
24/09/96	5.00	-1	45	54
27/01/97	4.81	-1	48	62
18/04/97	4.80	-1	43	60
17/06/97	4.86	0	41	56
10/07/97	4.92	0	41	61
23/09/97	4.94	0	46	61
02/12/97	4.81	-1	47	68

Table 2.18 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Bray between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
25/04/96	7.7	7.7	0.7	4.8	0.4	<1.0
25/06/96	7.3	4.5	0.7	5.0	0.4	<1.0
25/07/96	7.4	4.3	0.7	4.9	0.4	<1.0
24/09/96	7.4	4.3	0.7	5.0	0.4	<1.0
27/01/97	7.6	4.5	0.7	5.0	0.3	1.0
18/04/97	7.9	4.3	0.7	4.9	0.4	<1.0
17/06/97	7.4	4.0	0.7	5.0	0.4	<1.0
10/07/97	7.4	4.1				
23/09/97	7.7	4.0				
02/12/97	7.4	4.0				

Table 2.19 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Bray between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
25/04/96	16	8	0.41	0.40	0.18	1.88	1.89	1.78
25/06/96	5	5	0.36	0.26	0.05	1.64	1.69	1.71
25/07/96	<7	5	0.35	0.22	0.06	1.78	1.79	1.82
24/09/96	4	5	0.49	0.50	0.08	1.80	1.80	1.83
27/01/97	8	10	0.45	0.43	0.16	1.74	1.73	1.76
18/04/97	10	11	0.35	0.31	0.18	1.87	1.88	1.88
17/06/97	11	7	0.41	0.22	0.08	1.84	1.84	1.82
10/07/97	7	14	0.57	0.53	0.07	1.85	1.86	1.87
23/09/97	9	7	0.36	0.29	0.06	1.86	1.85	1.79
02/12/97	13	15	0.40	0.38	<.05	1.89	1.89	1.81

Table 2.20 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Bray.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
25/04/96	2.2	-	2.0
25/06/96	43.0	1.94	1.0
25/07/96	39.1	2.55	1.1
24/09/96	7.9	1.98	1.3
27/01/97	2.2	1.56	2.1
18/04/97	5.5	1.36	1.9
17/06/97	44.7	2.16	1.0
10/07/97	40.8	2.18	1.1
23/09/97	4.9	1.78	2.1
02/12/97	2.0	1.17	2.3

Table 2.21 Summary statistics of Lough Bray.

	Mean	95% C.I.	n	Max.	Min.
pH	4.86	0.05	10	5.00	4.74
Alkalinity mg l^{-1} $CaCO_3$	-1	0	10	0	-2
Conductivity µS cm^{-1}	45	2	10	48	41
Turbidity NTU	1.85	0.28	9	2.55	1.17
Colour mg l^{-1} PtCo	58	3	10	68	51
Chlorophyll *a* µg l^{-1}	19.2	12.2	10	44.7	2.0
MRP µg l^{-1}	9	2	10	15	5
TP µg l^{-1}	9	2	10	16	4
TDP µg l^{-1}	5	3	10	13	< 7
NO_3^--N mg l^{-1}	0.09	0.04	10	0.18	< .05
TN mg l^{-1}	0.42	0.04	10	0.57	0.35
TDN mg l^{-1}	0.36	0.07	10	0.53	0.22
SiO_2-Si mg l^{-1}	1.81	0.03	10	1.88	1.71
TSi mg l^{-1}	1.82	0.05	10	1.89	1.64
TDSi mg l^{-1}	1.82	0.04	10	1.89	1.69
Cl^- mg l^{-1}	7.5	0.1	10	7.9	7.3
SO_4^{2-} mg l^{-1}	4.6	0.7	10	7.7	4.0
Mg^{2+} mg l^{-1}	0.7	0.0	7	0.7	0.7
Na^+ mg l^{-1}	4.9	0.1	7	5.0	4.8
K^+ mg l^{-1}	0.4	0.0	7	0.4	0.3
Ca^{2+} mg l^{-1}	< 1.0	0.0	7	1.0	< 1.0

Table 2.22 Temperature °C profiles of Lough Bunny.

Depth (m)	10 Apr 96	10 Jun 96	08 Jui 96	09 Sep 96	13 Jan 97	08 Apr 97	02 Jun 97	30 Jun 97	16 Sep 97	09 Dec 97
0	10.0	15.4	16.0	17.5	4.1	11.2	18.7	14.6	14.9	7.7
1			15.9						14.9	7.6
2	10.0	15.4	15.9	17.5	4.1		18.7	14.6	14.9	7.6
3			16.0						14.9	7.6
4	10.0	15.4	15.9	17.0	4.1		18.3	14.6	14.9	7.6
5			15.9						14.9	7.6
6	9.9	15.3	15.9	16.6	4.0		17.1	14.6	14.9	7.6
7	9.9		15.9		4.0		16.4	14.3	14.9	7.6
8		15.4		16.3			14.3	14.2	14.9	7.6
9		15.3		16.3			13.9	14.1	14.9	7.6
10		15.3					13.5	13.9	14.9	7.6
11							13.2	13.9	14.9	
12								13.9	14.9	
13									14.9	

Table 2.23 Oxygen mg l^{-1} profiles of Lough Bunny.

Depth (m)	10 Apr 96	10 Jun 96	08 Jul 96	09 Sep 96	13 Jan 97	08 Apr 97	02 Jun 97	30 Jun 97	16 Sep 97	09 Dec 97
0	-	10.5	10.7	10.6	13.1	-	9.8	10.3	9.6	11.5
1			10.6						9.6	11.5
2		10.2	10.6	10.4	13.2		9.7	10.3	9.6	11.4
3			10.7						9.6	11.4
4		10.2	10.6	9.7	13.2		9.7	10.2	9.6	11.4
5			10.6						9.6	11.4
6		10.0	10.6	9.1	13.1		9.9	10.1	9.6	11.4
7			10.6		13.2		10.2	10.1	9.6	11.4
8		10.1		8.1			10.3	10.1	9.6	11.4
9		10.1		7.7			9.3	10.0	9.6	11.4
10		9.9					8.5	9.9	9.6	11.4
11							8.1	9.9	9.6	
12								9.9	9.6	
13									9.6	

Table 2.24 Values of pH, alkalinity, conductivity and colour recorded in Lough Bunny between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
10/04/96	8.18	146	352	11
10/06/96	8.35	122	304	7
08/07/96	8.44	103	270	8
09/09/96	8.41	93	255	9
13/01/97	8.22	151	366	14
08/04/97	8.40	138	363	10
02/06/97	8.42	118	292	9
30/06/97	8.39	111	273	10
16/09/97	8.30	134	307	18
09/12/97	8.37	164	356	13

Table 2.25 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Bunny between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
10/04/96	18.1	5.3	3.2	8.8	1.2	56.5
10/06/96	17.2	5.1	3.2	9.8	1.2	46.0
08/07/96	18.2	5.3	3.3	9.8	1.3	38.0
09/09/96	18.4	5.4	3.6	9.9	1.3	34.5
13/01/97	17.9	5.3	3.1	9.9	1.2	61.0
08/04/97	25.1	6.0	3.2	11.3	1.4	56.5
02/06/97	24.3	5.7	3.2	11.4	1.3	47.3
30/06/97	23.3	5.8				
16/09/97	15.3	3.6				
09/12/97	12.4	3.7				

Table 2.26 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Bunny between April 1996 and December 1997.

Date	TP µg l^{-1}	MRP µg l^{-1}	TN mg l^{-1}	TDN mg l^{-1}	NO_3^--N mg l^{-1}	TSi mg l^{-1}	TDSi mg l^{-1}	SiO_2-Si mg l^{-1}
10/04/96	5	1	1.16	1.14	0.94	0.23	0.16	0.14
10/06/96	< 7	2	0.67	0.67	0.25	0.25	0.23	0.24
08/07/96	< 7	4	0.54	0.44	<.05	0.44	0.43	0.42
09/09/96	< 7	3	0.61	0.54	<.05	0.75	0.72	0.73
13/01/97	< 7	3	1.08	1.04	0.76	0.85	0.85	0.85
08/04/97	< 7	3	0.99	0.94	0.98	0.27	0.23	0.23
02/06/97	< 7	3	0.60	0.55	0.19	0.33	0.31	0.34
30/06/97	< 7	4	0.52	0.48	0.09	0.52	0.49	0.49
16/09/97	< 7	5	0.39	0.37	0.07	1.02	1.01	0.96
09/12/97	< 7	5	0.67	0.68	0.37	0.77	0.74	0.76

Table 2.27 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Bunny.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
10/04/96	1.4	-	5.5
10/06/96	1.4	-	5.5
08/07/96	2.1	0.77	5.0
09/09/96	1.9	0.90	5.5
13/01/97	1.5	0.37	7.4
08/04/97	0.8	0.41	8.6
02/06/97	2.1	0.56	5.5
30/06/97	2.0	0.59	7.5
16/09/97	1.7	0.49	5.0
09/12/97	1.8	0.64	7.0

Table 2.28 Summary statistics of Lough Bunny.

	Mean	95% C.I.	n	Max.	Min.
pH	8.34	0.06	10	8.44	8.18
Alkalinity mg l^{-1} $CaCO_3$	128	14	10	164	93
Conductivity µS cm^{-1}	314	26	10	366	255
Turbidity NTU	0.59	0.12	8	0.90	0.37
Colour mg l^{-1} PtCo	11	2	10	18	7
Chlorophyll *a* µg l^{-1}	1.7	0.3	10	2.1	0.8
MRP µg l^{-1}	3	1	10	5	1
TP µg l^{-1}	< 7	1	10	5	< 7
TDP µg l^{-1}	< 7	2	10	6	< 7
NO_3^--N mg l^{-1}	0.37	0.23	10	0.98	< .05
TN mg l^{-1}	0.72	0.16	10	1.16	0.39
TDN mg l^{-1}	0.69	0.17	10	1.14	0.37
SiO_2-Si mg l^{-1}	0.52	0.18	10	0.96	0.14
TSi mg l^{-1}	0.54	0.18	10	1.02	0.23
TDSi mg l^{-1}	0.52	0.18	10	1.01	0.16
Cl^- mg l^{-1}	19.0	2.5	10	25.1	12.4
SO_4^{2-} mg l^{-1}	5.1	0.5	10	6.0	3.6
Mg^{2+} mg l^{-1}	3.3	0.1	7	3.6	3.1
Na^+ mg l^{-1}	10.1	0.7	7	11.4	8.8
K^+ mg l^{-1}	1.3	0.0	7	1.4	1.2
Ca^{2+} mg l^{-1}	48.5	7.4	7	61.0	34.5

Table 2.29 Values of pH, alkalinity, conductivity and colour recorded in Lough Caragh between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
19/04/96	6.91	3	71	27
29/06/96	7.06	5	64	29
17/07/96	7.01	4	57	25
28/08/96	6.93	2	59	32
30/01/97	6.58	3	63	32
12/06/97	6.94	4	73	14
19/07/97	7.05	5	71	18
25/08/97	6.92	5	72	30
21/09/97	6.82	5	67	40
15/12/97	6.76	4	54	46

Table 2.30 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Caragh between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
19/04/96	14.6	3.3	1.3	8.2	0.5	2.0
29/06/96	12.1	2.7	1.2	7.7	0.4	2.0
17/07/96	11.6	2.7	1.3	7.1	0.4	2.0
28/08/96	10.4	2.6	1.2	6.5	0.4	2.0
30/01/97	12.5	2.7	1.2	7.3	0.4	1.9
12/06/97	19.4	3.2	1.6	10.0	0.5	2.3
19/07/97	16.5	3.1				
25/08/97	14.8	1.9				
21/09/97	13.8	2.5				
15/12/97	10.7	2.2				

Table 2.31 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Caragh between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
19/04/96	10	1	0.40	0.40	0.17	0.47	0.42	0.40
29/06/96	< 7	4	0.37	0.33	0.05	0.15	0.15	0.14
17/07/96	< 7	3	0.33	0.31	0.09	0.16	0.14	0.13
28/08/96	< 7	5	0.29	0.25	0.10	0.26	0.25	0.25
30/01/97	< 7	4	0.39	0.26	0.13	0.57	0.53	0.55
12/06/97	< 7	2	0.14	0.15	0.09	0.24	0.22	0.20
19/07/97	< 7	5	0.23	0.23	0.09	0.28	0.26	0.25
25/08/97	6	5	0.30	0.32	0.09	0.35	0.35	-
21/09/97	< 7	4	0.26	0.23	0.09	0.51	0.45	0.43
15/12/97	9	9	0.32	0.30	0.10	0.58	0.56	0.56

Table 2.32 Values of chlorophyll *a* and turbidity recorded in Lough Caragh.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU
19/04/96	3.35	-
29/06/96	3.16	0.42
17/07/96	2.43	1.77
28/08/96	4.24	0.60
30/01/97	2.43	1.17
12/06/97	2.40	0.38
19/07/97	3.48	0.52
25/08/97	4.00	0.63
21/09/97	3.75	1.22
15/12/97	0.73	1.00

Table 2.33 Summary statistics of Lough Caragh.

	Mean	95% C.I.	n	Max.	Min.
pH	6.87	0.12	10	7.06	6.58
Alkalinity mg l^{-1} $CaCO_3$	4	1	10	5	2
Conductivity µS cm^{-1}	65	4	10	73	54
Turbidity NTU	0.86	0.30	9	1.77	0.38
Colour mg l^{-1} PtCo	29	6	10	46	14
Chlorophyll *a* µg l^{-1}	3.0	0.6	10	4.2	0.7
MRP µg l^{-1}	4	1	10	9	1
TP µg l^{-1}	< 7	2	10	10	< 7
TDP µg l^{-1}	< 7	3	10	10	< 7
NO_3^--N mg l^{-1}	0.10	0.02	10	0.17	0.05
TN mg l^{-1}	0.30	0.05	10	0.40	0.14
TDN mg l^{-1}	0.28	0.04	10	0.40	0.15
SiO_2-Si mg l^{-1}	0.32	0.11	9	0.56	0.13
TSi mg l^{-1}	0.36	0.10	10	0.58	0.15
TDSi mg l^{-1}	0.33	0.10	10	0.56	0.14
Cl^- mg l^{-1}	13.6	1.7	10	19.4	10.4
SO_4^{2-} mg l^{-1}	2.7	0.3	10	3.3	1.9
Mg^{2+} mg l^{-1}	1.3	0.1	6	1.6	1.2
Na^+ mg l^{-1}	7.8	1.0	6	10.0	6.5
K^+ mg l^{-1}	0.4	0.0	6	0.5	0.4
Ca^{2+} mg l^{-1}	2.0	0.1	6	2.3	1.9

Table 2.34 Temperature °C profiles of Lough Cullaun.

Depth (m)	10 Apr 96	10 Jun 96	08 Jul 96	09 Sep 96	13 Jan 97	08 Apr 97	02 Jun 97	30 Jun 97	16 Sep 97	09 Dec 97
0	9.0	14.9	15.7	17.8	3.1	11.0	18.5	14.9	15.4	7.8
1									15.4	7.8
2	8.9	14.9	15.7	17.7	3.1		18.5	15.0	15.4	7.8
3									15.4	7.8
4	8.9	14.9	15.6	17.7	3.1		18.4	15.0	15.4	7.8
5							16.3		15.4	7.8
6	8.9	14.8	15.6	17.4	3.0		15.0	15.0	15.4	7.8
7							14.0	14.7	15.3	7.8
8	8.3	14.6	15.5	16.9	3.0		13.5	14.6	15.3	
9							12.8	14.6	15.3	
10	8.0	14.2	15.4	16.7	3.0		12.7	14.5	15.3	7.8
11							12.5	14.4	15.3	7.8
12	7.5	13.7	15.3	15.9	3.0		12.4	14.3	15.3	7.8
13			15.1					13.9	15.3	7.8
14	7.4	13.3	14.6	13.8	3.0		12.2	12.4	15.3	7.8
15			13.2					12.2	15.3	7.8
16	7.3		13.0	13.3	3.0		12.1	12.1	15.3	7.8
17			12.9	13.2				12.1	15.3	7.8
18	7.1		12.9	13.1	3.0		12.1		14.7	
19			12.9	12.7	3.1					
20	7.0		12.8	12.6			12.1			
21			12.8							
22	7.0		12.8							

Table 2.35 Oxygen mg l^{-1} profiles of Lough Cullaun.

Depth (m)	10 Apr 96	10 Jun 96	08 Jul 96	09 Sep 96	13 Jan 97	08 Apr 97	02 Jun 97	30 Jun 97	16 Sep 97	09 Dec 97
0	-	10.3	10.1	10.1	12.4	-	10.3	10.0	8.5	11.2
1									8.5	11.1
2		10.1	10.1	10.0	12.6		10.2	10.0	8.5	11.1
3									8.5	10.9
4		10.0	10.1	9.8	12.7		10.2	10.0	8.5	10.9
5							10.1		8.4	10.9
6		10.0	9.8	9.2	12.8		10.0	9.8	8.4	10.9
7							9.6	9.5	8.4	10.9
8		9.9	9.8	8.5	12.8		9.4	9.5	8.4	
9							9.2	9.3	8.4	
10		9.7	9.2	7.8	12.8		9.1	9.4	8.4	10.9
11							9.0	9.3	8.4	10.9
12		9.4	9.2	5.6	12.7		8.8	9.0	8.4	10.9
13			8.9					8.1	8.4	10.9
14		9.2	8.1	0.1	12.7		8.5	5.9	8.3	10.9
15			6.2					5.6	8.3	10.9
16			5.9	0.0	12.7		8.4	5.4	8.2	10.9
17			5.8	0.0				5.2	8.2	10.9
18			5.8	0.0	12.6		8.2		6.4	
19			5.7	0.0	12.5					
20			5.7	0.0			7.8			
21			5.6							
22			5.5							

Table 2.36 Values of pH, alkalinity, conductivity and colour recorded in Lough Cullaun between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
10/04/96	8.20	160	399	22
10/06/96	8.37	156	380	19
08/07/96	8.41	149	365	17
09/09/96	8.38	136	345	14
13/01/97	8.15	153	383	26
08/04/97	8.35	156	403	25
02/06/97	8.45	147	346	19
30/06/97	8.33	143	337	19
16/09/97	8.18	149	360	28
09/12/97	8.20	172	390	27

Table 2.37 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Cullaun between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
10/04/96	20.5	7.9	4.8	10.3	1.7	61.8
10/06/96	16.4	7.6	4.6	10.8	1.7	58.9
08/07/96	19.4	7.6	4.7	10.1	1.7	56.2
09/09/96	19.6	7.5	4.5	10.1	1.7	52.8
13/01/97	20.3	7.7	4.5	9.9	1.6	60.7
08/04/97	23.2	8.2	4.8	12.0	1.9	62.0
02/06/97	24.4	8.0	4.5	11.8	1.8	58.0
30/06/97	24.3	7.9				
16/09/97	20.2	6.6				
09/12/97	16.2	5.4				

Table 2.38 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Cullaun between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3-N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
10/04/96	5	1	1.40	1.40	1.05	0.48	0.45	0.45
10/06/96	< 7	2	1.16	1.21	0.69	0.41	0.37	0.37
08/07/96	< 7	3	0.96	0.91	0.59	0.42	0.36	0.36
09/09/96	5	3	0.70	0.65	0.26	0.52	0.51	0.50
13/01/97	< 7	2	1.14	1.11	0.71	0.95	0.94	0.95
08/04/97	< 7	5	1.26	1.27	0.81	0.53	0.51	0.52
02/06/97	4	3	0.98	0.94	0.47	0.43	0.41	0.44
30/06/97	< 7	4	0.82	0.87	0.41	0.52	0.49	0.50
16/09/97	< 7	5	0.72	0.64	0.24	1.01	0.99	0.95
09/12/97	5	6	0.89	0.88	0.51	1.04	1.01	1.04

Table 2.39 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Cullaun.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
10/04/96	2.3	-	3.8
10/06/96	2.4	-	4.5
08/07/96	3.5	0.50	4.8
09/09/96	4.6	0.54	5.2
13/01/97	0.5	0.40	5.2
08/04/97	1.0	0.39	5.5
02/06/97	2.7	0.46	5.9
30/06/97	3.3	0.54	5.1
16/09/97	1.9	0.46	4.1
09/12/97	0.9	0.56	5.5

Table 2.40 Summary statistics of Lough Cullaun.

	Mean	95% C.I.	n	Max.	Min.
pH	8.29	0.07	10	8.45	8.15
Alkalinity mg l^{-1} $CaCO_3$	152	6	10	172	136
Conductivity µS cm^{-1}	371	15	10	403	337
Turbidity NTU	0.48	0.05	8	0.56	0.39
Colour mg l^{-1} PtCo	22	3	10	28	14
Chlorophyll *a* µg l^{-1}	2.3	0.8	10	4.6	0.5
MRP µg l^{-1}	3	1	10	6	1
TP µg l^{-1}	4	1	10	5	< 7
TDP µg l^{-1}	< 7	2	10	8	< 7
NO_3^--N mg l^{-1}	0.57	0.16	10	1.05	0.24
TN mg l^{-1}	1.00	0.15	10	1.40	0.70
TDN mg l^{-1}	0.99	0.16	10	1.40	0.64
SiO_2-Si mg l^{-1}	0.61	0.16	10	1.04	0.36
TSi mg l^{-1}	0.63	0.16	10	1.04	0.41
TDSi mg l^{-1}	0.60	0.16	10	1.01	0.36
Cl^- mg l^{-1}	20.5	1.8	10	24.4	16.2
SO_4^{2-} mg l^{-1}	7.4	0.5	10	8.2	5.4
Mg^{2+} mg l^{-1}	4.6	0.1	7	4.8	0.5
Na^+ mg l^{-1}	10.7	0.6	7	12.0	9.9
K^+ mg l^{-1}	1.7	0.1	7	1.9	1.6
Ca^{2+} mg l^{-1}	58.6	2.5	7	62.0	52.8

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Table 2.41 Temperature °C profiles of Lough Dan.

Depth (m)	26 Mar 96	25 Apr 96	22 May 96	25 Jun 96	25 Jul 96	25 Aug 96	24 Sep 96	25 Oct 96	27 Jan 97	14 Mar 97	18 Apr 97	08 May 97	17 Jun 97	10 Jul 97	19 Aug 97	23 Sep 97	22 Oct 97	02 Dec 97
0	4.3	7.2	11.8	17.1		-	13.7	11.0	4.1	6.0	10.8	9.4	13.7	18.0	18.7	14.5	11.7	8.7
1														16.8	18.7	14.3	11.7	8.7
2	4.2	7.2	9.0	15.7	18.1		13.6	11.0	4.1	5.8		9.4	12.8	16.3	18.5	13.9	11.7	8.7
3														15.0	18.4	13.9	11.7	8.7
4	4.2	7.1	8.8	15.3	17.2		13.6	11.0	4.0	5.7		9.3	12.7	13.7	17.9	13.9	11.7	8.7
5														13.1	17.7	13.8	11.7	8.7
6	4.2	7.1	8.7	15.0	16.6		13.6	11.0	3.9	5.7		9.3	12.6	12.7	16.5	13.8	11.7	8.7
7														12.5	15.0	13.8	11.7	8.7
8	4.2	7.1	8.6	14.9	16.0		13.5	11.0	3.9	5.7		9.3	12.4	12.2	14.5	13.7	11.7	8.7
9				12.4										11.9	14.2	13.7	11.7	8.7
10	4.2	6.9	8.4	12.6	14.3		13.5	11.0	3.9	5.6		8.9	12.3	11.8	13.6	13.7	11.7	8.7
11													11.9	11.4	12.8	13.7	11.7	8.7
12	4.2	6.8	8.1	10.2	12.5		13.5	11.0	3.9	5.6		8.8	10.5	11.2	11.9	13.6	11.7	8.7
13													9.7		11.3	13.6	11.7	8.7
14	4.1	6.8	7.7	9.7	10.6		13.4	11.0	3.9	5.6		8.8	9.5	11.1	11.0	13.6	11.7	8.7
15															10.8	13.5		8.7
16	3.9	6.7	7.7	9.0	9.1		13.1	11.0	3.9	5.6		8.7	9.1	10.9	10.5	13.2	11.7	8.7
17							11.1								10.4	12.6	11.7	8.7
18	3.9	6.7	7.5	8.2	8.4		10.1	10.9	3.9	5.6		8.6	8.8	10.7	10.1	10.6	11.6	
19							8.9								9.9	10.3	11.4	
20	3.9	6.6	7.3	7.8	8.1		8.5	10.9	3.9	5.5		8.5	8.6	10.6	9.7	10.0	11.3	
21							8.3								9.6	9.8	11.2	
22	3.9	6.6	7.3	7.7	7.9		8.2	10.9	3.9	5.5		8.5	8.6	9.8	9.6		11.0	
23							8.1								9.4	9.6	10.8	
24	3.9	6.6	7.3	7.7	7.8		8.0	10.8	3.8	5.5		8.3	8.5	9.1	9.3	9.4	10.1	
25							7.9								9.2	9.4	9.8	
26	3.9	6.6	7.2	7.7	7.7		7.9	10.3	3.8	5.5		8.1	8.4	8.8	9.2	9.4	9.5	
27															9.2	9.3	9.5	
28	3.9	6.6	7.2	7.6	7.7				3.8	5.5		7.9	8.4	8.7	9.2	9.3	9.4	
29																9.3	9.4	
30	3.9	6.5	7.2	7.6	7.6				3.8	5.5		7.8	8.4	8.5		9.3	9.4	
31				7.8					3.8					8.5		9.3	9.4	
32	3.9		7.2	7.0	7.6					5.5						9.3	9.4	
33																9.3		

Table 2.42 Oxygen mg l^{-1} profiles of Lough Dan.

Depth (m)	26 Mar 96	25 Apr 96	22 May 96	25 Jun 96	25 Jul 96	25 Aug 96	24 Sep 96	25 Oct 96	27 Jan 97	14 Mar 97	18 Apr 97	08 May 97	17 Jun 97	10 Jul 97	19 Aug 97	23 Sep 97	22 Oct 97	02 Dec 97
0	12.4	11.5	9.6	12.1		-	12.2	10.7	12.9	11.7	-	10.9	10.9	8.3	8.6	9.0	9.2	9.9
1														8.2	8.6	9.1	9.2	9.9
2	12.2	11.5	11.4	12.0	9.0		12.3	10.6	13.1	12.0		11.3	10.6	8.4	8.5	9.0	9.2	9.9
3														8.4	8.5	9.0	9.2	9.9
4	12.4	11.6	11.6	12.1	9.0		12.3	10.6	13.2	12.1		12.0	10.6	8.6	8.5	9.0	9.1	9.9
5														8.8	8.4	9.0	9.1	9.9
6	12.5	11.6	11.6	12.2	8.9		12.2	10.4	13.3	12.3		12.4	10.6	8.9	8.4	9.0	9.1	9.9
7														8.9	8.5	8.9	9.1	9.9
8	12.4	11.6	11.6	12.2	8.9		12.2	10.4	13.3	12.2		12.8	10.6	8.9	8.5	8.9	9.1	9.8
9				12.5										8.9	8.5	8.9	9.1	9.8
10	12.4	11.6	11.5	12.4	8.9		12.2	10.4	13.3	12.2		13.1	10.6	8.7	8.5	8.9	9.1	9.8
11													10.5	8.8	8.5	8.9	9.1	9.8
12	12.4	11.6	11.5	12.7	8.8		12.2	10.4	13.3	12.1		13.2	10.7	8.9	8.6	8.8	9.1	9.8
13													10.9		8.8	8.8	9.1	9.8
14	12.4	11.6	11.4	12.8	8.7		12.0	10.5	13.4	12.2		13.4	10.9	9.0	8.8	8.8	9.1	9.7
15															8.7	8.7		9.7
16	12.4	11.6	11.4	12.8	8.9		11.6	10.5	13.4	12.2		13.8	10.8	8.9	8.4	8.4	9.1	9.7
17							10.1								8.3	8.1	9.0	9.7
18	12.4	11.6	11.5	12.9	8.8		9.8	10.3	13.4	12.3		13.8	10.9	8.7	8.1	6.9	8.7	
19							9.6								7.9	6.7	8.4	
20	12.4	11.5	11.4	12.5	8.7		9.4	10.3	13.3	12.3		13.8	10.8	8.7	7.7	6.5	8.8	
21							9.3								7.4	6.4	8.4	
22	12.2	11.5	11.4	12.5	8.6		9.1	10.3	13.3	12.1		13.5	10.8	8.2	7.4		7.5	
23							8.8								7.1	5.9	6.8	
24	12.2	11.6	11.4	12.3	8.4		8.5	10.2	13.3	12.2		13.6	10.8	7.5	6.9	5.5	5.1	
25							8.2								6.6	5.5	4.5	
26	12.3	11.6	11.3	12.4	8.2		7.9	9.2	13.3	12.3		13.1	10.5	7.6	6.5	5.4	3.8	
27															6.3	4.9	3.7	
28	12.2	11.5	11.2	12.2	8.0				13.4	12.1		13.0	9.8	7.4	6.3	4.7	3.5	
29																4.5	3.2	
30	12.1	11.5	11.2	11.8	7.8				13.4	12.1		13.2	10.3	7.4		4.4	3.1	
31				12.0					13.3					7.3		4.4	3.1	
32	12.2		11.1		7.6											4.4	3.0	
33																4.4		

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.43 Values of pH, alkalinity, conductivity and colour recorded in Lough Dan between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
26/03/96	4.60	-2	56	88
25/04/96	4.63	-1	55	91
22/05/96	4.71	-1	54	88
25/06/96	5.01	0	50	91
25/07/96	5.23	0	49	83
25/08/96	5.15	0	48	103
24/09/96	5.24	0	48	95
25/10/96	4.79	-1	50	128
27/01/97	4.77	-1	52	118
14/03/97	4.76	-1	51	112
18/04/97	4.98	-1	45	108
08/05/97	4.93	0	45	106
17/06/97	4.94	0	44	125
10/07/97	5.01	0	42	138
19/08/97	5.24	0	45	145
23/09/97	5.08	0	45	170
22/10/97	5.06	0	45	181
02/12/97	4.87	0	43	164

Table 2.44 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Dan between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
26/03/96	8.6	4.5	0.8	5.3	0.3	1.2
25/04/96	8.4	5.4	0.8	5.4	0.3	1.1
22/05/96	8.3	4.4	0.8	5.4	0.3	1.1
25/06/96	8.0	4.5	0.8	5.7	0.3	1.2
25/07/96	8.2	4.7	0.9	5.4	0.3	1.2
25/08/96	7.9	4.5	0.8	5.3	0.3	1.1
24/09/96	8.4	4.5	0.8	5.5	0.3	1.3
25/10/96	7.9	4.5	0.8	5.3	0.3	1.2
27/01/97	8.4	4.3	0.8	5.3	0.3	1.2
14/03/97	8.8	3.7	0.8	5.3	0.3	1.2
18/04/97	9.4	3.6	0.8	5.4	0.3	1.2
08/05/97	8.8	3.4	0.8	5.4	0.3	1.2
17/06/97	8.7	3.5	0.8	5.2	0.3	1.2
10/07/97	8.1	3.1				
19/08/97	8.3	3.2				
23/09/97	8.2	2.1				
22/10/97	7.8	1.7				
02/12/97	7.0	2.5				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.45 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Dan between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-}$	SiO_2-Si $mg\ l^{-1}$
26/03/96	15	20	0.53	0.51	0.28	1.38	1.38	1.36
25/04/96	10	5	0.50	0.55	0.27	1.43	1.37	1.32
22/05/96	9	6	0.51	0.50	0.25	1.21	1.28	1.03
25/06/96	< 7	5	0.52	0.49	0.17	1.16	1.15	1.10
25/07/96	< 7	5	0.43	0.42	0.22	1.11	1.07	1.09
25/08/96	8	9	0.50	0.49	0.22	1.20	1.19	1.22
24/09/96	7	6	0.54	0.51	0.23	1.23	1.24	1.29
25/10/96	14	10	0.58	0.56	0.20	1.34	1.35	1.26
27/01/97	9	10	0.56	0.52	0.21	1.45	1.46	1.42
14/03/97	12	11	0.57	0.50	0.22	1.54	1.55	1.50
18/04/97	10	10	0.52	0.38	0.21	1.55	1.56	1.56
08/05/97	13	9	0.54	0.33	0.19	1.55	1.53	1.53
17/06/97	15	10	0.57	0.53	0.18	1.37	1.35	1.30
10/07/97	15	17	0.57	0.53	0.16	1.37	1.37	1.36
19/08/97	11	8	0.60	0.52	0.13	1.38	1.37	1.32
23/09/97	13	11	0.57	0.55	0.09	1.47	1.47	1.36
22/10/97	14	14	0.49	0.50	0.15	1.50	1.50	1.38
02/12/97	24	18	0.67	0.64	<.05	1.35	1.34	1.34

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.46 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Dan.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
26/03/96	0.3	0.88	1.5
25/04/96	0.5	-	1.3
22/05/96	1.5	-	-
25/06/96	1.0	0.67	1.4
25/07/96	1.1	0.81	1.9
25/08/96	1.2	0.92	-
24/09/96	1.5	0.61	1.7
25/10/96	1.9	1.63	1.3
27/01/97	0.7	1.04	1.3
14/03/97	0.5	1.40	1.6
18/04/97	0.5	0.94	2.0
08/05/97	1.2	0.94	1.6
17/06/97	1.4	1.04	1.6
10/07/97	0.9	1.21	1.8
19/08/97	3.9	0.91	1.2
23/09/97	1.3	0.64	1.2
22/10/97	0.8	0.92	1.3
02/12/97	0.6	1.68	1.0

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.47 Summary statistics of Lough Dan.

	Mean	95% C.I.	n	Max.	Min.
pH	4.90	0.11	18	5.24	4.60
Alkalinity mg l^{-1} $CaCO_3$	0	0	18	0	-2
Conductivity µS cm^{-1}	48	2	18	56	42
Turbidity NTU	1.02	0.16	16	1.68	0.61
Colour mg l^{-1} PtCo	119	14	18	181	83
Chlorophyll *a* µg l^{-1}	1.1	0.4	18	3.9	0.3
MRP µg l^{-1}	10	2	18	20	5
TP µg l^{-1}	11	2	18	24	4
TDP µg l^{-1}	8	2	18	17	< 7
NO_3^--N mg l^{-1}	0.19	0.03	18	0.28	< .05
TN mg l^{-1}	0.54	0.02	18	0.67	0.43
TDN mg l^{-1}	0.50	0.03	18	0.64	0.33
SiO_2-Si mg l^{-1}	1.32	0.07	18	1.56	1.03
TSi mg l^{-1}	1.37	0.06	18	1.55	1.11
TDSi mg l^{-1}	1.36	0.06	18	1.56	1.07
Cl^- mg l^{-1}	8.3	0.2	18	9.4	7.0
SO_4^{2-} mg l^{-1}	3.8	0.5	18	5.4	1.7
Mg^{2+} mg l^{-1}	0.8	0.0	13	0.9	0.8
Na^+ mg l^{-1}	5.4	0.1	13	5.7	5.2
K^+ mg l^{-1}	0.3	0.0	13	0.3	0.3
Ca^{2+} mg l^{-1}	1.2	0.0	13	1.3	1.1

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.48 Temperature °C profiles of Doolough.

Depth (m)	11 Mar 96	11 Apr 96	07 May 96	11 Jun 96	01 Jul 96	13 Aug 96	10 Sep 96	15 Oct 96	14 Jan 97	10 Mar 97	07 Apr 97	05 May 97	01 Jun 97	01 Jul 97	11 Aug 97	15 Sep 97	13 Oct 97	08 Dec 97
0	5.8	8.2	11.6	14.8	15.4	17.8	16.8	11.9	3.2	6.9	10.3	13.4	17.3	14.6	17.2	-	12.6	7.5
1	5.8			14.8	15.4	17.3									17.2		12.6	7.5
2	5.8	8.2	10.7	14.8	15.4	17.2	16.8	11.9	3.1	6.9	10.1	13.4	17.2	14.7	17.2		12.6	7.5
3	5.8			14.8	15.4	17.2									17.2		12.6	7.5
4	5.8	8.1	10.4	14.8	15.4	17.1	16.7	11.9	3.1	6.9	10.1	13.4	17.2	14.8	17.1		12.6	7.5
5	5.8			14.8	15.4	16.9									17.1		12.6	7.5
6	5.8	8.1	10.2	14.8	15.3	16.8	16.6	11.9	3.1	6.8	10.1	13.5	16.8	14.8	17.1		12.6	7.5
7				14.8	15.3	16.8						13.5	16.5		17.1		12.6	
8			10.2	14.7		16.8	16.6	11.9	3.1	6.8	10.1		15.3	14.8			12.6	
9						16.8		11.8		6.8			14.9		17.0		12.5	
10			10.2			16.8	16.6		3.1	6.8	10.0		14.2	14.8	16.9		12.4	
11						16.7	16.6								15.7		12.4	
12			10.1			16.7			3.1		10.0			14.8	15.1		12.2	
13			10.1						3.1		10.0						12.2	
14														14.8				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.49 Oxygen mg l^{-1} profiles of Doolough.

Depth (m)	11 Mar 96	11 Apr 96	07 May 96	11 Jun 96	01 Jul 96	13 Aug 96	10 Sep 96	15 Oct 96	14 Jan 97	10 Mar 97	07 Apr 97	05 May 97	01 Jun 97	01 Jul 97	11 Aug 97	15 Sep 97	13 Oct 97	08 Dec 97
0	12.6	-	11.0	9.7	9.7	9.8	9.4	10.1	13.3	12.2	11.0	10.4	9.3	10.2	9.1	-	9.5	11.2
1	12.6			9.6	9.5	9.8									9.1		9.4	11.2
2	13.2		10.8	9.7	9.4	9.7	9.2	9.9	13.5	12.2	11.0	10.6	9.3	10.0	9.1		9.4	11.2
3	13.6			9.7	9.5	9.6									9.1		9.4	11.2
4	13.8		10.6	9.7	9.5	9.5	9.1	9.8	13.5	12.2	11.0	11.0	9.3	9.8	9.0		9.4	11.2
5	14.0			9.6	9.4	9.3									9.0		9.4	11.2
6			10.6	9.6	3.5	9.0	9.0	9.7	13.5	12.2	11.0	11.3	9.2	9.8	9.0		9.4	11.1
7				9.7	1.0	9.0						11.3	9.0		9.0		9.4	
8			10.7			9.0	8.9	9.7	13.6	12.1	11.0		8.2	9.8			9.3	
9						9.0		9.7		12.1			7.9		8.9		9.3	
10			10.7			8.9	8.9		13.6	12.1	11.0		7.8	9.9	8.9		9.1	
11						8.7	8.9								8.4		9.0	
12			10.4			8.6			13.6		10.9			9.8	7.1		8.9	
13			10.3						13.5		10.8						8.9	
14														9.8				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.50 Values of pH, alkalinity, conductivity and colour recorded in Doolough between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
11/03/96	6.40	3	101	78
11/04/96	6.67	3	98	72
07/05/96	7.68	4	98	70
11/06/96	6.84	4	100	69
09/07/96	6.95	5	100	60
13/08/96	7.39	6	102	54
10/09/96	7.02	7	104	57
15/10/96	6.85	5	105	69
14/01/97	6.64	4	100	96
10/03/97	6.57	3	110	88
07/04/97	6.66	4	112	74
05/05/97	6.74	4	101	67
01/06/97	6.85	5	106	63
01/07/97	7.02	5	101	62
11/08/97	6.94	6	104	84
15/09/97	6.98	5	100	101
13/10/97	6.77	5	93	133
08/12/97	6.73	5	89	139

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.51 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Doolough between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
11/03/96	18.7	7.4	2.0	11.9	0.9	3.0
11/04/96	18.8	7.4	2.0	10.8	0.9	2.9
07/05/96	18.2	6.9	2.1	11.4	0.9	2.9
11/06/96	18.5	7.4	2.0	11.8	0.9	2.9
09/07/96	18.4	7.5	2.0	11.7	1.0	3.1
13/08/96	18.4	7.5	2.2	10.9	1.0	3.2
10/09/96	18.4	7.5	2.3	11.5	1.0	3.4
15/10/96	18.8	8.2	1.0	11.5	2.3	3.3
14/01/97	18.6	6.7	2.2	10.7	0.9	3.2
10/03/97	21.8	6.8	2.3	12.6	1.0	3.2
07/04/97	23.4	6.8	2.3	13.4	1.1	3.3
05/05/97	23.6	6.8	2.3	13.3	1.1	3.3
01/06/97	25.1	7.1	2.3	13.6	1.0	3.4
01/07/97	22.5	6.8				
11/08/97	21.8	6.6				
15/09/97	20.2	6.0				
13/10/97	18.2	5.0				
08/12/97	17.0	4.9				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.52 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Doolough between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
11/03/96	16	6	0.74	0.69	0.27	0.77	0.75	0.73
11/04/96	16	5	0.69	0.67	0.25	0.40	0.37	0.35
07/05/96	15	4	0.73	0.67	0.22	0.34	0.31	0.28
11/06/96	16	5	0.57	0.48	0.19	0.29	0.28	0.27
09/07/96	12	5	0.63	0.63	0.22	0.28	0.22	0.20
13/08/96	12	6	0.58	0.52	0.15	0.26	0.24	0.20
10/09/96	10	4	0.64	0.57	0.10	0.36	0.33	0.31
15/10/96	13	4	0.72	0.65	0.18	0.55	0.54	0.49
14/01/97	17	8	0.77	0.75	0.24	0.67	0.66	0.65
10/03/97	19	8	0.79	0.76	0.28	0.57	0.53	0.49
07/04/97	15	6	0.74	0.71	0.25	0.31	0.26	0.26
05/05/97	17	5	0.68	0.66	0.23	0.09	0.04	0.02
01/06/97	13	5	0.72	0.66	0.21	0.07	0.06	0.07
01/07/97	13	7	0.73	0.62	0.13	0.16	0.13	0.12
11/08/97	15	4	0.70	0.64	0.08	0.18	0.16	0.13
15/09/97	19	5	0.84	0.69	0.10	0.34	0.32	0.31
13/10/97	21	6	0.79	0.65	0.10	0.46	0.45	0.43
08/12/97	26	8	0.84	0.71	0.13	0.65	0.63	0.63

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.53 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Doolough.

Date	Turbidity NTU	Secchi depth m	Chlorophyll *a* $\mu g\ l^{-1}$
11/03/96	1.9	1.6	6
11/04/96	-	1.5	6
07/05/96	-	2.5	4
11/06/96	-	1.6	3
09/07/96	1.6	1.7	4
13/08/96	1.4	1.9	9
10/09/96	1.4	2.0	6
15/10/96	2.6	1.6	5
14/01/97	2.1	0.9	2
10/03/97	3.1	1.1	6
07/04/97	1.7	2.0	5
05/05/97	2.1	1.3	6
01/06/97	1.2	2.1	6
01/07/97	1.4	2.0	11
11/08/97	2.2	1.5	9
15/09/97	2.0	-	8
13/10/97	2.9	1.0	12
08/12/97	3.6	1.1	12

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.54 Summary statistics of Doolough.

	Mean	95% C.I.	n	Max.	Min.
pH	6.80	0.13	18	7.68	6.40
Alkalinity mg l^{-1} $CaCO_3$	5	1	18	7	3
Conductivity µS cm^{-1}	101	2	18	112	89
Turbidity NTU	2.07	0.35	15	3.60	1.21
Colour mg l^{-1} PtCo	80	11	18	139	54
Chlorophyll *a* µg l^{-1}	6.6	1.3	18	11.7	2.2
MRP µg l^{-1}	6	1	18	8	4
TP µg l^{-1}	16	2	18	26	10
TDP µg l^{-1}	9	1	18	13	5
NO_3^--N mg l^{-1}	0.18	0.03	18	0.28	0.08
TN mg l^{-1}	0.72	0.04	18	0.84	0.57
TDN mg l^{-1}	0.65	0.03	18	0.76	0.48
SiO_2-Si mg l^{-1}	0.33	0.09	18	0.73	0.02
TSi mg l^{-1}	0.38	0.09	18	0.77	0.07
TDSi mg l^{-1}	0.35	0.10	18	0.75	0.04
Cl^- mg l^{-1}	20.0	1.1	18	25.1	17.0
SO_4^{2-} mg l^{-1}	6.9	0.4	18	8.2	4.9
Mg^{2+} mg l^{-1}	2.1	0.2	13	2.3	1.0
Na^+ mg l^{-1}	11.9	0.5	13	13.6	10.7
K^+ mg l^{-1}	1.1	0.2	13	2.3	0.9
Ca^{2+} mg l^{-1}	3.2	0.1	13	3.4	2.9

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.55 Temperature °C profiles of Lough Dromore.

Depth (m)	10 Apr 96	10 Jun 96	08 Jul 96	09 Sep 96	13 Jan 97	08 Apr 97	02 Jun 97	30 Jun 97	16 Sep 97	09 Dec 97
0	9.4	15.6	17.0	18.3	3.9	11.8	19.0	15.6	15.4	8.2
1									15.5	8.2
2	9.0	15.6	16.9	17.8	3.8		18.9	15.6	15.5	8.2
3									15.5	8.2
4	9.0	15.5	16.8	17.7	3.8		17.8	15.4	15.5	8.2
5							16.3	15.3	15.5	8.2
6	9.0	15.5	16.8	16.9	3.7		14.7	15.3	15.4	8.2
7			16.5				14.0	15.3	15.4	8.2
8	8.5	14.9	16.2	16.6	3.7		13.9	15.2	15.4	8.2
9			15.8					15.1	15.4	8.2
10	8.4	14.3	15.5	16.3	3.7		13.5	15.0	15.4	8.2
11			14.6	15.7				14.9	15.2	8.2
12	8.3	13.7	13.7	14.0	3.7		12.8	13.0	15.1	8.2
13			13.4					12.5	15.0	8.2
14	7.5	13.5	13.1	13.1	3.7		12.2	12.1	14.2	8.2
15			12.9	12.8				11.9	12.4	8.2
16	7.5	13.1	12.8	12.7	3.7		11.5	11.7	12.0	8.2
17			12.7					11.5	11.8	8.2
18	7.5	12.8	12.6		3.7			11.5	11.8	8.2
19					3.7					8.2
20	7.5									

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.56 Oxygen mg l^{-1} profiles of Lough Dromore.

Depth (m)	10 Apr 96	10 Jun 96	08 Jul 96	09 Sep 96	13 Jan 97	08 Apr 97	02 Jun 97	30 Jun 97	16 Sep 97	09 Dec 97
0	-	10	11.5	10.8	11.5	-	9.8	10.3	8.3	10.6
1									8.3	10.4
2		10	11.5	10.2	11.6		9.9	10	8.2	10.4
3									8.2	10.3
4		10	11.5	9.4	11.7		10.2	9.6	8.2	10.3
5							9.9	9.2	8.2	10.2
6		10	11.5	4.5	11.5		8.4	9.2	8.1	10.2
7			9.6				7.5	9	8.1	10.2
8		9	7.9	3.8	11.7		7.2	9	8.1	10.2
9			6.5					8.4	8	10.2
10		8.4	5.2	3.3	11.7		6.9	8.4	8	10.2
11			2.7	0.1				8	7	10.1
12		7.5	1.8	0.1	11.6		5.7	1.3	6.8	10.1
13			1.7					1	6.4	10.1
14		7.1	0.7	0.1	11.7		4.1	0.5	3.2	10.1
15			0.2	0.1				0.3	0.1	10.1
16		5.3	0.1	0.1	11.7		1.6	0.3	0.1	10.1
17			0					0.3	0.1	10.1
18		3.7	0.1		11.7			0.3	0.1	10.1
19					11.3					10.1

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.57 Values of pH, alkalinity, conductivity and colour recorded in Lough Dromore between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
10/04/96	8.02	165	412	22
10/06/96	8.29	157	384	17
08/07/96	8.55	148	361	17
09/09/96	8.25	130	330	14
13/01/97	8.06	164	413	26
08/04/97	8.24	161	418	21
02/06/97	8.33	150	358	18
30/06/97	8.26	144	345	17
16/09/97	8.07	166	405	29
09/12/97	8.11	192	439	30

Table 2.58 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Dromore between April 1996 and December 1997. *Outlying cation values in July 1996 may be due to incorrect sample being analysed.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
10/04/96	20.9	8.2	4.1	11.4	1.6	64.6
10/06/96	19.8	8.3	4.2	11.9	1.5	60.9
08/07/96	20.4	8.4	2.0*	5.6*	0.6*	17.1*
09/09/96	20.5	7.1	4.4	11.3	1.5	48.6
13/01/97	21.6	9.4	4.4	10.7	1.6	67.4
08/04/97	24.7	9.6	4.3	12.4	1.7	65.7
02/06/97	25.8	9.0	4.1	12.4	1.5	60.7
30/06/97	26.5	9.2				
16/09/97	22.9	7.9				
09/12/97	19.1	6.9				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.59 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Dromore between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3-N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
10/04/96	18	7	1.96	1.99	1.49	0.58	0.54	0.56
10/06/96	11	2	1.25	1.12	0.71	0.49	0.44	0.45
08/07/96	15	4	1.02	0.73	0.31	0.50	0.34	0.17
09/09/96	16	4	0.60	0.38	<.05	0.78	0.70	0.70
13/01/97	15	17	1.59	1.52	1.12	1.22	1.20	1.19
08/04/97	7	8	1.47	1.43	1.04	0.54	0.47	0.47
02/06/97	8	4	0.99	0.96	0.53	0.35	0.32	0.31
30/06/97	14	5	0.87	0.76	0.37	0.52	0.40	0.41
16/09/97	31	6	0.93	0.80	0.35	1.33	1.25	1.19
09/12/97	22	21	1.25	1.20	0.65	1.61	1.58	1.63

Table 2.60 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Dromore.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
10/04/96	3.8	-	4.5
10/06/96	8.3	-	4.0
08/07/96	43.2	2.26	1.9
09/09/96	19.0	2.20	2.0
13/01/97	1.0	0.89	4.0
08/04/97	4.7	0.52	6.0
02/06/97	6.5	0.71	3.9
30/06/97	11.5	1.37	3.2
16/09/97	15.1	2.51	2.1
09/12/97	1.2	0.87	4.2

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.61 Summary statistics of Lough Dromore.

	Mean	95% C.I.	n	Max.	Min.
pH	8.19	0.10	10	8.55	8.02
Alkalinity mg l^{-1} $CaCO_3$	158	10	10	192	130
Conductivity µS cm^{-1}	387	22	10	439	330
Turbidity NTU	1.41	0.55	8	2.51	0.52
Colour mg l^{-1} PtCo	21	3	10	30	14
Chlorophyll *a* µg l^{-1}	11.4	7.8	10	43.2	1.0
MRP µg l^{-1}	8	4	10	21	2
TP µg l^{-1}	16	4	10	31	7
TDP µg l^{-1}	6	4	10	20	< 7
NO_3^--N mg l^{-1}	0.66	0.28	10	1.49	< 0.05
TN mg l^{-1}	1.19	0.25	10	1.96	0.60
TDN mg l^{-1}	1.09	0.29	10	1.99	0.38
SiO_2-Si mg l^{-1}	0.71	0.29	10	1.63	0.17
TSi mg l^{-1}	0.79	0.27	10	1.61	0.35
TDSi mg l^{-1}	0.72	0.28	10	1.58	0.32
Cl^- mg l^{-1}	22.2	1.6	10	26.5	19.1
SO_4^{2-} mg l^{-1}	8.4	0.6	10	9.6	6.9
Mg^{2+} mg l^{-1}	3.9	0.6	7	4.4	2.0
Na^+ mg l^{-1}	10.8	1.8	7	12.4	5.6
K^+ mg l^{-1}	1.4	0.3	7	1.7	0.6
Ca^{2+} mg l^{-1}	55.0	13.2	7	67.4	17.1

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.62 Temperature °C profiles of Lough Easky.

Depth (m)	14 Apr 96	14 Jun 96	13 Jul 96	14 Sep 96	17 Jan 97	12 Apr 97	06 Jun 97	05 Jul 97	20 Sep 97	13 Dec 97
0	8.3	15.9	15.1	14.8	5.1	10.5	16.3	13.0	12.6	6.5
1	8.3	15.8							12.6	6.5
2	8.2	15.6	15.0	14.7	5.1			13.0	12.6	6.5
3	8.2	15.6							12.6	6.4
4	8.2	15.3	14.9	14.9	5.1			12.8	12.6	6.4
5	8.1	13.7						12.3	12.6	6.4
6	8.1	13.6	14.9	14.6	5.1			12.2	12.6	6.4
7									12.6	6.4
8			14.9	14.5	5.1			12.1	12.6	6.4
9			14.9						12.6	
10				14.0				11.8	12.6	
11										
12								11.5		

Table 2.63 Oxygen mg l^{-1} profiles of Lough Easky.

Depth (m)	14 Apr 96	14 Jun 96	13 Jul 96	14 Sep 96	17 Jan 97	12 Apr 97	06 Jun 97	05 Jul 97	20 Sep 97	13 Dec 97
0	11.5	9.7	10.3	9.7	12.4	-	8.5	13.3	10.3	11.0
1	11.7	9.9							10.3	10.9
2	11.8	10.0	10.4	9.8	12.3			13.4	10.3	10.9
3	11.8	9.9							10.2	10.9
4	11.8	10.0	10.4	9.9	12.5			13.6	10.2	10.9
5	11.8	9.8						14.2	10.2	10.8
6	11.7	9.9	10.4	9.9	12.5			14.2	10.2	10.8
7									10.2	10.8
8			10.3	9.8	12.5			14.6	10.2	10.8
9			10.3						10.2	
10				9.1				14.7	10.2	
11										
12								14.8		

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.64 Values of pH, alkalinity, conductivity and colour recorded in Lough Easky between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
14/04/96	6.28	1	51	52
14/06/96	6.57	2	51	53
13/07/96	6.72	2	52	50
14/09/96	6.65	3	48	82
17/01/97	6.21	1	49	72
12/04/97	6.13	1	58	51
06/06/97	6.47	2	54	45
05/07/97	6.41	2	53	55
20/09/97	6.57	2	49	83
13/12/97	6.32	2	44	91

Table 2.65 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Easky between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
14/04/96	9.7	3.7	1.0	6.2	0.4	1.4
14/06/96	9.0	3.4	0.9	6.2	0.4	1.7
13/07/96	9.4	3.6	0.4	2.0	< 0.2	< 1.0
14/09/96	8.2	2.9	0.9	5.8	0.3	1.6
17/01/97	9.4	2.6	0.9	5.9	0.3	1.4
12/04/97	13.0	2.8	1.1	7.0	0.4	1.5
06/06/97	13.3	2.9	1.1	6.8	0.4	1.6
05/07/97	12.3	2.9				
20/09/97	10.4	1.2				
13/12/97	8.5	1.9				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.66 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Easky between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
14/04/96	5	3	0.40	0.36	0.20	0.53	0.53	0.52
14/06/96	6	2	0.50	0.34	0.06	0.34	0.32	0.35
13/07/96	< 7	3	0.31	0.26	0.06	0.33	0.31	0.04
14/09/96	< 7	4	0.43	0.41	0.08	0.44	0.43	0.39
17/01/97	< 7	2	0.19	0.16	0.11	0.57	0.55	0.55
12/04/97	< 7	4	0.22	0.21	0.11	0.46	0.44	0.44
06/06/97	5	3	0.38	0.20	0.09	0.44	0.33	0.31
05/07/97	< 7	4	0.28	0.20	0.06	0.34	0.30	0.30
20/09/97	< 7	4	0.21	0.16	0.06	0.40	0.38	0.36
13/12/97	4	5	0.41	0.27	0.08	0.52	0.49	0.48

Table 2.67 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Easky.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
14/04/96	2.2	-	1.5
14/06/96	4.6	-	2.2
13/07/96	8.1	1.02	1.9
14/09/96	2.6	0.71	1.7
17/01/97	1.3	1.16	1.6
12/04/97	3.2	0.74	3.0
06/06/97	3.9	2.58	-
05/07/97	3.9	1.08	2.0
20/09/97	2.8	0.98	1.6
13/12/97	1.8	1.61	1.7

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.68 Summary statistics of Lough Easky.

	Mean	95% C.I.	n	Max.	Min.
pH	6.39	0.14	10	6.72	6.13
Alkalinity mg l^{-1} $CaCO_3$	2	0	10	3	1
Conductivity µS cm^{-1}	51	2	10	58	44
Turbidity NTU	1.24	0.42	8	2.58	0.71
Colour mg l^{-1} PtCo	63	10	10	91	45
Chlorophyll *a* µg l^{-1}	3.4	1.2	10	8.1	1.3
MRP µg l^{-1}	4	1	10	5	2
TP µg l^{-1}	< 7	1	10	6	< 7
TDP µg l^{-1}	< 7	1	10	< 7	< 7
NO_3^--N mg l^{-1}	0.09	0.03	10	0.20	0.06
TN mg l^{-1}	0.33	0.07	10	0.50	0.19
TDN mg l^{-1}	0.26	0.05	10	0.41	0.16
SiO_2-Si mg l^{-1}	0.37	0.09	10	0.55	0.04
TSi mg l^{-1}	0.44	0.05	10	0.57	0.33
TDSi mg l^{-1}	0.41	0.06	10	0.55	0.30
Cl^- mg l^{-1}	10.3	1.2	10	13.3	8.2
SO_4^{2-} mg l^{-1}	2.8	0.5	10	3.7	1.2
Mg^{2+} mg l^{-1}	0.9	0.2	7	1.1	0.4
Na^+ mg l^{-1}	5.7	1.3	7	7.0	2.0
K^+ mg l^{-1}	0.3	0.1	7	0.4	< 0.20
Ca^{2+} mg l^{-1}	1.4	0.3	7	1.7	< 1.0

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.69 Temperature °C profiles of Lough Egish.

Depth (m)	27 Jun 96	23 Jul 96	25 Sep 96	21 Jan 97	15 Apr 97	18 Jun 97	08 Jul 97	24 Sep 97	03 Dec 97
0	16.2	19.1	13.3	4.3	11.9	16.7	17.8	13.9	6.4
1	16.1	19.1	13.2			16.7		14.0	6.4
2	16.0	19.1	13.1	4.2		16.3	16.3	13.9	6.4
3	16.0	19.0	13.1			15.3	15.7	13.9	6.4
4	16.0	19.0	13.1	4.3		15.0	15.5	13.8	6.4
5	15.9	18.8	13.0			14.7	14.9	13.8	6.4
6	15.9	17.0	12.9	4.2		14.5	14.6	13.8	6.4
7	15.8	16.8	12.9			14.4	14.4	13.8	6.4
8	15.8	16.6	12.9	4.2		14.4	13.9	13.8	6.4
9			12.8			14.3	13.7	13.8	6.4
10			12.8	4.2		14.3	13.6	13.8	6.4
11				4.1		14.3			6.4
12				4.1					

Table 2.70 Oxygen mg l^{-1} profiles of Lough Egish.

Depth (m)	27 Jun 96	23 Jul 96	25 Sep 96	21 Jan 97	15 Apr 97	18 Jun 97	08 Jul 97	24 Sep 97	03 Dec 97
0	7.7	12.3	9.1	13.1	-	11.4	12.6	10.5	10.1
1	7.7	12.2	9.2			11.5		10.5	10.1
2	7.5	12.1	9.0	13.1		11.0	11.2	10.5	10.0
3	7.5	12.0	9.1			9.1	10.3	10.5	10.0
4	7.5	12.0	9.2	13.2		8.6	10.0	10.3	10.0
5	7.4	11.6	9.1			7.5	8.5	10.3	10.0
6	7.5	5.7	9.0	13.1		7.1	8.4	10.3	10.0
7	7.4	4.8	9.0			7.1	8.2	10.2	10.0
8	7.2	3.9	8.9	13.1		7.1	7.8	10.2	9.9
9			8.9			7.0	7.6	10.2	9.9
10			8.7	12.8		6.7	7.5	10.2	9.9
11				12.8		6.6			9.9
12				12.8					

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.71 Values of pH, alkalinity, conductivity and colour recorded in Lough Egish between June 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
27/06/96	7.91	65	232	27
23/07/96	9.17	73	237	28
25/09/96	7.94	74	244	26
21/01/97	7.92	62	235	26
15/04/97	8.13	60	198	23
18/06/97	8.19	68	210	26
08/07/97	8.44	70	214	23
24/09/97	8.44	79	251	21
03/12/97	7.92	73	243	26

Table 2.72 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Egish between June 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
27/06/96	15.6	17.5	3.1	19.9	3.9	18.7
23/07/96	15.9	17.3	3.1	21.7	4.1	18.5
25/09/96	15.1	17.0	3.3	22.8	4.3	18.8
21/01/97	14.6	17.8	3.2	19.4	3.9	19.3
15/04/97	15.8	18.4	3.1	18.2	3.6	18.3
18/06/97	15.7	18.2	3.3	20.7	3.9	18.6
08/07/97	14.6	17.0				
24/09/97	15.7	17.8				
03/12/97	14.9	16.2				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.73 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Egish between June 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
27/06/96	279	222	1.60	1.47	0.50	0.85	0.82	0.83
23/07/96	367	322	1.86	0.93	0.08	1.85	1.85	1.84
25/09/96	429	471	1.36	1.26	0.57	3.66	3.63	3.67
21/01/97	312	254	1.85	1.71	1.11	1.63	1.31	1.26
15/04/97	226	110	1.32	0.97	0.28	0.27	0.05	0.05
18/06/97	296	216	1.43	1.08	0.27	1.03	1.01	1.02
08/07/97	350	282	1.38	1.01	0.32	1.42	1.38	1.37
24/09/97	421	363	1.29	0.99	0.24	2.00	1.22	1.20
03/12/97	412	368	1.49	1.37	0.50	1.61	1.58	1.58

Table 2.74 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Egish.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
27/06/96	7	2.6	2.1
23/07/96	104	18.2	-
25/09/96	5	2.1	3.4
21/01/97	50	2.4	2.3
15/04/97	61	2.4	0.6
18/06/97	29	2.8	1.3
08/07/97	14	2.7	1.8
24/09/97	40	5.7	1.6
03/12/97	6	2.2	2.6

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.75 Summary statistics of Lough Egish.

	Mean	95% C.I.	n	Max.	Min.
pH	8.11	0.20	9	9.17	7.91
Alkalinity mg l^{-1} $CaCO_3$	69	4	9	79	60
Conductivity µS cm^{-1}	229	12	9	251	198
Turbidity NTU	4.57	3.42	9	18.20	2.13
Colour mg l^{-1} PtCo	25	2	9	28	21
Chlorophyll *a* µg l^{-1}	35.0	21.5	9	103.6	4.6
MRP µg l^{-1}	290	69	9	471	110
TP µg l^{-1}	344	46	9	429	226
TDP µg l^{-1}	302	51	9	411	170
NO_3-N mg l^{-1}	0.43	0.20	9	1.11	0.08
TN mg l^{-1}	1.51	0.14	9	1.86	1.29
TDN mg l^{-1}	1.20	0.18	9	1.71	0.93
SiO_2-Si mg l^{-1}	1.42	0.64	9	3.67	0.05
TSi mg l^{-1}	1.59	0.62	9	3.66	0.27
TDSi mg l^{-1}	1.43	0.63	9	3.63	0.05
Cl^- mg l^{-1}	15.3	0.3	9	15.9	14.6
SO_4^{2-} mg l^{-1}	17.5	0.4	9	18.4	16.2
Mg^{2+} mg l^{-1}	3.2	0.1	6	3.3	3.1
Na^+ mg l^{-1}	20.5	1.3	6	22.8	18.2
K^+ mg l^{-1}	4.0	0.2	6	4.3	3.6
Ca^{2+} mg l^{-1}	18.7	0.3	6	19.3	18.3

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.76 Temperature °C profiles of Lough Feeagh.

Depth (m)	12 Mar 96	13 Apr 96	09 May 96	13 Jun 96	12 Jul 96	15 Aug 96	13 Sep 96	17 Oct 96	16 Jan 97	12 Mar 97	11 Apr 97	07 May 97	05 Jun 97	04 Jul 97	13 Aug 97	19 Sep 97	15 Oct 97	12 Dec 97
0	5.9	6.8	9.6	14.7	15.3	17.1	17.1	12.3	5.1	6.6	9.3	10.5	17.6	13.9	17.1	14.6	13.3	8.9
1																14.6	13.3	8.9
2	5.9	6.8	9.5	13.5	15.2	17.1	16.0	12.3	5.1	6.6		10.6	17.4	13.7	17.0	14.6	13.3	8.9
3															17.0	14.6	13.3	8.9
4	5.9	6.8	9.3	13.1	14.9	16.8	15.8	12.3	5.1	6.6		10.6	17.0	13.4	17.0	14.6	13.3	8.9
5															17.0	14.6	13.3	8.9
6	5.9	6.8	9.3	13.1	14.8	16.3	15.8	12.3	5.1	6.6		10.5	15.7	13.4		14.6	13.3	8.9
7													14.7		17.0	14.6	13.3	8.9
8	5.8	6.8	9.3	13.0	14.7	16.0	15.7	12.3	5.1	6.6		10.5	13.6	13.3	16.9	14.6	13.3	8.9
9													12.9			14.6	13.3	8.9
10	5.6	6.7	9.1	13.0	14.7	15.9	15.7	12.3	5.0	6.6		10.5	12.7	13.3	16.9	14.6	13.3	8.9
11													12.5			14.6	13.3	8.9
12	5.8	6.7	9.0	12.9	14.6	15.9	15.6	12.3	5.0	6.6		10.5	12.3	13.2	16.7	14.6	13.3	8.9
13				12.8								10.5	12.1			14.6	13.3	8.9
14	5.8	6.6	9.0	12.8	14.4	15.8	15.5	12.3	5.0	6.6			12.0	13.1		14.6		8.9
15				12.8	14.3											14.6	13.3	8.9
16	5.8	6.6	9.0	12.8	14.3	15.6	15.4	12.3	5.0	6.6			11.8	13.1		14.6	13.3	8.9
17															15.1	14.6	13.3	8.9
18	5.6	6.6	9.0	12.7	14.1	15.3	15.4	12.3	5.0	6.6			11.6	13.1		14.6	13.3	8.9
19						14.7									14.3	14.6	13.3	8.9
20	5.6	6.6	8.9	12.7	13.9	14.4	15.3	12.3	5.0	6.6			11.3	13.1		14.6	13.3	8.9
21						13.7										14.6	13.3	8.9
22		6.6	8.8	12.6	13.7	13.6	15.0	12.3	5.0	6.5			11.2	13.1	13.4	14.6	13.3	8.9
23						13.3	14.6									14.6	13.3	8.9
24		6.6	8.7	12.4	13.4	13.2	14.4	12.3	4.9	6.5			11.2	13.0		14.6	13.2	8.9
25	5.6					13.1	14.1								13.0	14.6	13.2	8.9
26		6.6	8.7	12.2	12.7	13.1	13.7	12.3	4.9	6.5			11.1	13.0		14.6	13.3	8.9
27						13.0	13.6									14.6	13.2	8.9
28		6.6	8.7	12.1	12.5	13.0	13.5	12.3	4.9	6.5			11.1	13.0		14.6	13.2	8.9
29						13.0	13.3									14.6	13.2	8.9
30	5.5	6.5	8.6	12.0	12.4	13.0	13.3	12.3	4.9	6.5			11.1	13.0	12.9	14.6	13.2	8.9
31					12.3	13.0	13.2		4.9				11.1	12.9		14.6	13.2	8.8
32		6.5	8.5			13.0		12.3		6.4						14.6	13.2	8.8
33																14.6	13.2	8.8
34															12.9	14.6	13.2	8.8
35	5.5																13.2	8.8
36																14.6	13.2	8.8
37																14.6	13.2	8.8
38																13.2	13.1	8.8
39															12.7	13.1	13.1	8.7
40	5.4														12.7	12.9	13.0	
41	5.4															12.9		8.7
42																12.9		
43																12.9		

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.77 Oxygen mg l^{-1} profiles of Lough Feeagh.

Depth (m)	12 Mar 96	13 Apr 96	09 May 96	13 Jun 96	12 Jul 96	15 Aug 96	13 Sep 96	17 Oct 96	16 Jan 97	12 Mar 97	11 Apr 97	07 May 97	05 Jun 97	04 Jul 97	13 Aug 97	19 Sep 97	15 Oct 97	12 Dec 97
0	13.0	12.9	11.4	10.1	9.6	9.8	9.0	10.1	12.9	12.4	-	11.5	9.4	10.2	9.1	8.9	9.3	10.8
1																8.9	9.3	10.7
2	13.6	12.7	11.4	9.9	9.7	9.7	8.9	9.9	12.6	12.3		11.6	9.8	10.3	9.1	8.9	9.3	10.7
3															9.1	8.9	9.3	10.6
4	14.0	12.8	11.4	10.0	9.7	9.7	8.8	9.9	12.6	12.3		12.0	9.9	10.2	9.1	8.9	9.3	10.6
5															9.1	8.9	9.3	10.6
6	14.2	12.8	11.2	9.8	9.8	9.5	8.8	9.9	12.6	12.3		12.2	9.9	10.2		8.9	9.3	10.5
7													10.0		9.1	8.9	9.3	10.5
8	14.2	12.8	11.4	10.1	9.8	9.4	8.7	9.9	12.6	12.2		12.5	10.1	10.3	9.1	8.9	9.3	10.5
9													10.1			8.9	9.2	10.5
10	14.2	12.9	11.3	10.1	9.8	9.5	8.7	9.9	12.6	12.2		12.8	10.2	10.3	9.1	8.9	9.3	10.5
11													10.3			8.9	9.2	10.5
12	13.8	12.9	11.3	10.1	9.8	9.4	8.7	9.9	12.7	12.2		12.9	10.3	10.4	9.0	8.9	9.3	10.5
13				10.2								13.0	10.2			8.8	9.2	10.5
14	13.8	12.9	11.1	10.2	9.6	9.3	8.7	9.9	12.7	12.2			10.2	10.4		8.9		10.6
15				10.3	9.7											8.8	9.2	10.7
16	13.9	12.9	11.4	10.3	9.6	9.0	8.6	10.0	12.7	12.2			10.2	10.4		8.9	9.2	10.8
17															8.2	8.8	9.3	10.8
18	13.7	12.9	11.4	10.3	9.5	8.6	8.6	10.0	12.7	12.2			10.2	10.3		8.8	9.2	10.9
19						8.0									7.7	8.8	9.2	10.9
20	13.6	12.9	11.4	10.2	9.1	7.7	8.4	10.0	12.7	12.2			10.1	10.4		8.8	9.2	10.9
21						7.1										8.8	9.2	10.9
22		12.9	11.3	9.9	9.0	7.0	7.5	9.8	12.7	12.3			9.9	10.4	7.6	8.8	9.3	10.9
23						6.4	6.2									8.8	9.3	10.8
24		12.9	11.3	10.0	8.8	6.3	5.8	9.8	12.5	12.3			10.1	10.4		8.8	9.3	10.8
25	13.7					6.1	5.4								6.8	8.8	9.2	10.8
26		12.9	11.3	10.0	8.0	6.0	4.5	9.8	12.5	12.3			10.0	10.4		8.8	9.2	10.8
27						5.7	4.2									8.8	9.2	10.8
28		12.9	11.3	10.0	7.9	5.7	4.0	9.9	12.6	12.3			10.0	10.3		8.8	9.2	10.8
29						5.6	3.6									8.8	9.2	10.8
30	13.6	12.9	11.2	9.8	7.7	5.5	3.5	9.9	12.6	12.3			10.0	10.3	6.3	8.8	9.2	10.8
31					7.6	5.3	3.4		12.6				10.0	10.1		8.8	9.2	10.8
32		12.9	11.1			5.2		9.9		12.3						8.8	9.2	10.7
33																8.8	9.2	10.7
34															6.0	8.8	9.3	10.3
35	13.5																9.3	10.3
36																8.8	9.3	10.3
37																8.7	9.3	10.3
38																3.6	9.3	10.3
39															5.2	3.2	9.3	10.3
40	13.4														2.9	2.6	9.3	
41	13.4															2.0		10.3
42																1.9		
43																1.7		

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.78 Values of pH, alkalinity, conductivity and colour recorded in Lough Feeagh between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity $\mu S\ cm^{-1}$	Colour mg l^{-1} PtCo
12/03/96	6.56	5	92	86
13/04/96	6.87	5	92	89
09/05/96	7.07	6	-	91
13/06/96	6.89	6	90	91
12/07/96	7.11	7	90	91
15/08/96	7.14	7	89	93
13/09/96	7.02	7	88	103
17/10/96	6.94	7	86	111
16/01/97	6.60	5	81	100
12/03/97	6.77	4	95	81
11/04/97	6.69	5	95	74
07/05/97	6.83	5	89	71
05/06/97	6.99	6	90	68
04/07/97	6.93	6	89	68
13/08/97	7.12	7	96	79
19/09/97	6.86	6	89	99
15/10/97	6.96	6	87	103
12/12/97	6.46	5	80	102

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.79 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Feeagh between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
12/03/96	18.0	4.1	1.8	11.5	0.6	2.9
13/04/96	18.6	4.4	1.9	10.1	0.6	2.9
09/05/96	17.5	3.9	1.9	10.2	0.5	2.9
13/06/96	17.0	4.5	1.9	10.6	0.5	3.0
12/07/96	17.8	4.7	2.0	10.5	0.6	3.2
15/08/96	16.7	4.4	2.0	9.6	0.6	3.2
13/09/96	16.1	4.3	2.0	9.7	0.5	3.2
17/10/96	16.0	4.3	1.9	9.6	0.5	3.0
16/01/97	15.5	3.7	1.7	9.2	0.5	2.6
12/03/97	19.6	4.3	1.9	11.8	0.6	2.6
11/04/97	19.9	3.8	2.1	11.8	0.6	2.7
07/05/97	21.3	4.1	2.1	11.8	0.6	2.8
05/06/97	20.1	4.0	2.2	11.7	0.6	3.1
04/07/97	20.3	4.1				
13/08/97	20.6	4.2				
19/09/97	19.4	3.1				
15/10/97	18.8	2.7				
12/12/97	16.3	3.1				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.80 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Feeagh between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3-N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
12/03/96	16	9	0.60	0.60	0.30	0.84	0.85	0.80
13/04/96	14	8	0.64	0.60	0.30	0.77	0.77	0.74
09/05/96	12	7	0.64	0.60	0.28	0.73	0.68	0.51
13/06/96	9	7	0.55	0.53	0.23	0.64	0.63	0.63
12/07/96	12	8	0.62	0.64	0.29	0.63	0.62	0.65
15/08/96	11	9	0.60	0.57	0.26	0.65	0.63	0.67
13/09/96	10	8	0.66	0.63	0.25	0.70	0.70	0.69
17/10/96	10	8	0.62	0.60	0.25	0.72	0.73	0.68
16/01/97	13	8	0.58	0.53	0.17	0.71	0.71	0.68
12/03/97	12	7	0.49	0.55	0.22	0.72	0.70	0.66
11/04/97	11	9	0.48	0.41	0.21	0.69	0.68	0.68
07/05/97	10	6	0.49	0.49	0.24	0.67	0.66	0.66
05/06/97	< 7	5	0.47	0.47	0.19	0.61	0.61	0.60
04/07/97	8	6	0.54	0.50	0.23	0.61	0.59	0.60
13/08/97	10	5	0.58	0.52	0.22	0.59	0.56	0.54
19/09/97	13	6	0.56	0.55	0.19	0.61	0.61	0.57
15/10/97	8	6	0.39	0.39	0.19	0.63	0.63	0.60
12/12/97	12	8	0.49	0.50	0.18	0.67	0.66	0.66

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.81 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Feeagh.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
12/03/96	0.3	1.14	1.4
13/04/96	0.5	-	1.3
09/05/96	1.0	-	2.2
13/06/96	2.0	-	1.4
12/07/96	1.2	0.84	1.5
15/08/96	4.2	0.74	2.0
13/09/96	1.7	0.78	2.0
17/10/96	1.0	1.07	1.7
16/01/97	0.4	1.00	1.0
12/03/97	0.3	1.06	2.0
11/04/97	0.4	0.65	2.2
07/05/97	1.4	0.57	2.3
05/06/97	2.5	0.62	2.0
04/07/97	3.0	0.97	2.9
13/08/97	4.1	1.62	1.9
19/09/97	1.9	1.49	1.6
15/10/97	1.4	1.16	1.8
12/12/97	0.7	1.12	1.6

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.82 Summary statistics of Lough Feeagh.

	Mean	95% C.I.	n	Max.	Min.
pH	6.83	0.12	18	7.14	6.46
Alkalinity mg l^{-1} $CaCO_3$	6	0	18	7	4
Conductivity µS cm^{-1}	89	2	17	96	80
Turbidity NTU	0.99	0.15	15	1.62	0.57
Colour mg l^{-1} PtCo	89	6	18	111	68
Chlorophyll *a* µg l^{-1}	1.6	0.6	18	4.2	0.3
MRP µg l^{-1}	7	1	18	9	5
TP µg l^{-1}	11	1	18	16	< 7
TDP µg l^{-1}	7	1	18	14	< 7
NO_3^--N mg l^{-1}	0.23	0.02	18	0.30	0.17
TN mg l^{-1}	0.55	0.03	18	0.66	0.39
TDN mg l^{-1}	0.54	0.03	18	0.64	0.39
SiO_2-Si mg l^{-1}	0.65	0.03	18	0.80	0.51
TSi mg l^{-1}	0.68	0.03	18	0.84	0.59
TDSi mg l^{-1}	0.67	0.03	18	0.85	0.56
Cl^- mg l^{-1}	18.3	0.8	18	21.3	15.5
SO_4^{2-} mg l^{-1}	4.0	0.2	18	4.7	2.7
Mg^{2+} mg l^{-1}	2.0	0.1	13	2.2	1.7
Na^+ mg l^{-1}	10.6	0.5	13	11.8	9.2
K^+ mg l^{-1}	0.5	0.0	13	0.6	0.5
Ca^{2+} mg l^{-1}	2.9	0.1	13	3.2	2.6

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.83 Temperature °C profiles of Lough Gara South.

Depth (m)	13 Jul 96	15 Sep 96	19 Oct 96	17 Jan 97	12 Apr 97	06 Jun 97	05 Jul 97	20 Sep 97	13 Dec 97
0	18.4	18.2	-	7.1	17.0	17.8	17.2	13.6	5.4
1	18.4	15.2		7.1		17.8	17.2	13.6	5.4
2							17.2		
3							17.2		

Table 2.84 Oxygen mg l^{-1} profiles of Lough Gara South.

Depth (m)	13 Jul 96	15 Sep 96	19 Oct 96	17 Jan 97	12 Apr 97	06 Jun 97	05 Jul 97	20 Sep 97	13 Dec 97
0	9.8	12.3	-	11.5	-	9.1	11.9	9.0	10.0
1	9.8	12.0		11.4		8.9	11.5	9.0	9.8
2							11.2		
3							10.6		

Table 2.85 Values of pH, alkalinity, conductivity and colour recorded in Lough Gara South between July 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
13/07/96	8.28	124	304	93
15/09/96	8.80	135	326	76
20/10/96	7.88	124	370	201
17/01/97	8.27	173	429	93
12/04/97	8.55	177	420	77
06/06/97	8.34	187	377	115
05/07/97	8.20	155	327	153
20/09/97	7.96	156	368	223
13/12/97	7.64	153	371	175

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.86 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Gara South between July 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
13/07/96	13.1	10.9	3.5	8.7	0.4	50.2
15/09/96	14.5	12.1	4.2	9.4	1.4	54.4
20/10/96	15.2	33.0	3.0	8.6	2.0	63.8
17/01/97	15.8	19.7	4.1	9.3	1.6	76.4
12/04/97	16.4	14.7	3.7	8.8	1.4	74.4
06/06/97	15.3	14.4	3.8	8.2	0.9	76.1
05/07/97	13.9	11.7				
20/09/97	15.0	14.7				
13/12/97	14.5	11.3				

Table 2.87 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Gara South between July 1996 and December 1997.

Date	TP µg l^{-1}	MRP µg l^{-1}	TN mg l^{-1}	TDN mg l^{-1}	NO_3^--N mg l^{-1}	TSi mg l^{-1}	TDSi mg l^{-1}	SiO_2-Si mg l^{-1}
13/07/96	28	5	0.93	0.86	<.05	0.13	0.05	0.04
15/09/96	11	4	0.77	0.74	<.05	0.39	0.39	0.35
20/10/96	46	22	2.17	2.15	1.01	1.84	1.83	1.68
17/01/97	26	23	1.67	1.65	0.92	1.90	1.86	1.85
12/04/97	20	4	1.11	0.92	0.20	0.07	0.01	0.01
06/06/97	20	4	1.01	0.87	<.05	0.13	0.06	0.05
05/07/97	22	6	0.99	0.94	0.05	0.29	0.24	0.24
20/09/97	42	21	1.65	1.52	0.33	1.80	1.74	1.68
13/12/97	48	36	2.06	2.01	1.10	1.72	1.71	1.80

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.88 Values of turbidity, Secchi depth and chlorophyll *a* recorded in Lough Gara South.

Date	Turbidity NTU	Secchi depth m	Chlorophyll *a* $\mu g\ l^{-1}$
13/07/96	6.1	0.9	4
15/09/96	1.1	1.0	2
20/10/96	5.7	-	2
17/01/97	5.8	1.0	1
12/04/97	3.4	1.0	12
06/06/97	5.3	1.1	7
05/07/97	2.6	1.1	5
20/09/97	4.5	0.9	3
13/12/97	5.5	0.9	1

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.89 Summary statistics of Lough Gara South.

	Mean	95% C.I.	n	Max.	Min.
pH	8.09	0.33	9	8.80	7.64
Alkalinity mg l^{-1} $CaCO_3$	154	15	9	187	124
Conductivity µS cm^{-1}	366	27	9	429	304
Turbidity NTU	4.43	1.12	9	6.13	1.10
Colour mg l^{-1} PtCo	134	36	9	223	76
Chlorophyll *a* µg l^{-1}	4.0	2.3	9	12.1	0.9
MRP µg l^{-1}	14	8	9	36	4
TP µg l^{-1}	29	8	9	48	11
TDP µg l^{-1}	22	8	9	40	8
NO_3^--N mg l^{-1}	0.40	0.31	9	1.10	<.05
TN mg l^{-1}	1.37	0.34	9	2.17	0.77
TDN mg l^{-1}	1.30	0.35	9	2.15	0.74
SiO_2-Si mg l^{-1}	0.86	0.56	9	1.85	<.05
TSi mg l^{-1}	0.92	0.56	9	1.90	0.07
TDSi mg l^{-1}	0.88	0.57	9	1.86	<.05
Cl^- mg l^{-1}	14.9	0.6	9	16.4	13.1
SO_4^{2-} mg l^{-1}	15.8	4.6	9	33.0	10.9
Mg^{2+} mg l^{-1}	3.7	0.3	6	4.2	3.0
Na^+ mg l^{-1}	8.8	0.4	6	9.4	8.2
K^+ mg l^{-1}	1.3	0.4	6	2.0	0.4
Ca^{2+} mg l^{-1}	65.9	9.3	6	76.4	50.2

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.90 Temperature °C profiles of Lough Gowna.

Depth (m)	13 Mar 96	15 Apr 96	09 May 96	15 Jun 96	14 Jul 96	15 Aug 96	15 Sep 96	17 Oct 96	18 Jan 97	12 Mar 97	13 Apr 97	07 May 97	07 Jun 97	06 Jul 97	13 Aug 97	21 Sep 97	15 Oct 97	14 Dec 97
0		9.2	12.1	19.8	16.7	19.3	16.3	11.5	4.4	7.3	13.6	12.0	17.3	15.1	20.7	14.7	12.2	6.9
1	2.9				16.7	19.0									20.5	14.7	12.2	6.9
2	3.7	9.0	12.1	17.6	16.6	17.7	16.3	11.5	4.4	7.3		12.0	17.3	14.9	19.4	14.7	12.2	6.9
3	3.9			16.3	16.6	17.0									19.2	14.6	12.2	6.9
4	4.0	9.0	11.9	15.6	16.6	16.8	16.3	11.5	4.3	7.2		12.1	17.4	14.9	18.9	14.6	12.2	6.9
5					16.6	16.6									18.7	14.6	12.2	6.9
6	4.2	8.7	10.5	15.2	16.5	16.5	16.0	11.4	4.2	7.1		12.1	17.0	14.5	17.8	14.6	12.2	6.9
7	4.3				16.4	16.4	15.9						15.4		17.1	14.6	12.2	6.9
8		8.6	10.0	15.0	16.3	16.3	15.9	11.3	4.2	7.0		12.1	14.2	14.2	16.8	14.5	12.1	6.9
9	4.5				16.3	16.3	15.8			6.8			13.7		16.5	14.5	12.1	6.8
10		8.3	9.7	14.5	16.3	16.3	15.8	11.3	4.2	6.6			13.5	14.1	15.5	14.5	12.1	6.8
11	4.6				15.8	16.1	15.6	11.3		6.5			13.0	14.1	14.2	14.5	12.1	6.7
12			9.6	13.2	15.0	15.5		11.3	4.2	6.4			12.5	14.0	13.7	14.5	12.0	6.7
13						14.3		11.3	4.2	6.4			12.1	13.9	13.5	14.5	12.1	
14			9.5			14.1				6.4								
15										6.3								

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.91 Oxygen mg l^{-1} profiles of Lough Gowna.

Depth (m)	13 Mar 96	15 Apr 96	09 May 96	15 Jun 96	14 Jul 96	15 Aug 96	15 Sep 96	17 Oct 96	18 Jan 97	12 Mar 97	13 Apr 97	07 May 97	07 Jun 97	06 Jul 97	13 Aug 97	21 Sep 97	15 Oct 97	14 Dec 97
0		11.4	12.1	11.2	9.6	14.3	9.3	9.9	12.6	12.7	-	10.2	10.8	10.7	12.0	9.0	9.2	10.3
1	14.6				9.6	14.5									11.9	8.9	9.2	10.2
2	11.1	11.6	12.4	10.8	9.5	13.3	9.2	9.9	12.7	12.8		10.4	10.7	10.5	10.4	8.9	9.2	10.1
3	11.8			10.5	9.4	11.4									9.6	8.8	9.2	10.1
4	11.0	11.7	12.2	9.3	9.1	10.8	9.3	9.9	12.6	12.8		11.0	10.6	10.5	9.1	8.7	9.1	10.1
5					9.2	8.5									8.8	8.7	9.1	10.1
6	10.7	11.5	10.4	8.2	8.5	7.2	8.7	9.8	12.6	12.7		11.4	10.1	10.1	7.5	8.7	9.1	10.0
7	12.6				8.4	6.9	7.0						7.7		6.6	8.7	9.1	10.0
8		11.3	9.4	8.6	8.3	6.5	6.7	9.7	12.6	12.6		11.6	7.4	9.7	5.8	8.6	9.1	10.0
9	14.5				7.9	6.2	5.9			12.3			7.7		4.4	8.6	9.1	10.0
10		11.1	8.9	6.9	7.2	5.9	5.3	9.6	12.7	11.9			7.4	9.9	1.2	8.6	9.0	10.0
11	14.7				5.9	4.4	1.5	9.6		11.7			6.7	9.8	0.1	8.6	9.0	9.8
12			7.3	3.1	3.4	0.2		9.6	12.7	11.3			5.7	9.6	0.0	8.6	8.8	9.7
13						0.1		9.4	12.7	11.2			3.5	8.8	0.0	8.1	8.4	
14			5.7			0.1				10.7								
15										10.2								

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.92 Values of pH, alkalinity, conductivity and colour recorded in Lough Gowna between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
13/03/96	7.76	52	198	26
15/04/96	7.94	50	193	28
09/05/96	8.21	54	-	28
15/06/96	7.88	59	211	29
14/07/96	8.00	64	219	24
15/08/96	8.27	64	214	26
15/09/96	7.93	65	217	26
17/10/96	7.92	65	217	25
18/01/97	7.84	58	202	45
12/03/97	8.03	52	193	42
13/04/97	7.99	64	194	37
07/05/97	7.97	62	189	32
07/06/97	8.25	67	194	31
06/07/97	8.15	69	194	29
13/08/97	8.35	70	216	30
21/09/97	7.93	71	221	28
15/10/97	7.93	72	218	30
14/12/97	7.90	68	212	46

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.93 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Gowna between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
13/03/96	14.1	14.6	3.8	7.2	2.5	23.8
15/04/96	14.1	15.6	3.8	7.3	2.6	22.5
09/05/96	13.9	16.2	3.8	7.6	2.4	23.4
15/06/96	13.6	16.8	4.1	7.5	2.5	24.3
14/07/96	14.0	16.9	4.2	8.1	2.6	26.7
15/08/96	13.6	16.8	4.3	7.5	2.6	25.6
15/09/96	13.8	16.5	4.4	7.9	2.7	25.6
17/10/96	13.6	16.1	4.4	7.9	2.6	25.9
18/01/97	12.8	13.6	4.1	7.4	2.6	24.3
12/03/97	12.8	12.6	3.8	7.4	2.5	22.0
13/04/97	14.2	15.1	4.3	7.3	2.4	25.7
07/05/97	14.1	13.9	4.2	7.5	2.5	24.6
07/06/97	14.5	14.1	4.3	7.7	2.4	25.8
06/07/97	13.9	13.7				
13/08/97	13.8	13.1				
21/09/97	13.8	12.8				
15/10/97	13.8	13.1				
14/12/97	13.4	11.2				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.94 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Gowna between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
13/03/96	43	8	1.78	1.69	1.12	3.41	2.85	3.12
15/04/96	33	4	1.50	1.41	0.81	0.96	0.52	0.48
09/05/96	37	2	1.23	1.06	0.54	0.88	0.58	0.53
15/06/96	29	10	0.88	0.81	0.35	1.12	0.98	1.02
14/07/96	30	6	1.01	0.72	0.18	1.00	0.76	1.56
15/08/96	34	5	0.75	0.54	<.05	0.89	0.48	0.45
15/09/96	32	3	0.79	0.59	<.05	0.66	0.44	0.42
17/10/96	62	24	0.86	0.62	0.10	0.87	0.51	0.48
18/01/97	39	24	1.35	1.29	0.74	1.52	1.35	1.26
12/03/97	37	6	1.61	1.53	0.98	0.99	0.44	0.40
13/04/97	31	4	1.50	1.38	0.90	0.42	0.18	0.17
07/05/97	42	7	1.23	1.43	0.70	1.02	0.63	0.58
07/06/97	36	5	1.04	0.89	0.38	0.95	0.63	0.61
06/07/97	38	9	1.04	0.85	0.28	0.84	0.50	0.47
13/08/97	55	5	0.95	0.64	<.05	1.30	1.07	1.03
21/09/97	65	28	0.95	0.61	<.05	1.75	1.42	1.36
15/10/97	75	38	0.76	0.60	0.06	1.86	1.59	1.52
14/12/97	54	37	1.23	1.13	0.36	2.24	2.02	2.06

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.95 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Gowna.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
13/03/96	23.6	5.63	1.2
15/04/96	23.4	-	1.2
09/05/96	21.3	-	1.5
15/06/96	6.8	-	2.6
14/07/96	26.1	4.68	1.4
15/08/96	36.4	5.32	1.1
15/09/96	25.1	6.79	1.3
17/10/96	19.9	5.49	1.6
18/01/97	6.2	3.51	1.5
12/03/97	29.4	4.09	1.2
13/04/97	13.0	3.94	1.6
07/05/97	14.5	5.59	1.5
07/06/97	23.7	5.92	1.0
06/07/97	15.8	4.75	1.4
13/08/97	32.9	8.72	1.0
21/09/97	23.5	7.30	1.4
15/10/97	14.3	6.48	1.2
14/12/97	8.6	5.18	1.4

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.96 Summary statistics of Lough Gowna.

	Mean	95% C.I.	n	Max.	Min.
pH	7.99	0.07	18	8.35	7.76
Alkalinity mg l^{-1} $CaCO_3$	63	3	18	72	50
Conductivity µS cm^{-1}	206	6	17	221	189
Turbidity NTU	5.56	0.69	15	8.72	3.51
Colour mg l^{-1} PtCo	31	3	18	46	24
Chlorophyll *a* µg l^{-1}	20.3	4.0	18	36.4	6.2
MRP µg l^{-1}	13	6	18	38	2
TP µg l^{-1}	43	6	18	75	29
TDP µg l^{-1}	19	5	18	46	8
NO_3^--N mg l^{-1}	0.42	0.17	18	1.12	< .05
TN mg l^{-1}	1.14	0.14	18	1.78	0.75
TDN mg l^{-1}	0.99	0.18	18	1.69	0.54
SiO_2-Si mg l^{-1}	0.97	0.35	18	3.12	0.17
TSi mg l^{-1}	1.26	0.32	18	3.41	0.42
TDSi mg l^{-1}	0.94	0.31	18	2.85	0.18
Cl^- mg l^{-1}	13.8	0.2	18	14.5	12.8
SO_4^{2-} mg l^{-1}	14.6	0.8	18	16.9	11.2
Mg^{2+} mg l^{-1}	4.1	0.1	13	4.4	3.8
Na^+ mg l^{-1}	7.6	0.2	13	8.1	7.2
K^+ mg l^{-1}	2.5	0.5	13	2.7	2.4
Ca^{2+} mg l^{-1}	24.6	0.8	13	26.7	22.0

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.97 Temperature °C profiles of Lough Graney.

Depth (m)	09 Apr 96	09 Jun 96	07 Jul 96	08 Sep 96	12 Jan 97	06 Apr 97	31 May 97	29 Jun 97	14 Sep 97	07 Dec 97
0	8.1	15.1	15.8	18.3	3.0	10.5	19.3	14.6	15.9	7.8
1			15.8						15.9	7.8
2	8.1	15.1	15.8	18.2	3.0	10.3	19.4	14.6	15.9	7.8
3			15.8						15.9	7.8
4	8.1	15.1	15.8	17.4	3.0	10.0	18.3	14.6	15.8	7.7
5			15.8				14.6		15.8	
6	8.0	15.1	15.8	17.1	3.0	10.0	14.4	14.6	15.7	7.7
7		15.1	15.8				14.0		15.7	7.7
8	7.7		15.8	16.7	3.0	10.0	13.9	14.6	15.6	7.7
9			15.8				13.7		15.5	7.7
10	7.7			16.4	3.0	10.0	13.3	14.6		7.7
11				16.4			13.1			7.7
12	7.7			16.4		10.0		14.6		7.7
13				16.4						
14						10.0		14.5		7.7
15										
16						10.0		14.4		7.7
17						9.9				7.7

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.98 Oxygen mg l^{-1} profiles of Lough Graney.

Depth (m)	09 Apr 96	09 Jun 96	07 Jul 96	08 Sep 96	12 Jan 97	06 Apr 97	31 May 97	29 Jun 97	14 Sep 97	07 Dec 97
0	-	11.1	11.3	10.9	12.8	10.4	12.5	9.9	8.8	9.1
1			11.1						8.8	9.1
2		10.9	11.1	10.8	12.8	10.5	12.6	9.7	8.8	9.1
3			11.1						8.8	9.0
4		10.8	11.1	9.9	12.7	10.4	12.0	9.7	8.7	9.0
5			11.0				10.5		8.6	
6		10.7	11.0	8.9	12.7	10.4	10.4	9.7	8.6	9.0
7		10.8	11.1				10.0		8.6	9.0
8			10.8	7.9	12.7	10.4	10.0	9.7	8.5	9.0
9			10.8				9.8		8.4	9.0
10				6.4	12.7	10.4	9.4	9.7		9.0
11				6.1			9.2			9.0
12				6.0		10.4		9.7		9.0
13				6.0						
14						10.4		9.7		8.9
15										
16						10.2		9.5		8.9
17										8.9

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.99 Values of pH, alkalinity, conductivity and colour recorded in Lough Graney between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
09/04/96	7.44	22	115	94
09/06/96	8.40	25	116	71
07/07/96	7.64	27	119	57
08/09/96	7.99	31	129	43
12/01/97	7.44	25	118	102
06/04/97	7.51	22	117	94
31/05/97	7.60	24	112	73
29/06/97	7.53	26	113	69
14/09/97	7.55	28	115	97
07/12/97	7.50	28	111	138

Table 2.100 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Graney between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
09/04/96	13.5	7.0	2.0	8.6	0.8	9.7
09/06/96	12.9	7.0	2.0	9.1	0.8	10.4
07/07/96	13.5	7.2	2.0	8.5	0.7	10.9
08/09/96	12.9	7.0	2.3	8.7	0.8	12.0
12/01/97	13.4	5.9	2.2	8.7	0.8	10.9
06/04/97	16.3	5.6	2.0	9.1	0.9	9.8
31/05/97	17.1	5.6	2.1	8.5	0.9	10.2
29/06/97	15.4	5.3				
14/09/97	14.0	5.0				
07/12/97	11.8	4.2				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.101 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Graney between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
09/04/96	30	6	1.23	0.92	0.43	0.85	0.87	0.83
09/06/96	18	3	0.83	0.78	0.26	0.37	0.29	0.27
07/07/96	11	4	0.71	0.58	0.22	0.33	0.26	0.27
08/09/96	8	3	0.66	0.57	<.05	0.41	0.37	0.32
12/01/97	15	12	0.90	0.85	0.32	1.08	1.07	1.03
06/04/97	15	9	0.91	0.86	0.41	0.88	0.76	0.75
31/05/97	11	4	0.83	0.68	0.21	0.48	0.36	0.38
29/06/97	14	7	0.82	0.72	0.21	0.52	0.42	0.41
14/09/97	17	5	0.80	0.67	0.15	0.76	0.70	0.65
07/12/97	21	12	0.89	0.84	0.18	0.99	0.96	0.96

Table 2.102 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Graney.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
09/04/96	2.7	-	1.0
09/06/96	8.3	-	0.9
07/07/96	7.8	4.42	1.1
08/09/96	14.0	5.57	-
12/01/97	2.5	3.38	1.5
06/04/97	5.3	3.97	1.4
31/05/97	13.6	3.37	1.7
29/06/97	12.8	4.84	1.1
14/09/97	14.7	6.66	0.7
07/12/97	2.9	3.73	0.8

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.103 Summary statistics of Lough Graney.

	Mean	95% C.I.	n	Max.	Min.
pH	7.59	0.13	10	8.40	7.44
Alkalinity mg l^{-1} $CaCO_3$	26	2	10	31	22
Conductivity µS cm^{-1}	117	3	10	129	111
Turbidity NTU	4.49	0.80	8	6.66	3.37
Colour mg l^{-1} PtCo	84	17	10	138	43
Chlorophyll *a* µg l^{-1}	8.5	3.1	10	14.7	2.5
MRP µg l^{-1}	7	2	10	12	3
TP µg l^{-1}	16	4	10	30	8
TDP µg l^{-1}	9	4	10	24	< 7
NO_3^--N mg l^{-1}	0.24	0.07	10	0.43	< .05
TN mg l^{-1}	0.86	0.09	10	1.23	0.66
TDN mg l^{-1}	0.75	0.08	10	0.92	0.57
SiO_2-Si mg l^{-1}	0.59	0.18	10	1.03	0.27
TSi mg l^{-1}	0.67	0.17	10	1.08	0.33
TDSi mg l^{-1}	0.61	0.19	10	1.07	0.26
Cl^- mg l^{-1}	14.1	1.0	10	17.1	11.8
SO_4^{2-} mg l^{-1}	6.0	0.6	10	7.2	4.2
Mg^{2+} mg l^{-1}	2.1	0.1	7	2.3	2.0
Na^+ mg l^{-1}	8.7	0.2	7	9.1	8.5
K^+ mg l^{-1}	0.8	0.0	7	0.9	0.7
Ca^{2+} mg l^{-1}	10.6	0.6	7	12.0	9.7

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.104 Temperature °C profiles of Lough Inchiquin.

Depth (m)	10 Apr 96	07 May 96	10 Jun 96	10 Jul 96	12 Aug 96	11 Sep 96	14 Oct 96	14 Jan 97	09 Mar 97	09 Apr 97	04 May 97	03 Jun 97	01 Jul 97	11 Aug 97	17 Sep 97	12 Oct 97	10 Dec 97
0	8.1	12.5	15.2	16.4	17.7	17.3	12.7	4.8	7.7	10.8	13.8	18.3	14.0	16.6	14.0	12.6	8.9
1														16.6	14.0	12.6	8.9
2	8.1	12.1	15.3	16.4	17.7	17.3	12.7	4.7	7.7		13.8	18.2	14.0	16.6	14.0	12.6	
3														16.5	14.0	12.6	8.9
4	8.1	10.9	15.3	16.4	17.6	17.3	12.6	4.7	7.6		13.8	17.2	14.0	16.5	14.0	12.6	8.9
5												14.7		13.9	14.0	12.6	8.9
6	8.1	10.4	14.8	16.3	17.3	17.1	12.6	4.6	7.7		13.8	13.2	14.0		13.9	12.6	8.9
7												12.9		13.7	13.9	12.5	8.9
8	8.1	10.1	14.1	16.3	17.2	16.6	12.6	4.6	7.7		13.8	12.6	14.0		13.8	12.4	8.9
9											13.6	12.1		13.5	13.6	12.4	
10	8.1	10.1	13.3	15.9	16.9	16.3	12.5	4.6	7.5		11.4	12.0	14.0		13.6	12.4	
11					16.1									13.4	13.5	12.3	8.8
12	7.8	10.0	12.7	15.4	14.7	15.5	12.4	4.6	7.5		10.7	11.5	13.9	13.3	13.4	12.1	8.9
13				13.6	13.8	14.2					10.0			13.2	13.1	12.0	8.9
14	7.7	9.9	11.8	12.1	12.6	12.9	12.3	4.6	7.4		9.9	11.3	13.4		12.9	12.0	8.9
15				11.2	11.6	11.9								12.6	12.6	11.9	8.9
16	7.5	9.8	10.8	10.9	10.8	11.2	12.1	4.6	7.4		9.7	10.9	13.0		12.5	11.8	8.9
17				10.4	10.4	10.4									12.3	11.8	8.9
18	7.3	9.4	9.7	10.2	10.0	10.0	11.9	4.6	7.4		9.5	10.4	11.0	11.3	11.6	11.8	8.9
19			9.4	9.9	9.7	9.8									11.3	11.6	8.9
20	7.2	9.0	9.2	9.9	9.6	9.7	11.5	4.5	7.4		9.4	10.1	10.6	10.6	11.1	11.5	8.9
21			9.2	9.9	9.5	9.6	11.4								11.1	11.5	8.9
22		8.4	9.2	9.3	9.5	9.6	10.7	4.5	7.3			10.0	10.3	10.5	10.9	11.5	8.9
23			9.1	9.3	9.5	9.5	10.1								10.8	11.5	8.9
24		8.3	9.1		9.4	9.5	9.8	4.4	7.3			9.8	10.2	10.4	10.8	11.4	8.8
25			9.0			9.5									10.7		8.9
26		8.1	9.0			9.5		4.4	7.3			9.7	10.1	10.4	10.7		8.9
27						9.5		4.4									8.9
28		8.1							7.3				10.1	10.3			8.9
29													10.1	10.3			
30														10.3			

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.105 Oxygen mg l^{-1} profiles of Lough Inchiquin.

Depth (m)	10 Apr 96	07 May 96	10 Jun 96	10 Jul 96	12 Aug 96	11 Sep 96	14 Oct 96	14 Jan 97	09 Mar 97	09 Apr 97	04 May 97	03 Jun 97	01 Jul 97	11 Aug 97	17 Sep 97	12 Oct 97	10 Dec 97
0	-	13.5	10.5	10.7	9.5	10.4	9.5	11.4	11.6	-	10.8	11.5	10.4	8.7	8.6	8.0	10.5
1														8.7	8.6	8.0	10.4
2		13.6	10.3	10.7	9.1	10.3	9.6	11.4	11.6		11.3	11.3	10.5	8.7	8.6	7.9	
3														8.7	8.5	7.9	10.4
4		12.5	9.9	10.7	8.8	10.2	9.5	11.4	11.6		11.6	11.5	10.3	8.7	8.5	7.9	10.4
5												11.6		7.5	8.5	7.9	10.4
6		11.8	10.4	10.6	8.6	9.3	9.4	11.4	11.7		11.7	10.5	10.4		8.5	7.9	10.4
7												10.4		7.3	8.4	7.5	10.3
8		11.4	9.3	10.5	8.4	8.3	9.4	11.4	11.7		12.0	10.2	10.4		7.9	7.4	10.3
9											12.0	9.9		7.0	7.6	7.4	
10		11.4	9.2	10.1	7.9	7.4	9.2	11.4	11.6		11.3	9.8	10.3		7.6	7.4	
11					6.5									7.0	7.4	7.0	10.3
12		11.2	9.0	9.6	5.2	6.3	9.0	11.5	11.6		11.2	9.6	10.2	6.9	7.2	6.0	10.3
13				7.9	4.5	3.5					11.0			6.5	6.6	6.5	10.3
14		11.0	8.4	7.3	4.2	1.9	8.8	11.5	11.6		11.1	9.5	9.3		6.3	6.8	10.3
15				6.6	4.3	1.4								5.3	5.4	6.7	10.3
16		10.8	8.0	6.1	3.9	1.2	8.2	11.5	11.6		11.1	8.8	8.2		5.2	6.4	10.3
17				5.7	3.2	0.5									3.6	5.8	10.3
18		10.4	7.3	5.5	2.8	0.2	8.3	11.5	11.5		10.3	7.7	6.5	2.0	1.5	5.9	10.3
19			6.7	4.8	2.0	0.1									0.3	6.2	10.3
20		9.9	6.2	4.6	1.5	0.1	6.4	11.5	11.5		9.9	6.6	4.9	0.8	0.1	4.9	10.3
21			6.2	3.9	1.3	0.1	6.0								0.1	4.4	10.3
22		9.2	6.2	3.3	0.9	0.1	2.6	11.5	11.6			6.2	3.4	0.1	0.1	4.2	10.3
23			6.2	2.9	0.8	0.1	0.4								0.1	4.7	10.3
24		9.1	6.0		1.0	0.1	0.2	11.4	-			5.6	3.0	0.0	0.1	5.1	10.3
25			0.2			0.1									0.1		10.3
26		8.8	0.1			0.1		11.5	-			4.7	2.6	0.0	0.1		10.3
27						0.1		11.5									10.2
28		8.7							-				2.4	0.0			10.2
29													2.2	0.0			
30														0.0			

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.106 Values of pH, alkalinity, conductivity and colour recorded in Lough Inchiquin between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
10/04/96	8.01	136	356	28
07/05/96	8.32	138	354	26
10/06/96	8.45	139	341	22
10/07/96	8.40	133	325	18
12/08/96	8.42	126	325	14
11/09/96	8.46	124	319	13
14/10/96	8.08	128	343	27
14/01/97	8.09	142	365	33
09/03/97	8.10	129	372	29
09/04/97	8.33	135	384	23
04/05/97	8.39	133	340	20
03/06/97	8.56	132	333	19
01/07/97	8.36	136	335	20
11/08/97	8.10	145	359	47
17/09/97	8.09	162	382	48
12/10/97	8.07	165	392	48
10/12/97	8.07	171	388	43

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.107 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Inchiquin between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
10/04/96	20.0	7.4	2.4	10.2	1.1	57.3
07/05/96	19.6	7.0	2.6	9.9	1.0	56.3
10/06/96	18.1	7.5	2.5	10.1	1.0	54.7
10/07/96	18.4	7.8	2.6	11.1	1.0	52.7
12/08/96	18.3	7.7	2.7	10.0	1.1	50.7
11/09/96	17.9	7.6	2.8	10.5	1.1	50.1
14/10/96	19.1	9.5	2.6	10.5	1.3	53.2
14/01/97	20.3	8.5	2.6	10.2	1.2	59.4
09/03/97	26.5	8.4	2.5	12.3	1.2	57.6
09/04/97	28.9	8.6	2.6	12.6	1.2	59.3
04/05/97	28.9	8.7	2.7	12.5	1.2	58.5
03/06/97	29.1	8.7	2.8	12.8	1.1	56.5
01/07/97	25.8	8.3				
11/08/97	20.2	7.6				
17/09/97	17.2	7.0				
12/10/97	17.6	6.6				
10/12/97	15.9	6.4				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.108 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Inchiquin between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
10/04/96	31	19	2.08	1.84	1.66	0.63	0.61	0.60
07/05/96	17	2	1.74	1.62	1.34	0.31	0.15	0.13
10/06/96	10	2	1.47	1.41	1.11	0.17	0.13	0.13
10/07/96	5	3	1.34	1.28	1.01	0.17	0.15	0.14
12/08/96	11	4	1.10	1.05	0.71	0.19	0.16	0.14
11/09/96	10	3	1.03	0.96	0.61	0.15	0.10	0.05
14/10/96	28	12	1.47	1.41	1.03	0.60	0.59	0.52
14/01/97	33	27	1.66	1.65	1.27	0.88	0.87	0.84
09/03/97	28	23	1.77	1.74	1.42	0.71	0.70	0.66
09/04/97	23	13	1.59	1.54	1.17	0.39	0.27	0.27
04/05/97	12	5	1.39	1.34	1.06	0.16	0.18	0.12
03/06/97	6	3	1.23	1.14	0.79	0.09	0.07	0.10
01/07/97	12	5	1.32	1.22	0.84	0.30	0.27	0.28
11/08/97	41	24	1.44	1.34	0.71	0.66	0.63	0.62
17/09/97	32	24	1.20	1.20	0.71	0.83	0.82	0.77
12/10/97	36	26	1.25	1.17	0.81	0.97	0.94	0.93
10/12/97	39	30	1.49	1.47	0.98	1.09	1.05	1.07

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.109 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Inchiquin.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
10/04/96	4.3	-	2.0
07/05/96	14.5	-	2.2
10/06/96	5.8	-	3.5
10/07/96	4.0	0.74	4.6
12/08/96	4.6	0.46	4.1
11/09/96	7.2	0.72	5.0
14/10/96	3.2	1.79	3.0
14/01/97	0.6	1.45	2.7
09/03/97	1.1	1.50	3.0
09/04/97	5.0	0.69	4.0
04/05/97	3.0	0.81	4.0
03/06/97	5.3	1.80	5.0
01/07/97	4.5	1.20	4.0
11/08/97	6.9	1.96	2.3
17/09/97	2.5	0.96	2.8
12/10/97	1.9	2.02	1.6
10/12/97	1.2	2.72	2.0

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.110 Summary statistics of Lough Inchiquin.

	Mean	95% C.I.	n	Max.	Min.
pH	8.22	0.09	17	8.56	8.01
Alkalinity mg l^{-1} $CaCO_3$	140	7	17	171	124
Conductivity µS cm^{-1}	354	11	17	392	319
Turbidity NTU	1.34	0.34	14	2.72	0.46
Colour mg l^{-1} PtCo	28	6	17	48	13
Chlorophyll *a* µg l^{-1}	4.5	1.5	17	14.5	0.6
MRP µg l^{-1}	13	5	17	30	2
TP µg l^{-1}	22	6	17	41	5
TDP µg l^{-1}	15	7	17	39	<5
NO_3-N mg l^{-1}	1.01	0.14	17	1.66	0.61
TN mg l^{-1}	1.45	0.13	17	2.08	1.03
TDN mg l^{-1}	1.38	0.12	17	1.84	0.96
SiO_2-Si mg l^{-1}	0.43	0.16	17	1.07	0.05
TSi mg l^{-1}	0.49	0.16	17	1.09	0.09
TDSi mg l^{-1}	0.45	0.16	17	1.05	0.07
Cl^- mg l^{-1}	21.3	2.2	17	29.1	15.9
SO_4^{2-} mg l^{-1}	7.8	0.4	17	9.5	6.4
Mg^{2+} mg l^{-1}	2.6	0.1	12	2.8	2.4
Na^+ mg l^{-1}	11.1	0.7	12	12.8	9.9
K^+ mg l^{-1}	1.1	0.1	12	1.3	1.0
Ca^{2+} mg l^{-1}	55.5	1.8	12	59.4	50.1

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.111 Values of pH, alkalinity, conductivity and colour recorded in Lough Leane between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
20/04/96	7.33	16	96	39
12/06/96	7.52	20	105	35
/9/96	7.55	23	103	-
30/01/97	7.33	15	93	46
12/06/97	7.70	22	102	26
19/07/97	7.76	20	97	35
25/08/97	7.96	22	101	37
21/09/97	7.38	20	95	45
15/12/97	7.50	16	89	56

Table 2.112 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Leane between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
20/04/96	13.6	4.3	1.7	7.8	0.8	6.9
12/06/96	13.3	4.0	1.7	8.0	0.8	7.8
/9/96	13.0	4.1	1.8	8.1	0.8	8.7
30/01/97	12.0	3.8	1.6	7.7	0.8	6.9
12/06/97	15.7	3.9	1.9	8.0	0.8	8.7
19/07/97	13.9	3.8				
25/08/97	14.1	4.0				
21/09/97	13.3	3.5				
15/12/97	11.8	3.2				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.113 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Leane between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
20/04/96	18	7	0.82	0.78	0.54	0.79	0.75	0.71
12/06/96	10	2	0.86	0.72	0.42	0.16	0.09	0.08
/9/96	< 7	3	0.63	-	0.34	0.31	-	0.24
30/01/97	8	4	0.81	0.77	0.49	0.80	0.82	0.80
12/06/97	5	3	0.72	0.65	0.36	0.23	0.19	0.18
19/07/97	7	5	0.59	0.45	0.24	0.39	0.37	0.36
25/08/97	20	6	0.74	0.18	<.05	0.50	0.50	0.50
21/09/97	8	4	0.63	0.58	0.17	0.62	0.62	0.58
15/12/97	17	14	0.61	0.59	0.27	0.87	0.86	0.88

Table 2.114 Values of chlorophyll *a* and turbidity recorded in Lough Leane.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU
20/04/96	3.2	-
12/06/96	6.0	-
/9/96	5.8	0.86
30/01/97	0.6	1.06
12/06/97	10.1	1.93
19/07/97	15.5	3.89
25/08/97	54.6	10.15
21/09/97	6.7	2.56
15/12/97	0.9	1.74

Table 2.115 Summary statistics of Lough Leane.

	Mean	95% C.I.	n	Max.	Min.
pH	7.52	0.14	9	7.96	7.33
Alkalinity mg l^{-1} $CaCO_3$	19	2	9	23	15
Conductivity µS cm^{-1}	98	3	9	105	89
Turbidity NTU	3.17	2.40	7	10.15	0.86
Colour mg l^{-1} PtCo	40	6	8	56	26
Chlorophyll *a* µg l^{-1}	11.5	11.0	9	54.6	0.6
MRP µg l^{-1}	5	2	9	14	2
TP µg l^{-1}	11	4	9	20	< 7
TDP µg l^{-1}	8	5	8	24	< 7
NO_3^--N mg l^{-1}	0.31	0.11	9	0.54	< .05
TN mg l^{-1}	0.71	0.07	9	0.86	0.59
TDN mg l^{-1}	0.59	0.14	8	0.78	0.18
SiO_2-Si mg l^{-1}	0.48	0.18	9	0.88	0.08
TSi mg l^{-1}	0.52	0.17	9	0.87	0.16
TDSi mg l^{-1}	0.53	0.20	8	0.86	0.09
Cl^- mg l^{-1}	13.4	0.8	9	15.7	11.8
SO_4^{2-} mg l^{-1}	3.8	0.2	9	4.3	3.2
Mg^{2+} mg l^{-1}	1.7	0.1	5	1.9	1.6
Na^+ mg l^{-1}	7.9	0.1	5	8.1	7.7
K^+ mg l^{-1}	0.8	0.0	5	0.8	0.8
Ca^{2+} mg l^{-1}	7.8	0.8	5	8.7	6.9

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Table 2.116 Temperature °C profiles of Lough Lene.

Depth (m)	28 Mar 96	24 Apr 96	23 May 96	27 Jun 96	24 Jul 96	28 Aug 96	26 Sep 96	24 Oct 96	22 Jan 97	13 Mar 97	16 Apr 97	15 May 97	19 Jun 97	09 Jul 97	20 Aug 97	25 Sep 97	21 Oct 97	04 Dec 97
0	4.8	9.2	11.3	17.2	19.0	16.4	14.3	12.1	3.8	6.7	11.8	11.8	16.4	18.0	19.3	15.1	12.5	7.4
1					19.0			12.0						17.6	19.3	15.1	12.5	7.5
2	4.8	9.2	11.3	17.2	19.0	16.4	14.3	12.0	3.8	6.7		11.8	16.5	17.1	19.3	15.0	12.5	7.5
3					19.0									16.3	19.3		12.5	7.5
4	4.8	9.2	11.3	17.1	19.0	16.3	14.3	11.9	3.8	6.6		11.7	16.5	16.0	19.3	14.9	12.5	7.5
5														15.9	19.3	14.8	12.5	7.5
6	4.8	9.2	11.3	16.2	18.9	16.3	14.3	11.9	3.8	6.6		11.7	16.3	15.7	19.3	14.8	12.5	7.5
7					18.8	16.3								15.3	18.9	14.8	12.5	7.5
8	4.8	9.2	11.3	15.3	17.8	16.3	14.3	11.9	3.8	6.6		11.7	16.0	15.2	18.6		12.5	7.5
9					17.0	16.3								14.8	18.1	14.8	12.5	7.5
10	4.8	9.2	11.3	14.9		16.3	14.3	11.9	3.8	6.6		11.7	15.5	14.5	17.6	14.8	12.5	7.5
11					16.5									14.3	17.1	14.8	12.5	7.5
12	4.8	9.2	11.3	14.6	16.4		14.2	11.9	3.8	6.6		11.6	15.2	14.2	16.9	14.8	12.5	7.4
13						16.3								14.2	16.6	14.8	12.5	7.3
14	4.8	9.2	11.3	14.2	16.1	16.3	14.2	11.9	3.8	6.6		11.5	15.0	14.1	16.3	14.7	12.5	7.3
15	4.8					16.1									15.7	14.7	12.5	7.2
16		9.2	11.2	13.4	15.7	16.0	14.2	11.8	3.8	6.6		11.5	12.8	14.0	14.9	14.7	12.5	7.2
17				13.0	15.4	16.0									13.9	14.7	12.5	7.2
18		9.2	11.1			16.0	14.2	11.8	3.8	6.6		11.4	12.3	13.9	13.4	14.7	12.5	7.2
19			11.1			16.0							12.1		13.1	14.7	12.5	7.2
20		9.2			14.7	16.0	14.2	11.8	3.8	6.6		11.4	11.9	13.7	13.0	14.6	12.5	7.2
21		9.2			14.6		14.2						11.9		13.0		12.4	7.2
22					14.5		14.2	11.7				11.3		12.2	12.9			7.1
23							14.2	11.6				11.3			12.9			
24					14.4							11.3						

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Table 2.117 Oxygen mg l^{-1} profiles of Lough Lene.

Depth (m)	28 Mar 96	24 Apr 96	23 May 96	27 Jun 96	24 Jul 96	28 Aug 96	26 Sep 96	24 Oct 96	22 Jan 97	13 Mar 97	16 Apr 97	15 May 97	19 Jun 97	09 Jul 97	20 Aug 97	25 Sep 97	21 Oct 97	04 Dec 97
0	12.3	11.8	10.8	10.4	9.8	9.5	9.7	15.2	13.9	13.3	-	11.0	11.4	10.9	9.1	9.4	9.6	10.7
1					9.9			15.3						10.9	9.1	9.4	9.6	10.6
2	12.4	11.8	10.8	10.4	9.9	9.3	9.7	15.3	13.7	13.3		11.7	10.9	10.8	9.1	9.4	9.6	10.6
3					9.9									10.6	9.1		9.6	10.5
4	12.4	11.7	10.8	10.4	9.9	9.2	9.6	15.3	13.7	13.2		12.2	10.8	10.5	9.1	9.4	9.6	10.5
5														10.7	9.1	9.3	9.6	10.5
6	12.4	11.7	10.8	9.9	9.9	9.0	9.6	15.3	13.2	13.2		12.3	10.6	10.8	9.1	9.3	9.6	10.5
7					9.8	9.0								10.8	8.8	9.3	9.6	10.5
8	12.4	11.7	10.8	8.9	8.8	9.0	9.6	15.4	13.3	13.2		12.6	10.5	10.3	8.3		9.6	10.5
9					8.0	8.8								10.3	7.7	9.2	9.6	10.4
10	12.4	11.7	10.8	7.9		8.9	9.6	15.4	13.5	13.2		12.8	10.0	10.1	7.0	9.1	9.5	10.4
11					6.4									10.0	6.6	9.2	9.5	10.4
12	12.5	11.7	10.8	7.8	6.2		9.6	15.4	13.6	13.1		12.9	9.7	9.8	6.7	9.2	9.5	10.4
13						8.9								9.8	6.6	9.1	9.5	10.4
14	12.4	11.7	10.8	7.0	6.2	8.8	9.6	15.5	13.6	13.1		12.9	8.7	9.8	5.7	9.1	9.5	10.3
15	12.3					7.7									4.3	9.1	9.5	10.3
16		11.7	10.6	6.0	4.9	7.6	9.4	15.2	13.6	13.1		12.9	5.9	9.7	2.1	9.0	9.5	10.3
17				5.1	4.0	7.5									0.1	9.0	9.5	10.3
18		11.7	10.4			7.5	9.4	15.4	13.5	13.2		12.9	4.2	9.1	0.0	8.9	9.5	10.3
19			10.4			7.5							3.5		0.0	8.8	9.5	10.3
20		11.7			1.2	7.2	9.4	15.2	13.5	13.1		12.6	2.6	8.3	0.0	8.8	9.5	10.3
21		11.7			0.6		9.4						2.3		0.0		9.5	10.3
22					0.5		9.4	15.0				12.6		2.5	0.0			10.2
23							9.4	14.3				12.4			0.0			
24					0.0							12.2						

Table 2.118 Values of pH, alkalinity, conductivity and colour recorded in Lough Lene between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
28/03/96	8.18	107	-	1
24/04/96	8.32	106	261	5
23/05/96	8.27	105	263	5
27/06/96	8.42	98	252	3
24/07/96	8.45	96	245	6
28/08/96	8.27	95	244	6
26/09/96	8.24	93	242	6
24/10/96	8.22	93	241	7
22/01/97	8.17	99	255	5
13/03/97	8.37	101	256	5
16/04/97	8.39	101	231	6
15/05/97	8.37	99	228	6
19/06/97	8.37	95	220	5
09/07/97	8.42	92	215	5
20/08/97	8.33	88	231	5
25/09/97	8.24	89	235	6
21/10/97	8.22	91	238	7
04/12/97	8.23	-	248	6

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Table 2.119 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Lene between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
28/03/96	12.4	7.9	3.5	6.2	1.1	41.9
24/04/96	12.5	8.8	3.5	6.2	1.0	39.9
23/05/96	12.3	7.6	3.7	6.1	0.9	39.6
27/06/96	11.6	7.9	3.8	6.9	1.0	37.4
24/07/96	11.6	7.8	3.7	6.2	1.0	35.1
28/08/96	11.8	8.0	3.7	6.2	1.0	35.7
26/09/96	11.9	8.0	3.7	6.5	1.0	35.5
24/10/96	12.0	8.2	3.7	6.5	1.0	35.0
22/01/97	11.2	8.2	3.8	6.3	0.9	38.5
13/03/97	11.4	8.5	3.6	6.0	1.0	39.4
16/04/97	12.1	8.6	3.7	6.2	1.0	38.5
15/05/97	11.9	8.6	3.6	6.6	1.0	37.5
19/06/97	11.3	8.1	3.6	6.2	0.9	35.8
09/07/97	11.9	9.1				
20/08/97	12.0	8.1				
25/09/97	12.0	8.5				
21/10/97	12.2	8.4				
04/12/97	12.3	8.5				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.120 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Lene between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3-N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
28/03/96	11	6	0.38	0.33	<.05	0.66	0.57	0.57
24/04/96	9	1	0.38	0.35	<.05	0.52	0.43	0.42
23/05/96	12	2	0.46	0.21	<.05	0.52	0.45	0.47
27/06/96	9	3	0.38	0.31	<.05	0.69	0.57	0.58
24/07/96	8	4	0.51	0.43	<.05	0.99	0.97	1.02
28/08/96	17	7	0.42	0.29	<.05	1.55	1.53	1.64
26/09/96	15	6	0.50	0.35	<.05	1.73	1.73	1.92
24/10/96	5	4	0.43	0.41	<.05	1.83	1.87	1.83
22/01/97	8	3	0.43	0.41	<.05	1.64	1.51	1.51
13/03/97	11	4	0.44	0.38	<.05	1.06	0.54	0.52
16/04/97	13	3	0.31	0.22	<.05	0.36	0.09	0.08
15/05/97	20	4	0.48	0.27	<.05	0.36	0.10	0.08
19/06/97	20	3	0.37	0.37	<.05	0.42	0.28	0.26
09/07/97	14	6	0.38	0.39	<.05	0.62	0.51	0.50
20/08/97	11	2	0.41	0.31	<.05	0.84	0.80	0.79
25/09/97	11	4	0.36	0.35	<.05	1.56	1.57	1.45
21/10/97	5	4	0.26	0.19	<.05	1.67	1.62	1.50
04/12/97	12	6	0.40	0.36	<.05	1.74	1.70	1.74

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.121 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Lene.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
28/03/96	5	-	4.8
24/04/96	8	-	3.9
23/05/96	13	-	5.0
27/06/96	4	0.87	3.3
24/07/96	6	0.86	5.0
28/08/96	8	1.04	3.8
26/09/96	1	0.42	8.0
24/10/96	2	0.67	9.0
22/01/97	5	0.84	8.6
13/03/97	8	1.14	4.1
16/04/97	5	0.87	5.4
15/05/97	4	0.87	4.2
19/06/97	3	0.91	5.1
09/07/97	3	0.78	5.5
20/08/97	3	0.71	5.5
25/09/97	3	0.99	7.2
21/10/97	5	0.81	5.5
04/12/97	6	0.71	6.1

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.122 Summary statistics of Lough Lene.

	Mean	95% C.I.	n	Max.	Min.
pH	8.30	0.04	18	8.45	8.17
Alkalinity mg l^{-1} $CaCO_3$	97	3	17	107	88
Conductivity µS cm^{-1}	241	7	17	263	215
Turbidity NTU	0.83	0.09	15	1.14	0.42
Colour mg l^{-1} PtCo	5	1	18	7	1
Chlorophyll *a* µg l^{-1}	5.1	1.3	18	13.3	1.0
MRP µg l^{-1}	4	1	18	7	1
TP µg l^{-1}	12	2	18	20	5
TDP µg l^{-1}	5	1	18	8	< 7
NO_3^--N mg l^{-1}	< .05	0.00	18	< .05	< .05
TN mg l^{-1}	0.40	0.03	18	0.51	0.26
TDN mg l^{-1}	0.33	0.03	18	0.43	0.19
SiO_2-Si mg l^{-1}	0.94	0.29	18	1.92	0.08
TSi mg l^{-1}	1.04	0.26	18	1.83	0.36
TDSi mg l^{-1}	0.94	0.29	18	1.87	0.09
Cl^- mg l^{-1}	11.9	0.2	18	12.5	11.2
SO_4^{2-} mg l^{-1}	8.3	0.2	18	9.1	7.6
Mg^{2+} mg l^{-1}	3.7	0.1	13	3.8	3.5
Na^+ mg l^{-1}	6.3	0.1	13	6.9	6.0
K^+ mg l^{-1}	1.0	0.0	13	1.1	0.9
Ca^{2+} mg l^{-1}	37.7	1.2	13	41.9	35.0

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.123 Temperature °C profiles of Lough Lettercraffroe.

Depth (m)	12 Apr 96	12 Jun 96	11 Jul 96	12 Sep 96	15 Jan 97	10 Apr 97	04 Jun 97	03 Jul 97	18 Sep 97	11 Dec 97
0	9.2	14.7	15.8	16.2	4.7	11.7	18.3	13.0	14.0	7.7
1									14.0	7.7
2	9.2	14.7	15.8	16.2	4.6		18.1	13.0	14.0	7.7
3									14.0	7.7
4	9.0	14.7	15.8	16.2	4.6		17.2	13.0	14.0	7.7
5							13.5		14.0	7.7
6	9.0	14.6	15.8	16.1	4.6		12.6	13.0	14.0	7.7
7							12.2		14.0	7.7
8	8.9	14.5	15.8	16.1	4.5		12.0	13.0	14.0	7.7
9							11.8		14.0	7.7
10	8.7	13.9	15.8	16.1	4.4		11.6	13.0	14.0	7.7
11				15.8			11.6		13.9	7.7
12	8.6	13.9	15.8	15.3	4.3		11.5	13.0	13.9	7.7
13					4.3		11.5		13.8	
14		13.9	15.8		4.3		11.5	13.0	13.8	
15			15.3				11.5	13.0	13.8	
16							11.5	13.0	13.7	
17									13.7	

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.124 Oxygen mg l^{-1} profiles of Lough Lettercraffroe.

Depth (m)	12 Apr 96	12 Jun 96	11 Jul 96	12 Sep 96	15 Jan 97	10 Apr 97	04 Jun 97	03 Jul 97	18 Sep 97	11 Dec 97
0	12.6	10.0	10.0	9.0	13.2	-	9.9	11.5	9.3	11.0
1									9.3	10.8
2	12.4	10.0	9.9	9.0	13.3		10.0	11.5	9.3	10.7
3									9.2	10.6
4	12.6	9.9	9.9	9.0	13.1		9.9	11.5	9.2	10.6
5							9.6		9.2	10.6
6	12.5	9.8	9.8	9.1	13.2		8.9	11.5	9.2	10.6
7							8.0		9.2	10.6
8	12.6	9.8	9.9	9.1	13.2		8.3	11.5	9.2	10.5
9							8.0		9.2	10.5
10	12.5	9.7	9.8	8.9	13.2		7.6	11.5	9.1	10.5
11				8.0			7.5		9.1	10.5
12	12.4	9.7	9.9	5.6	13.2		7.4	11.5	9.0	10.5
13					13.3		7.2		9.0	
14		9.3	9.8		13.3		7.2	11.5	8.9	
15			9.1				7.1	11.5	8.8	
16							7.2	11.4	8.7	
17									8.6	

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.125 Values of pH, alkalinity, conductivity and colour recorded in Lough Lettercraffroe between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
12/04/96	5.57	0	78	53
12/06/96	5.89	0	77	57
11/07/96	6.08	1	76	47
12/09/96	6.20	1	76	35
15/01/97	5.62	0	73	55
10/04/97	5.65	0	92	50
04/06/97	5.97	1	85	43
03/07/97	5.86	1	82	41
18/09/97	5.76	1	77	60
11/12/97	5.54	1	68	88

Table 2.126 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Lettercraffroe between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
12/04/96	17.3	5.0	1.3	10.0	0.4	1.5
12/06/96	15.8	5.1	1.3	10.1	0.3	1.3
11/07/96	16.3	5.1	1.4	10.3	0.3	1.3
12/09/96	15.9	4.6	1.4	9.7	0.3	1.4
15/01/97	15.7	4.2	1.3	9.0	0.3	1.3
10/04/97	22.2	4.1	1.7	12.2	0.4	1.6
04/06/97	23.2	4.9	1.7	12.3	0.4	1.7
03/07/97	21.9	4.9				
18/09/97	18.5	3.4				
11/12/97	15.5	3.2				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.127 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Lettercraffroe between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
12/04/96	16	3	0.30	0.24	<.05	0.10	0.05	0.03
12/06/96	14	4	0.46	0.38	<.05	0.29	0.20	0.11
11/07/96	9	5	0.32	0.30	<.05	0.32	0.24	0.17
12/09/96	7	4	0.24	0.19	<.05	0.22	0.10	0.03
15/01/97	9	3	0.18	0.11	<.05	0.35	0.05	0.02
10/04/97	10	5	0.33	0.25	<.05	0.27	0.15	0.08
04/06/97	14	5	0.22	0.14	<.05	0.43	0.28	0.08
03/07/97	9	5	0.21	0.19	<.05	0.48	0.35	0.20
18/09/97	6	4	0.28	0.21	<.05	0.43	0.30	0.28
11/12/97	10	7	0.42	0.38	<.05	0.50	0.45	0.42

Table 2.128 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Lettercraffroe.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
12/04/96	14.7	-	1.3
12/06/96	3.6	-	1.7
11/07/96	3.9	1.06	1.8
12/09/96	5.6	0.71	3.1
15/01/97	22.5	0.94	2.3
10/04/97	8.2	1.11	3.3
04/06/97	5.1	1.58	2.3
03/07/97	5.5	1.45	2.1
18/09/97	7.3	0.84	2.2
11/12/97	3.7	0.72	1.5

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Table 2.129 Summary statistics of Lough Lettercraffroe.

	Mean	95% C.I.	n	Max.	Min.
pH	5.77	0.15	10	6.20	5.54
Alkalinity mg l^{-1} $CaCO_3$	1	0	10	1	0
Conductivity µS cm^{-1}	78	4	10	92	68
Turbidity NTU	1.05	0.22	8	1.58	0.71
Colour mg l^{-1} PtCo	53	9	10	88	35
Chlorophyll *a* µg l^{-1}	8.0	3.8	10	22.5	3.6
MRP µg l^{-1}	4	1	10	7	3
TP µg l^{-1}	10	2	10	16	6
TDP µg l^{-1}	4	2	10	9	<7
NO_3^--N mg l^{-1}	<.05	0.00	10	<.05	<.05
TN mg l^{-1}	0.30	0.06	10	0.46	0.18
TDN mg l^{-1}	0.24	0.06	10	0.38	0.11
SiO_2-Si mg l^{-1}	0.14	0.08	10	0.42	0.02
TSi mg l^{-1}	0.34	0.08	10	0.50	0.10
TDSi mg l^{-1}	0.22	0.08	10	0.45	0.05
Cl^- mg l^{-1}	18.2	1.9	10	23.2	15.5
SO_4^{2-} mg l^{-1}	4.4	0.4	10	5.1	3.2
Mg^{2+} mg l^{-1}	1.4	0.1	7	1.7	1.3
Na^+ mg l^{-1}	10.5	0.9	7	12.3	9.0
K^+ mg l^{-1}	0.3	0.0	7	0.4	0.3
Ca^{2+} mg l^{-1}	1.4	0.1	7	1.7	1.3

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.130 Temperature °C profiles of Lough Lickeen.

Depth (m)	11 Mar 96	11 Apr 96	07 May 96	11 Jun 96	09 Jul 96	13 Aug 96	10 Sep 96	15 Oct 96	14 Jan 97	10 Mar 97	07 Apr 97	05 May 97	01 Jun 97	01 Jul 97	11 Aug 97	15 Sep 97	13 Oct 97	08 Dec 97
0	5.6	7.4	12.1	14.4	15.5	18.8	17.5	12.7	3.7	7.1	10.1	12.6	19.3	14.7	17.9	15.4	13.5	8.3
1						18.8									17.9	15.4	13.5	8.2
2	5.6	7.4	11.0	14.4	15.5	18.3	17.4	12.8	3.5	7.0	10.1	12.6	19.3	14.8	17.9	15.4	13.5	8.2
3						17.4									17.8	15.4	13.5	
4	5.6	7.4	10.7	14.4	15.5	17.3	17.3	12.8	3.5	6.9	10.0	12.6	19.0	14.8	17.7	15.3	13.5	8.2
5						17.2							18.8		17.7	15.3	13.5	
6	5.6	7.4	10.5	14.4	15.3	17.1	17.3	12.8	3.5	6.9	9.8	12.7	16.5	14.8		15.3	13.5	8.2
7						17.1							14.4		17.6	15.3	13.5	
8	5.6	7.4	10.4	14.4	15.3	16.9	17.0	12.8	3.4	6.9	9.7	12.7	13.7	14.9	17.4	15.3	13.5	8.2
9						16.9							13.3			15.3	13.5	
10	5.6	7.4	10.2	14.4	15.3	16.8	16.7	12.8	3.4	6.9	9.6	12.6	13.0	14.9	17.3	15.3	13.4	8.2
11						16.8							12.8		17.1	15.3	13.4	
12	5.6	7.4	10.1	14.4	15.3	16.8	16.6	12.8	3.4	6.8	9.6	12.6	12.8	14.8		15.3	13.4	8.2
13						16.7							12.7		16.5	15.3	13.4	
14	5.6	7.5	10.1	14.4	15.3	16.6	16.6	12.8	3.4	6.7	9.6	12.6	12.6	14.9	16.4	15.3	13.4	
15						16.3							12.6		16.3	15.3	13.4	
16	5.2	7.5	10.0	14.4	15.3	16.2	16.5	12.8	3.4	6.6	9.5	12.6	12.5	14.3	16.2	15.3	13.4	
17						15.7							12.4	13.9		15.3	13.4	
18	5.6	7.5	9.9	14.2	15.2	15.4	16.3	12.8	3.4	6.6	9.5	12.5	12.4	13.4	16.2	15.3	13.3	
19					14.7	15.3	16.3						12.3	12.8	16.0	15.3	13.3	
20	5.6	7.5	9.8	13.7	14.7	15.2	16.2	12.7	3.4	6.6	9.4	11.9	12.3		15.3	15.3	13.3	
21						15.1							12.3		13.5	15.3	13.3	
22	5.4			13.6		15.1		12.7			9.4	11.5			13.1	15.3	13.3	
23	5.4			13.6		15.0		12.7								15.3	13.3	
24				13.5		14.9		12.7				11.5					13.3	
25				13.6		14.4		12.7									13.3	
26												11.3					13.3	

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Table 2.131 Oxygen mg l^{-1} profiles of Lough Lickeen.

Depth (m)	11 Mar 96	11 Apr 96	07 May 96	11 Jun 96	09 Jul 96	13 Aug 96	10 Sep 96	15 Oct 96	14 Jan 97	10 Mar 97	07 Apr 97	05 May 97	01 Jun 97	01 Jul 97	11 Aug 97	15 Sep 97	13 Oct 97	08 Dec 97
0	12.6	-	11.1	9.5	9.6	9.7	10.0	9.8	12.1	12.3	12.7	11.3	11.9	9.8	9.4	9.0	9.1	10.8
1						9.7									9.4	9.0	9.1	10.8
2	12.9		11.2	9.6	9.6	9.6	9.9	9.6	12.8	12.3	12.6	11.4	11.9	9.6	9.3	9.0	9.0	10.7
3						9.2									9.3	9.0	9.0	
4	12.8		11.0	9.7	9.6	8.9	9.8	9.5	12.8	12.3	12.5	11.6	11.9	9.6	9.2	9.0	9.0	10.7
5						8.9							11.8		9.2	9.0	9.0	
6	13.0		11.0	9.6	9.6	8.6	9.7	9.5	12.8	12.4	12.5	11.6	10.5	9.4		8.9	9.0	10.7
7						8.6							10.0		9.1	8.9	9.0	
8	13.2		10.9	9.4	9.3	8.4	8.3	9.4	12.9	12.4	12.3	12.0	9.7	9.4	9.0	8.9	9.0	10.7
9						8.4							9.5			9.0	9.0	
10	13.2		10.7	9.5	9.4	8.2	7.8	9.5	12.8	12.4	12.2	12.3	9.4	9.4	8.9	8.9	9.0	10.7
11						8.2							9.2		8.7	9.0	8.9	
12	13.2		10.8	9.5	9.5	8.1	7.5	9.4	12.9	12.3	12.1	12.4	9.2	9.3		8.9	8.9	10.7
13						7.6							9.2		8.0	8.9	8.9	
14	13.4		10.6	9.6	9.3	7.4	7.2	9.4	12.9	12.1	12.1	12.5	9.1	9.3	7.7	8.9	8.9	
15						6.3							9.0		7.6	8.9	8.9	
16	13.2		10.9	9.5	9.3	5.6	6.5	9.4	12.8	12.1	12.1	12.6	8.9	8.0	7.2	9.0	8.8	
17						3.8							8.5	6.9		8.9	8.8	
18	13.3		10.4	9.4	9.0	3.2	6.0	9.4	12.9	12.1	12.1	12.6	8.4	5.6	7.1	8.9	8.7	
19					8.0	2.9	5.7						8.2	4.7	6.7	8.9	8.7	
20	13.4		10.4	9.1	0.2	2.2	4.7	9.4	12.9	11.8	8.3	12.1	8.0		4.8	8.9	8.7	
21						1.5							8.0		0.2	8.9	8.7	
22	13.6			8.6		0.9		9.4			9.1	11.7			0.0	8.9	8.7	
23	13.6			7.7		0.4		9.4								8.5	8.7	
24				8.1		0.2		9.4				11.7					8.7	
25				6.5		0.0		9.4									8.7	
26												8.8					8.6	

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.132 Values of pH, alkalinity, conductivity and colour recorded in Lough Lickeen between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
11/03/96	7.07	20	-	62
11/04/96	7.55	20	153	67
07/05/96	7.64	20	153	63
11/06/96	7.80	21	154	58
09/07/96	7.60	20	153	52
13/08/96	7.67	21	156	44
10/09/96	7.88	23	156	42
15/10/96	7.54	22	159	43
14/01/97	7.31	20	159	60
10/03/97	7.45	17	166	62
07/04/97	7.50	18	166	58
05/05/97	7.57	18	149	56
01/06/97	9.26	21	150	54
01/07/97	7.58	20	150	47
11/08/97	7.61	22	164	54
15/09/97	7.54	22	166	59
13/10/97	7.47	22	163	69
08/12/97	7.40	23	159	79

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.133 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Lickeen between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
11/03/96	24.7	7.4	2.3	12.9	1.5	9.4
11/04/96	24.8	7.6	2.3	14.5	1.6	9.1
07/05/96	24.4	7.4	2.2	14.2	1.5	9.2
11/06/96	24.9	8.0	2.3	14.4	1.5	9.7
09/07/96	24.7	8.1	2.3	14.4	1.6	9.5
13/08/96	24.5	8.1	2.4	13.5	1.7	9.8
10/09/96	25.3	8.1	2.4	14.3	1.7	9.8
15/10/96	26.2	9.5	2.4	14.3	1.5	10.0
14/01/97	25.1	9.8	2.6	14.0	1.5	9.9
10/03/97	25.5	10.1	2.7	15.4	1.6	11.5
07/04/97	21.7	9.0	2.6	15.7	1.6	10.3
05/05/97	28.0	10.3	2.5	15.6	1.6	9.8
01/06/97	28.4	10.3	2.5	15.0	1.5	9.9
01/07/97	26.8	10.0				
11/08/97	26.9	10.4				
15/09/97	26.5	10.4				
13/10/97	26.4	10.1				
08/12/97	24.9	8.9				

TRINITY COLLEGE LIBRARY DUBLIN

Table 2.134 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Lickeen between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
11/03/96	22	4	0.88	0.81	0.26	0.64	0.63	0.61
11/04/96	20	3	0.94	0.88	0.27	0.51	0.48	0.47
07/05/96	18	2	0.81	0.71	0.20	0.30	0.24	0.17
11/06/96	14	3	0.71	0.61	0.13	0.17	0.14	0.14
09/07/96	10	3	0.74	0.64	0.13	0.18	0.13	0.12
13/08/96	12	5	0.61	0.56	0.07	0.21	0.19	0.18
10/09/96	11	3	0.70	0.58	<.05	0.23	0.21	0.17
15/10/96	14	3	0.69	0.60	0.10	0.29	0.28	0.26
14/01/97	25	8	0.87	0.84	0.24	0.57	0.56	0.54
10/03/97	23	8	0.98	0.91	0.34	0.62	0.61	0.56
07/04/97	22	6	1.01	0.89	0.21	0.51	0.48	0.48
05/05/97	18	5	0.95	0.82	0.22	0.42	0.39	0.39
01/06/97	10	4	0.98	0.61	<.05	0.31	0.31	0.29
01/07/97	13	4	0.83	0.66	<.05	0.39	0.37	0.36
11/08/97	14	3	0.86	0.70	0.05	0.37	0.37	0.33
15/09/97	13	3	0.83	0.64	0.08	0.42	0.40	0.39
13/10/97	15	4	0.80	0.66	0.13	0.45	0.42	0.39
08/12/97	20	7	0.88	0.84	0.21	0.53	0.52	0.51

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Table 2.135 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Lickeen.

Date	Turbidity NTU	Chlorophyll *a* $\mu g\ l^{-1}$	Secchi depth m
11/03/96	2.1	4	1.5
11/04/96	-	8	1.5
07/05/96	-	12	2.2
11/06/96	-	11	1.7
09/07/96	2.5	10	1.9
13/08/96	3.1	14	2.0
10/09/96	3.9	17	2.0
15/10/96	3.0	13	2.2
14/01/97	2.5	3	1.7
10/03/97	2.3	6	2.0
07/04/97	2.6	10	2.4
05/05/97	3.8	17	1.3
01/06/97	9.9	48	1.3
01/07/97	4.6	16	2.3
11/08/97	3.5	17	2.0
15/09/97	3.4	13	2.4
13/10/97	4.1	12	1.4
08/12/97	2.6	5	2.1

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Table 2.136 Summary statistics of Lough Lickeen.

	Mean	95% C.I.	n	Max.	Min.
pH	7.52	0.14	18	9.26	7.07
Alkalinity mg l^{-1} $CaCO_3$	21	1	18	23	17
Conductivity µS cm^{-1}	157	3	17	166	149
Turbidity NTU	3.58	0.96	15	9.89	2.06
Colour mg l^{-1} PtCo	57	4	18	79	42
Chlorophyll *a* µg l^{-1}	13.1	4.5	18	48.1	3.5
MRP µg l^{-1}	4	1	18	8	2
TP µg l^{-1}	16	2	18	25	10
TDP µg l^{-1}	9	2	18	15	4
NO_3^--N mg l^{-1}	0.15	0.05	18	0.34	< .05
TN mg l^{-1}	0.84	0.05	18	1.01	0.61
TDN mg l^{-1}	0.72	0.06	18	0.91	0.56
SiO_2-Si mg l^{-1}	0.35	0.07	18	0.61	0.12
TSi mg l^{-1}	0.40	0.07	18	0.64	0.17
TDSi mg l^{-1}	0.37	0.07	18	0.63	0.13
Cl^- mg l^{-1}	25.5	0.7	18	28.4	21.7
SO_4^{2-} mg l^{-1}	9.1	0.5	18	10.4	7.4
Mg^{2+} mg l^{-1}	2.4	0.1	13	2.7	2.2
Na^+ mg l^{-1}	14.5	0.4	13	15.7	12.9
K^+ mg l^{-1}	1.6	0.0	13	1.7	1.5
Ca^{2+} mg l^{-1}	9.8	0.3	13	11.5	9.1

Table 2.137 Temperature °C profiles of Lough Maumwee.

Depth (m)	12 Apr 96	12 Jun 96	11 Jul 96	12 Sep 96	15 Jan 97	10 Apr 97	04 Jun 97	03 Jul 97	18 Sep 97	11 Dec 97
0	10.0	15.3	17.1	16.9	5.5	12.8	18.5	14.0	14.4	8.2
1	10.0	15.3	17.1	16.9	5.5		18.5	13.9	14.4	8.2
2	10.0	15.3	17.1	16.9	5.5		18.5	13.7	14.4	8.2
3	10.0	15.3							14.4	8.2

Table 2.138 Oxygen mg l^{-1} profiles of Lough Maumwee.

Depth (m)	12 Apr 96	12 Jun 96	11 Jul 96	12 Sep 96	15 Jan 97	10 Apr 97	04 Jun 97	03 Jul 97	18 Sep 97	11 Dec 97
0	12.9	10.4	10.0	9.7	13.5	-	10.3	11.4	9.4	10.9
1	13.1	10.3	9.9	9.6	13.3		10.3	11.6	9.4	10.8
2	12.6	10.2	9.9	9.5	13.3		10.2	11.5	9.4	10.7
3	12.5	10.2							9.4	10.7

Table 2.139 Values of pH, alkalinity, conductivity and colour recorded in Lough Maumwee between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
12/04/96	6.11	1	73	19
12/06/96	6.32	1	58	31
11/07/96	6.61	2	56	30
12/09/96	6.67	3	52	36
15/01/97	6.19	2	55	25
10/04/97	6.24	1	100	15
04/06/97	6.61	2	82	14
03/07/97	6.60	2	78	16
18/09/97	6.54	2	43	42
11/12/97	6.35	2	46	37

Table 2.140 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Maumwee between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
12/04/96	15.3	4.4	1.3	8.5	0.5	1.7
12/06/96	11.3	3.6	1.1	8.0	0.4	1.4
11/07/96	11.2	3.7	1.0	7.3	0.3	1.4
12/09/96	9.5	2.8	1.0	6.6	0.3	1.5
15/01/97	11.3	2.9	0.9	6.7	0.3	1.3
10/04/97	24.9	4.0	1.8	13.1	0.6	2.0
04/06/97	21.4	3.7	1.5	12.1	0.5	1.9
03/07/97	3.0	0.8				
18/09/97	9.2	1.6				
11/12/97	9.5	2.4				

Table 2.141 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Maumwee between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
12/04/96	5	1	0.51	0.52	0.32	0.17	0.15	0.15
12/06/96	<7	2	0.34	0.27	<.05	0.08	0.07	0.07
11/07/96	<7	2	0.31	0.27	<.05	0.06	0.05	0.04
12/09/96	<7	3	0.37	0.36	<.05	0.14	0.13	0.06
15/01/97	<7	2	0.11	0.10	0.12	0.29	0.29	0.27
10/04/97	<7	3	0.24	0.15	0.07	0.07	0.01	0.06
04/06/97	<7	2	0.20	0.14	<.05	0.03	0.03	0.01
03/07/97	<7	4	0.19	0.20	<.05	0.05	0.04	<.003
18/09/97	<7	4	0.24	0.25	<.05	0.22	0.21	0.19
11/12/97	<7	4	0.25	0.24	0.06	0.30	0.28	0.27

Table 2.142 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Maumwee.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
12/04/96	1.5	-	3.3
12/06/96	2.2	-	2.9
11/07/96	4.0	0.59	-
12/09/96	2.8	0.41	3.0
15/01/97	2.4	0.47	2.8
10/04/97	1.6	0.40	2.5
04/06/97	1.6	0.36	2.5
03/07/97	2.1	0.50	2.9
18/09/97	2.3	0.72	3.0
11/12/97	1.9	1.07	2.5

Table 2.143 Summary statistics of Lough Maumwee.

	Mean	95% C.I.	n	Max.	Min.
pH	6.38	0.15	10	6.67	6.11
Alkalinity mg l^{-1} $CaCO_3$	2	0	10	3	1
Conductivity µS cm^{-1}	64	11	10	100	43
Turbidity NTU	0.57	0.16	8	1.07	0.36
Colour mg l^{-1} PtCo	27	6	10	42	14
Chlorophyll *a* µg l^{-1}	2.2	0.4	10	4.0	1.5
MRP µg l^{-1}	3	1	10	4	1
TP µg l^{-1}	< 7	1	10	5	< 7
TDP µg l^{-1}	< 7	1	10	4	< 7
NO_3^--N mg l^{-1}	0.06	0.06	10	0.32	< .05
TN mg l^{-1}	0.28	0.07	10	0.51	0.11
TDN mg l^{-1}	0.25	0.08	10	0.52	0.10
SiO_2-Si mg l^{-1}	0.11	0.06	10	0.27	< .003
TSi mg l^{-1}	0.14	0.06	10	0.30	0.03
TDSi mg l^{-1}	0.12	0.07	10	0.29	0.01
Cl^- mg l^{-1}	12.7	3.9	10	24.9	3.0
SO_4^{2-} mg l^{-1}	3.0	0.7	10	4.4	0.8
Mg^{2+} mg l^{-1}	1.2	0.2	7	1.8	0.9
Na^+ mg l^{-1}	8.9	1.9	7	13.1	6.6
K^+ mg l^{-1}	0.4	0.1	7	0.6	0.3
Ca^{2+} mg l^{-1}	1.6	0.2	7	2.0	1.3

Table 2.144 Temperature °C profiles of Lough Moher.

Depth (m)	12 Mar 96	13 Apr 96	08 May 96	13 Jun 96	12 Jul 96	14 Aug 96	13 Sep 96	16 Oct 96	16 Jan 97	11 Mar 97	11 Apr 97	06 May 97	05 Jun 97	04 Jul 97	12 Aug 97	19 Sep 97	14 Oct 97	12 Dec 97
0	6.4	9.2	12.2	15.2	16.8	17.8	16.5	11.2	5.6	7.2	11.2	12.6	18.7	13.2	18.1	14.0	11.7	7.4
1						17.8			5.6						18.1	14.0	11.7	7.4
2	6.2	9.2	12.2	14.6	16.3	17.8	16.4	11.2	5.6	7.1		12.6	18.7	13.1	18.1	14.0	11.7	7.4
3						17.4									18.1	14.0	11.6	7.4
4	6.2	9.1	11.0	15.5	16.3	16.7	16.3	11.2		6.9		12.6	18.3	13.0		14.0	11.6	7.4
5						16.6							13.9		18.1	14.0	11.6	7.4
6	6.2	9.1	10.4	14.4	16.2	16.4	16.2	11.2		6.8		12.6	13.4	13.0	17.8	14.0	11.5	7.4
7						16.3							13.1		16.2	14.0	11.5	7.4
8	6.2	8.9	9.7	14.4	15.9	16.3	15.5	11.2		6.8		12.6	12.6	12.9		14.0	11.5	7.4
9					15.5	16.2							12.5		15.8	14.0	11.5	7.4
10	6.1	8.9	9.5	14.3	15.0	16.2	15.3	11.2		6.8		12.6	12.3	12.9	15.0	14.0	11.5	7.3
11					14.9	16.1							12.2		14.1	14.0	11.5	7.3
12	6.1	8.8	9.4	14.3	14.7	16.0	15.2	11.2		6.8			12.2	12.9	13.0	14.0	11.5	7.3
13					14.7	15.9	15.2						12.1	12.8	12.8	14.0		7.3
14	6.1	8.7	9.4	14.2	14.6	15.9	15.1			6.8			12.1	12.8	12.8	14.0		7.3
15			9.4	14.1			15.1						12.1	12.8		13.9		
16		8.5								6.8				12.9				
17														12.8				
18														12.8				

Table 2.145 Oxygen mg l^{-1} profiles of Lough Moher.

Depth (m)	12 Mar 96	13 Apr 96	08 May 96	13 Jun 96	12 Jul 96	14 Aug 96	13 Sep 96	16 Oct 96	16 Jan 97	11 Mar 97	11 Apr 97	06 May 97	05 Jun 97	04 Jul 97	12 Aug 97	19 Sep 97	14 Oct 97	12 Dec 97
0	11.8	11.8	11.9	10.0	9.5	10.1	9.1	10.4	12.2	12.0	-	10.9	9.5	10.1	8.8	8.9	9.5	10.7
1						10.1			12.3						8.8	8.9	9.5	10.7
2	12.2	11.8	11.8	9.9	9.4	10.0	9.2	10.4	12.3	12.1		10.6	9.3	10.0	8.7	8.9	9.5	10.6
3						10.0									8.8	8.9	9.4	10.6
4	12.6	11.9	11.5	9.9	9.3	9.5	9.0	10.3		12.1		10.8	9.1	10.1		8.9	9.4	10.6
5						9.4							8.3		8.7	8.9	9.4	10.6
6	12.8	12.0	11.3	9.9	9.3	9.2	8.8	10.2		12.1		11.2	8.0	10.1	8.5	8.9	9.3	10.6
7						9.1							8.0		7.6	8.9	9.3	10.5
8	12.8	12.0	10.9	9.8	9.2	8.9	7.7	10.2		12.1		11.4	7.3	10.1		8.9	9.3	10.5
9					8.9	8.9							6.9		6.8	8.9	9.3	10.5
10	12.8	11.9	10.8	9.6	8.5	8.9	6.8	10.2		12.1		11.6	6.7	10.1	5.6	8.9	9.3	10.5
11					8.1	8.5							6.5		4.1	8.9	9.2	10.5
12	12.9	12.0	10.5	9.5	7.8	8.2	6.0	10.3		12.1			6.3	10.1	2.7	8.8	9.3	10.5
13					7.8	7.7	5.6						5.8	10.1	2.0	8.8		10.5
14	12.9	11.7	10.5	9.5	7.2	7.6	5.5			12.0			5.8	10.1	1.7	8.8		10.5
15			10.4	9.4			5.1						5.8	9.9		8.8		
16		11.7								12.0				9.4				
17														8.9				
18														8.9				

Table 2.146 Values of pH, alkalinity, conductivity and colour recorded in Lough Moher between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
12/03/96	6.85	13	123	45
13/04/96	7.41	11	121	42
08/05/96	7.66	14	127	37
13/06/96	7.35	17	129	27
12/07/96	7.48	18	134	27
14/08/96	7.60	20	138	21
13/09/96	7.46	22	139	23
16/10/96	7.25	18	132	50
16/01/97	7.08	15	131	64
11/03/97	6.74	9	125	54
11/04/97	7.17	13	133	44
06/05/97	7.32	13	123	34
05/06/97	7.44	16	124	31
04/07/97	7.34	18	125	29
12/08/97	7.48	19	134	47
19/09/97	7.34	18	115	81
14/10/97	7.29	18	117	87
12/12/97	6.97	16	104	85

Table 2.147 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Moher between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
12/03/96	20.7	6.9	2.2	12.3	1.2	6.5
13/04/96	20.8	7.2	2.2	11.8	1.1	6.4
08/05/96	20.9	6.8	2.3	11.3	1.0	6.5
13/06/96	20.6	7.2	2.4	12.8	1.1	7.3
12/07/96	22.0	7.2	2.5	12.1	1.1	7.4
14/08/96	21.1	7.0	2.7	11.4	1.2	8.0
13/09/96	21.6	6.9	2.7	11.9	1.2	8.3
16/10/96	20.5	7.9	2.6	11.6	1.2	7.6
16/01/97	20.9	7.0	2.5	11.4	1.2	7.1
11/03/97	23.1	5.7	2.2	12.9	1.2	5.8
11/04/97	25.5	6.0	2.4	13.4	1.2	6.4
06/05/97	25.8	6.1	2.4	13.5	1.2	6.8
05/06/97	23.9	6.1	2.5	13.5	1.1	7.1
04/07/97	23.6	6.1				
12/08/97	23.0	5.5				
19/09/97	20.0	5.2				
14/10/97	18.7	4.8				
12/12/97	17.0	4.7				

Table 2.148 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Moher between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
12/03/96	16	4	1.03	0.99	0.66	1.36	1.23	1.32
13/04/96	14	3	0.95	0.93	0.68	0.73	0.68	0.65
08/05/96	8	2	0.89	0.85	0.52	0.42	0.38	0.27
13/06/96	8	2	0.64	0.61	0.27	0.12	0.07	0.07
12/07/96	< 7	3	0.65	0.64	0.24	0.24	0.21	0.20
14/08/96	8	5	0.52	0.51	0.19	0.42	0.39	0.38
13/09/96	< 7	3	0.56	0.51	0.13	0.53	0.52	0.50
16/10/96	10	3	0.71	0.68	0.23	0.84	0.84	0.77
16/01/97	13	5	1.00	0.99	0.56	1.39	1.38	1.36
11/03/97	16	6	0.92	0.91	0.54	0.84	0.81	0.75
11/04/97	12	5	0.90	0.81	0.46	0.48	0.30	0.29
06/05/97	13	4	0.78	0.69	0.37	0.34	0.17	0.14
05/06/97	11	3	0.61	0.45	0.20	0.14	0.10	0.08
04/07/97	5	5	0.73	0.62	0.23	0.40	0.37	0.37
12/08/97	12	3	0.67	0.66	0.18	0.54	0.54	0.49
19/09/97	14	5	0.86	0.71	0.22	0.83	0.80	0.76
14/10/97	15	7	0.75	0.69	0.27	0.94	0.90	0.85
12/12/97	17	9	0.88	0.88	0.37	1.26	1.24	1.24

Table 2.149 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Moher.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
12/03/96	6.4	1.83	1.7
13/04/96	5.5	-	1.5
08/05/96	5.1	-	2.8
13/06/96	5.0	-	3.1
12/07/96	2.6	0.63	4.7
14/08/96	2.2	1.40	3.5
13/09/96	1.8	0.60	4.5
16/10/96	2.1	1.69	1.9
16/01/97	1.8	2.47	1.6
11/03/97	6.8	1.77	-
11/04/97	9.3	1.73	1.9
06/05/97	6.8	1.96	1.9
05/06/97	6.1	0.96	2.4
04/07/97	3.3	0.95	3.0
12/08/97	2.9	0.57	3.3
19/09/97	3.5	1.52	2.0
14/10/97	2.5	1.55	1.7
12/12/97	1.3	2.40	1.4

Table 2.150 Summary statistics of Lough Moher.

	Mean	95% C.I.	n	Max	Min
pH	7.22	0.17	18	7.66	6.74
Alkalinity mg l^{-1} $CaCO_3$	16	2	18	22	9
Conductivity µS cm^{-1}	126	4	18	139	104
Turbidity NTU	1.47	0.31	15	2.47	0.57
Colour mg l^{-1} PtCo	46	10	18	87	21
Chlorophyll *a* µg l^{-1}	4.2	1.0	18	9.3	1.3
MRP µg l^{-1}	4	1	18	9	2
TP µg l^{-1}	11	2	18	17	< 7
TDP µg l^{-1}	5	2	18	11	< 7
NO_3-N mg l^{-1}	0.35	0.08	18	0.68	0.13
TN mg l^{-1}	0.78	0.07	18	1.03	0.52
TDN mg l^{-1}	0.73	0.08	18	0.99	0.45
SiO_2-Si mg l^{-1}	0.58	0.19	18	1.36	0.07
TSi mg l^{-1}	0.66	0.18	18	1.39	0.12
TDSi mg l^{-1}	0.61	0.19	18	1.38	0.07
Cl^- mg l^{-1}	21.7	1.0	18	25.8	17.0
SO_4^{2-} mg l^{-1}	6.4	0.4	18	7.9	4.7
Mg^{2+} mg l^{-1}	2.4	0.1	13	2.7	2.2
Na^+ mg l^{-1}	12.3	0.5	13	13.5	11.3
K^+ mg l^{-1}	1.2	0.0	13	1.2	1.0
Ca^{2+} mg l^{-1}	7.0	0.4	13	8.3	5.8

Table 2.151 Temperature °C profiles of Lough Muckno.

Depth (m)	23 Apr 96	26 Jun 96	23 Jul 96	25 Sep 96	21 Jan 97	15 Apr 97	18 Jun 97	08 Jul 97	24 Sep 97	03 Dec 97
0	8.9	16.0	19.3	14.1	3.4	11.8	15.6	18.3	14.9	7.9
1			19.3	14.0				17.2	14.8	7.9
2	8.8	16.3	19.3	13.9	3.4		15.1	16.5	14.7	7.9
3			19.2					16.0	14.6	7.9
4	8.7	16.3	19.2	13.9	3.4		15.0	15.5	14.6	7.9
5			17.4					14.6	14.5	7.9
6	8.7	16.2	16.8	13.9	3.5		14.8	14.3	14.4	7.9
7		14.6						14.0	14.4	7.9
8	8.7	14.2		13.9	3.5		14.6	13.9	14.4	7.9
9		13.6	15.5				14.4	13.9	14.4	7.9
10	8.6	12.4		13.9	3.5		14.0	13.7	14.3	7.9
11			12.8				11.9	13.5	14.3	7.9
12	8.5	11.0		13.9	3.5		11.3	13.3	13.9	7.9
13			10.4				10.6	13.0	13.8	7.9
14	8.5	9.7	10.2	13.2	3.5		10.1	11.5	12.9	7.9
15			9.7	10.2				10.5	10.3	7.8
16	8.4	9.1	9.5	9.5	3.5		9.3	9.7	10.1	
17			9.4					9.3	9.6	
18	8.4	9.0		9.3	3.5		9.0	9.1	9.4	7.8
19		9.0	9.3					9.0	9.4	7.8
20	8.3	9.0	9.3	9.2	3.5		8.9	9.0	9.3	7.8
21		9.0						8.9	9.3	7.8
22	8.3		9.2	9.1	3.5		8.9	8.9	9.3	7.7
23	8.2		9.2					8.8	9.3	7.7
24				9.1	3.5			8.8	9.2	7.7
25				9.0				8.8		7.7
26										7.7

Table 2.152 Oxygen mg l^{-1} profiles of Lough Muckno.

Depth (m)	23 Apr 96	26 Jun 96	23 Jul 96	25 Sep 96	21 Jan 97	15 Apr 97	18 Jun 97	08 Jul 97	24 Sep 97	03 Dec 97
0	11.7	9.4	10.2	8.8	-	-	9.8	11.2	9.4	9.5
1			10.1	8.8				11.7	9.2	9.5
2	12.0	9.4	10.1	8.6	13.0		8.9	12.0	9.1	9.5
3			9.9					11.7	9.0	9.5
4	12.0	9.5	9.9	8.5	13.0		8.9	10.4	9.0	9.5
5			7.4					8.9	8.7	9.5
6	12.0	9.5	6.4	8.5	12.8		8.5	9.3	8.5	9.5
7		7.4						8.9	8.5	9.5
8	11.9	7.6		8.5	12.8		8.4	9.1	8.6	9.5
9		6.9	5.3				8.1	9.3	8.4	9.4
10	11.9	6.1		8.5	12.9		7.5	8.8	8.1	9.4
11			2.9				6.1	8.9	8.0	9.4
12	11.9	5.2		8.3	12.9		5.6	8.4	6.8	9.4
13			1.3				5.2	7.8	6.6	9.4
14	12.0	3.2	0.9	6.4	12.9		4.1	5.4	3.4	9.4
15			0.5	0.2				3.4	0.1	9.4
16	11.9	1.4	0.2	0.1	13.0		2.1	2.7	0.1	
17			0.1					1.8	0.1	
18	11.9	0.8		0.1	13.0		1.1	1.8	0.1	9.4
19		0.5	0.1					1.8	0.1	9.3
20	11.8	0.5	0.1	0.1	13.0		0.8	1.9	0.1	9.3
21		0.1						1.8	0.1	9.3
22	11.8		0.1	0.1	12.9		0.8	1.9	0.1	9.3
23	11.7		0.0					1.9	0.1	9.2
24				0.1	12.9			2.1	0.1	9.2
25				0.0				2.2		9.2
26										9.2

Table 2.153 Values of pH, alkalinity, conductivity and colour recorded in Lough Muckno between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
23/04/96	7.95	30	216	31
26/06/96	7.84	39	215	30
24/07/96	7.83	40	215	27
25/09/96	7.71	46	217	29
21/01/97	7.66	44	223	41
15/04/97	7.98	43	197	37
18/06/97	7.91	47	196	31
08/07/97	8.02	48	196	28
24/09/97	7.93	57	225	28
03/12/97	7.76	57	225	46

Table 2.154 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Muckno between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
23/04/96	18.1	24.5	3.4	8.9	3.7	21.8
26/06/96	17.0	21.5	3.5	8.1	3.6	22.1
24/07/96	16.6	21.7	3.5	8.9	3.6	22.2
25/09/96	16.3	22.7	3.9	9.3	3.9	23.2
21/01/97	15.3	19.6	3.8	9.2	4.0	23.4
15/04/97	15.4	16.0	3.7	8.7	3.8	22.6
18/06/97	16.1	17.2	3.8	9.8	3.7	22.9
08/07/97	16.5	17.3				
24/09/97	16.5	18.3				
03/12/97	16.0	16.9				

Table 2.155 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Muckno between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
23/04/96	32	1	4.48	4.46	3.70	0.55	0.01	0.01
26/06/96	23	4	3.16	3.02	2.49	0.36	0.16	0.13
24/07/96	32	7	3.00	2.92	2.12	0.22	0.12	0.11
25/09/96	26	11	2.18	2.13	1.56	0.65	0.54	0.52
21/01/97	46	33	3.67	3.64	2.97	2.35	2.32	2.26
15/04/97	42	6	3.89	3.65	2.90	0.37	0.10	0.08
18/06/97	24	4	2.92	2.84	2.10	0.64	0.44	0.41
08/07/97	25	4	2.92	2.84	1.94	0.57	0.31	0.29
24/09/97	26	4	1.72	1.51	0.82	0.95	0.78	0.74
03/12/97	57	44	2.23	2.19	1.29	2.11	2.02	2.06

Table 2.156 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Muckno.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
23/04/96	30	-	1.1
26/06/96	14	2.0	2.0
24/07/96	6	2.1	-
25/09/96	8	3.4	1.6
21/01/97	3	1.5	2.4
15/04/97	16	1.7	1.3
18/06/97	15	1.9	2.0
08/07/97	17	1.5	2.1
24/09/97	13	4.3	1.6
03/12/97	3	2.6	1.9

Table 2.157 Summary statistics of Lough Muckno.

	Mean	95% C.I.	n	Max.	Min.
pH	7.84	0.08	10	8.02	7.66
Alkalinity mg l^{-1} $CaCO_3$	45	5	10	57	30
Conductivity µS cm^{-1}	216	7	10	225	196
Turbidity NTU	2.34	0.62	9	4.30	1.49
Colour mg l^{-1} PtCo	33	4	10	46	27
Chlorophyll *a* µg l^{-1}	12.7	5.1	10	30.5	2.9
MRP µg l^{-1}	12	9	10	44	1
TP µg l^{-1}	33	7	10	57	23
TDP µg l^{-1}	20	10	10	56	8
NO_3^--N mg l^{-1}	2.19	0.53	10	3.70	0.82
TN mg l^{-1}	3.02	0.52	10	4.48	1.72
TDN mg l^{-1}	2.92	0.53	10	4.46	1.51
SiO_2-Si mg l^{-1}	0.66	0.51	10	2.26	0.01
TSi mg l^{-1}	0.88	0.46	10	2.35	0.22
TDSi mg l^{-1}	0.68	0.51	10	2.32	0.01
Cl^- mg l^{-1}	16.4	0.5	10	18.1	15.3
SO_4^{2-} mg l^{-1}	19.6	1.8	10	24.5	16.0
Mg^{2+} mg l^{-1}	3.7	0.1	7	3.9	3.4
Na^+ mg l^{-1}	9.0	0.4	7	9.8	8.1
K^+ mg l^{-1}	3.8	0.1	7	4.0	3.6
Ca^{2+} mg l^{-1}	22.6	0.4	7	23.4	21.8

Table 2.158 Values of pH, alkalinity, conductivity and colour recorded in Lough Muckross between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
20/04/96	6.91	5	65	20
12/06/96	7.04	5	62	23
/9/96	7.18	6	59	27
30/01/97	6.86	5	61	22
12/06/97	7.10	6	61	14
19/07/97	6.74	6	60	18
25/08/97	7.15	6	63	24
21/09/97	7.04	6	61	28
15/12/97	6.92	5	59	25

Table 2.159 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Muckross between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
20/04/96	12.3	2.8	1.1	7.0	0.4	2.6
12/06/96	11.3	2.6	1.1	7.3	0.3	2.5
/9/96	10.4	2.5	1.1	6.7	0.3	2.8
30/01/97	12.2	3.1	1.2	7.2	0.3	2.5
12/06/97	12.7	2.6	1.2	7.5	0.3	2.7
19/07/97	13.0	2.8				
25/08/97	11.7	2.6				
21/09/97	11.8	1.6				
15/12/97	11.4	2.2				

Table 2.160 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Muckross between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3-N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
20/04/96	12	1	0.47	0.37	0.22	0.50	0.49	0.46
12/06/96	<7	2	0.38	0.38	0.07	0.34	0.33	0.34
/9/96	<7	3	0.18	-	0.07	0.28	-	0.21
30/01/97	<7	3	0.21	0.22	0.17	0.46	0.45	0.43
12/06/97	5	3	0.26	0.26	0.10	0.30	0.28	0.27
19/07/97	<7	3	0.28	0.25	0.08	0.25	0.23	0.22
25/08/97	<7	5	0.27	0.27	0.06	0.25	0.23	0.22
21/09/97	<7	3	0.22	0.19	0.09	0.33	0.32	0.28
15/12/97	<7	4	0.24	0.17	0.14	0.44	0.43	0.44

Table 2.161 Values of chlorophyll *a* and turbidity recorded in Lough Muckross.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU
20/04/96	0.5	-
12/06/96	2.2	-
/9/96	2.8	0.39
30/01/97	0.3	0.32
12/06/97	2.3	0.33
19/07/97	2.8	0.53
25/08/97	2.6	0.45
21/09/97	2.4	1.62
15/12/97	0.5	0.45

Table 2.162 Summary statistics of Lough Muckross.

	Mean	95% C.I	n	Max.	Min.
pH	6.97	0.11	9	7.18	6.74
Alkalinity mg l^{-1} $CaCO_3$	6	0	9	6	5
Conductivity µS cm^{-1}	61	1	9	65	59
Turbidity NTU	0.58	0.34	7	1.62	0.32
Colour mg l^{-1} PtCo	22	3	9	28	14
Chlorophyll *a* µg l^{-1}	1.8	0.7	9	2.8	0.3
MRP µg l^{-1}	3	1	9	5	1
TP µg l^{-1}	< 7	2	9	12	< 7
TDP µg l^{-1}	< 7	2	8	5	< 7
NO_3^--N mg l^{-1}	0.11	0.04	9	0.22	0.06
TN mg l^{-1}	0.28	0.06	9	0.47	0.18
TDN mg l^{-1}	0.26	0.05	8	0.38	0.17
SiO_2-Si mg l^{-1}	0.32	0.07	9	0.46	0.21
TSi mg l^{-1}	0.35	0.06	9	0.50	0.25
TDSi mg l^{-1}	0.35	0.07	8	0.49	0.23
Cl^- mg l^{-1}	11.9	0.5	9	13.0	10.4
SO_4^{2-} mg l^{-1}	2.5	0.3	9	3.1	1.6
Mg^{2+} mg l^{-1}	1.1	0.1	5	1.2	1.1
Na^+ mg l^{-1}	7.2	0.3	5	7.5	6.7
K^+ mg l^{-1}	0.3	0.0	5	0.4	0.3
Ca^{2+} mg l^{-1}	2.6	0.1	5	2.8	2.5

Table 2.163 Temperature °C profiles of Lough Mullagh.

Depth (m)	23 Apr 96	26 Jun 96	24 Jul 96	26 Sep 96	22 Jan 97	15 Apr 97	18 Jun 97	08 Jul 97	25 Sep 97	04 Dec 97
0	11.1	18.1	19.5	13.2	4.3	13.3	16.8	20.6	14.7	4.9
1		18.1	19.5				16.9	19.4	14.6	5.0
2	11.1	17.9	19.5	13.2	4.4		16.8	17.3	14.6	5.0
3		17.9	19.4				16.3	15.8	14.5	5.0
4	11.1	17.2		13.2	4.4		15.2	14.2	14.4	5.0
5		17.1	17.4		4.4		15.0	13.9	14.3	5.0
6	11.1	15.1	16.7	13.2			14.9	13.8	14.3	5.0
7	11.0	15.4	16.4				14.7	13.8	14.1	5.0
8				13.1			14.6		14.0	

Table 2.164 Oxygen mg l^{-1} profiles of Lough Mullagh.

Depth (m)	23 Apr 96	26 Jun 96	24 Jul 96	26 Sep 96	22 Jan 97	15 Apr 97	18 Jun 97	08 Jul 97	25 Sep 97	04 Dec 97
0	11.1	8.7	7.5	9.7	14.9	-	12.9	11.8	10.7	9.7
1		8.7	7.5				12.6	12.1	10.5	9.6
2	11.0	8.3	7.5	9.5	14.1		12.7	11.1	10.3	9.6
3		7.6	7.5				10.7	6.7	10.2	9.6
4	11.0	7.1		9.5	13.9		7.9	6.6	9.0	9.5
5		6.1	0.9		13.8		7.4	5.6	8.4	9.5
6	10.9	1.5	0.0	9.4			6.8	5.0	8.2	9.5
7	10.9	0.4	0.0				5.5	4.0	6.1	9.5
8				9.3			4.7		2.6	

Table 2.165 Values of pH, alkalinity, conductivity and colour recorded in Lough Mullagh between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
23/04/96	7.89	47	175	23
26/06/96	7.78	57	185	18
24/07/96	7.09	58	187	23
26/09/96	7.97	59	184	20
22/01/97	7.93	47	172	24
15/04/97	7.88	46	151	21
18/06/97	8.19	50	152	21
08/07/97	9.24	50	151	23
25/09/97	8.53	59	177	23
04/12/97	7.74	51	172	21

Table 2.166 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Mullagh between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
23/04/96	13.9	10.3	4.8	8.0	2.0	16.6
26/06/96	14.4	8.2	5.1	8.8	2.1	18.0
24/07/96	14.3	7.3	5.0	8.8	2.4	18.1
26/09/96	14.4	5.9	5.0	8.5	2.2	18.1
22/01/97	13.2	8.3	4.5	8.0	1.9	15.8
15/04/97	14.7	10.6	4.4	8.1	2.0	15.3
18/06/97	14.8	8.7	4.5	8.1	2.0	15.5
08/07/97	13.7	8.2				
25/09/97	14.2	4.4				
04/12/97	13.3	6.8				

Table 2.167 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Mullagh between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
23/04/96	44	3	1.76	1.55	0.98	0.27	0.22	0.19
26/06/96	40	7	0.91	0.73	<.05	0.98	0.96	0.97
24/07/96	48	4	0.96	0.75	<.05	0.53	0.34	0.30
26/09/96	80	6	1.06	0.63	<.05	1.92	1.76	1.77
22/01/97	55	8	1.28	1.06	0.58	2.98	2.05	1.98
15/04/97	29	8	0.81	0.74	0.22	0.44	0.32	0.26
18/06/97	66	9	1.03	0.70	<.05	2.58	2.54	2.55
08/07/97	58	19	1.03	0.70	<.05	2.66	2.44	2.47
25/09/97	69	4	1.03	0.67	<.05	0.88	0.13	0.12
04/12/97	61	34	0.97	0.85	0.06	1.89	1.83	1.86

Table 2.168 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Mullagh.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
23/04/96	10.1	-	-
26/06/96	10.9	-	1.7
24/07/96	8.2	5.79	1.7
26/09/96	75.4	10.31	0.9
22/01/97	59.8	3.63	1.1
15/04/97	12.3	1.52	3.6
18/06/97	36.1	6.06	1.4
08/07/97	36.8	8.39	1.1
25/09/97	68.5	9.76	0.9
04/12/97	6.8	2.33	4.0

Table 2.169 Summary statistics of Lough Mullagh.

	Mean	95% C.I.	n	Max.	Min.
pH	7.76	0.75	10	9.24	7.09
Alkalinity mg l^{-1} $CaCO_3$	52	3	10	59	46
Conductivity µS cm^{-1}	171	9	10	187	151
Turbidity NTU	5.97	2.31	8	10.31	1.52
Colour mg l^{-1} PtCo	22	1	10	24	18
Chlorophyll *a* µg l^{-1}	32.5	16.7	10	75.4	6.8
MRP µg l^{-1}	10	6	10	34	3
TP µg l^{-1}	55	9	10	80	29
TDP µg l^{-1}	18	6	10	45	11
NO_3^--N mg l^{-1}	0.18	0.21	10	0.98	< .05
TN mg l^{-1}	1.08	0.16	10	1.76	0.81
TDN mg l^{-1}	0.84	0.17	10	1.55	0.63
SiO_2-Si mg l^{-1}	1.25	0.61	10	2.55	0.12
TSi mg l^{-1}	1.51	0.63	10	2.98	0.27
TDSi mg l^{-1}	1.26	0.60	10	2.54	0.13
Cl^- mg l^{-1}	14.1	0.3	10	14.8	13.2
SO_4^{2-} mg l^{-1}	7.9	1.2	10	10.6	4.4
Mg^{2+} mg l^{-1}	4.8	0.2	7	5.1	4.4
Na^+ mg l^{-1}	8.3	0.3	7	8.8	8.0
K^+ mg l^{-1}	2.1	0.1	7	2.4	1.9
Ca^{2+} mg l^{-1}	16.8	0.9	7	18.1	15.3

Table 2.170 Temperature °C profiles of Lough Oughter.

Depth (m)	15 Apr 96	15 Jun 96	14 Jul 96	15 Sep 96	18 Jan 97	13 Apr 97	07 Jun 97	06 Jul 97	21 Sep 97	14 Dec 97
0	10.1	21.7	18.3	16.7	4.6	14.0	18.0	16.8	14.9	7.0
1		20.6	18.2						14.9	7.0
2	9.9	17.1	17.9	16.6	4.4		18.0	16.6	14.8	6.9
3		16.2	17.4						14.7	6.9
4	9.2	16.0	17.3	16.3	4.4		17.6	16.2	14.7	6.9
5		15.7	16.8	16.1			17.4		14.7	6.9
6	8.8	15.6	16.6	16.0	4.4		16.3	15.8	14.6	6.8
7		15.5	16.5	15.9			14.8	14.7	14.5	6.8
8	8.8	15.4	16.3	15.9	4.3		13.9	14.6	14.5	6.8
9			16.0	15.9			13.2		14.4	6.7
10					4.3		13.1	14.6	14.4	6.7
11							12.7	14.5	14.4	6.7
12							12.7			6.7
13							12.8			
14							12.9			

Table 2.171 Oxygen mg l^{-1} profiles of Lough Oughter.

Depth (m)	15 Apr 96	15 Jun 96	14 Jul 96	15 Sep 96	18 Jan 97	13 Apr 97	07 Jun 97	06 Jul 97	21 Sep 97	14 Dec 97
0	11.5	12.2	11.3	7.4	12.1	-	9.9	10.5	7.3	9.6
1		12.6	11.6						7.2	9.5
2	11.1	11.1	11.1	7.3	12.1		9.7	10.6	7.0	9.5
3		8.1	9.3						7.0	9.5
4	10.9	7.7	9.4	6.3	12.2		9.3	9.8	6.9	9.5
5		7.8	8.0	4.5			8.9		6.9	9.5
6	10.8	7.7	6.8	2.8	12.2		7.4	9.6	6.7	9.5
7		6.9	6.4	2.5			6.4	8.6	6.4	9.5
8	10.8	6.9	5.8	2.6	12.4		5.2	8.4	6.3	9.5
9			5.4	2.2			4.4		6.4	9.5
10					12.4		4.0	8.3	6.7	9.5
11							3.4	8.3	6.7	9.5
12							2.3			9.5
13							2.2			
14							2.1			

Table 2.172 Values of pH, alkalinity, conductivity and colour recorded in Lough Oughter between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
13/03/96	-	-	-	38
15/04/96	7.82	53	216	37
15/06/96	7.84	74	242	41
14/07/96	8.13	72	253	35
15/09/96	7.63	73	256	54
18/01/97	7.86	62	222	64
13/04/97	8.02	60	195	49
07/06/97	8.08	76	222	49
06/07/97	8.19	77	224	43
21/09/97	7.83	81	265	60
14/12/97	7.85	73	239	73

Table 2.173 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Oughter between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
13/03/96	15.5	17.3	3.5	8.4	3.1	25.2
15/04/96	16.4	19.0	3.8	8.5	2.8	25.3
15/06/96	16.5	19.6	4.1	9.5	3.2	27.7
14/07/96	17.3	19.4	4.4	10.4	3.5	29.5
15/09/96	18.1	22.4	4.6	10.1	4.4	30.5
18/01/97	13.9	14.8	4.0	8.3	3.1	26.5
13/04/97	15.9	13.8	3.9	8.0	2.8	17.2
07/06/97	16.0	16.1	4.4	10.1	3.3	29.4
06/07/97	17.2	16.5				
21/09/97	18.9	16.8				
14/12/97	16.0	12.5				

Table 2.174 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Oughter between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
13/03/96	58	15	2.05	2.03	1.43	2.56	2.27	2.50
15/04/96	52	5	1.74	1.57	1.01	1.41	0.93	0.87
15/06/96	53	18	1.21	1.08	0.16	0.79	0.57	0.52
14/07/96	55	7	1.15	0.84	0.07	0.90	0.33	0.33
15/09/96	89	50	1.55	1.51	0.49	0.74	0.49	0.45
18/01/97	73	43	1.96	1.91	1.19	2.30	2.21	2.28
13/04/97	46	6	1.63	1.47	0.88	0.69	0.37	0.36
07/06/97	68	13	1.09	0.84	0.19	0.50	0.31	0.27
06/07/97	73	21	1.13	0.83	0.11	0.64	0.44	0.43
21/09/97	114	73	1.44	1.28	0.23	1.07	0.78	0.70
14/12/97	109	79	1.84	1.78	0.80	2.71	2.59	2.62

Table 2.175 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Oughter.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
13/03/96	21.2	-	-
15/04/96	29.2	-	1.0
15/06/96	25.0	-	1.5
14/07/96	42.5	5.81	0.9
15/09/96	22.3	4.41	1.1
18/01/97	4.6	3.46	1.3
13/04/97	24.1	3.39	1.3
07/06/97	17.4	5.39	1.5
06/07/97	23.5	4.90	1.0
21/09/97	9.6	7.28	1.0
14/12/97	4.0	4.33	1.3

Table 2.176 Summary statistics of Lough Oughter.

	Mean	95% C.I.	n	Max.	Min.
pH	7.89	0.12	10	8.19	7.63
Alkalinity mg l^{-1} $CaCO_3$	70	5	10	81	53
Conductivity µS cm^{-1}	233	13	10	265	195
Turbidity NTU	4.87	0.89	8	7.28	3.39
Colour mg l^{-1} PtCo	49	7	11	73	35
Chlorophyll *a* µg l^{-1}	20.3	6.6	11	42.5	4.0
MRP µg l^{-1}	30	16	11	79	5
TP µg l^{-1}	72	14	11	114	46
TDP µg l^{-1}	41	16	11	90	12
NO_3^--N mg l^{-1}	0.60	0.29	11	1.43	0.07
TN mg l^{-1}	1.53	0.21	11	2.05	1.09
TDN mg l^{-1}	1.38	0.26	11	2.03	0.83
SiO_2-Si mg l^{-1}	1.03	0.56	11	2.62	0.27
TSi mg l^{-1}	1.30	0.49	11	2.71	0.50
TDSi mg l^{-1}	1.03	0.52	11	2.59	0.31
Cl^- mg l^{-1}	16.5	0.8	11	18.9	13.9
SO_4^{2-} mg l^{-1}	17.1	1.7	11	22.4	12.5
Mg^{2+} mg l^{-1}	4.1	0.3	8	4.6	3.5
Na^+ mg l^{-1}	9.2	0.7	8	10.4	8.0
K^+ mg l^{-1}	3.3	0.4	8	4.4	2.8
Ca^{2+} mg l^{-1}	26.4	2.9	8	30.5	17.2

Table 2.177 Temperature °C profiles of Lough Owel.

Depth (m)	28 Mar 96	24 Apr 96	23 May 96	27 Jun 96	24 Jul 96	28 Aug 96	26 Sep 96	24 Oct 96	22 Jan 97	13 Mar 97	16 Apr 97	15 May 97	19 Jun 97	09 Jul 97	20 Aug 97	25 Sep 97	21 Oct 97	04 Dec 97
0	4.8	9.2	11.0	17.0	18.6	16.5	14.1	11.9	3.7	6.7	12.0	11.6	15.7	17.6	19.2	15.0	12.3	7.6
1					18.6									17.5	19.2	15.0	12.3	7.6
2	4.8	9.2	11.0	17.0	18.6	16.5	14.1	11.9	3.7	6.6		11.6	15.8	17.3	19.2	15.0		7.6
3					18.6									16.3	19.2	15.0	12.3	7.6
4	4.8	9.2	10.9	16.9	18.6	16.5	14.1	11.8	3.7	6.6		11.5	15.8	16.1	19.2	15.0	12.3	7.6
5					18.6									15.5	19.1	15.0	12.3	7.6
6	4.8	9.2	10.9	16.7	18.6	16.5	14.1	11.8	3.7	6.6		11.5	15.7	15.3	19.2	15.0	12.3	7.6
7					18.2								15.6	15.1	19.1	15.0	12.3	7.6
8	4.8	9.2	10.9	16.5		16.5	14.1	11.8	3.7	6.6		11.5	15.5	15.0	19.1	15.0	12.3	7.6
9					18.1								15.3	14.9	19.1	14.9	12.3	7.6
10	4.8	9.2	10.9	15.0	16.8	16.5	14.1	11.8	3.7	6.6		11.5	15.3	14.8	19.0	14.9	12.3	7.6
11													15.2	14.6	19.0	14.8	12.3	7.5
12	4.8	9.2	10.9	14.8	16.4	16.5	14.1	11.8	3.7	6.6		11.5	15.2	14.3	18.9	14.8	12.3	7.5
13													15.1	14.2	18.8	14.8	12.3	
14		9.2	10.9	14.4	16.1	16.4	14.1	11.7	3.7	6.6		11.5	15.1	14.0	17.8	14.8	12.2	
15					15.9	16.4	14.1						15.0	14.0	17.3	14.8	12.2	
16		9.2	10.9	14.0	15.9	16.3	14.1	11.7	3.7	6.6		11.5	14.9	13.9	16.9	14.7	12.2	
17		9.1	10.9			16.3							14.8	13.9		14.7	12.2	
18		9.1						11.7	3.7	6.6						14.7		
19										6.6								

Table 2.178 Oxygen mg l^{-1} profiles of Lough Owel.

Depth (m)	28 Mar 96	24 Apr 96	23 May 96	27 Jun 96	24 Jul 96	28 Aug 96	26 Sep 96	24 Oct 96	22 Jan 97	13 Mar 97	16 Apr 97	15 May 97	19 Jun 97	09 Jul 97	20 Aug 97	25 Sep 97	21 Oct 97	04 Dec 97
0	12.6	11.5	11.2	10.6	10.0	9.0	10.0	15.2	13.6	12.6	-	11.1	10.6	10.5	9.0	9.8	9.6	10.8
1					10.0									10.5	9.0	9.8	9.6	10.6
2	12.7	11.5	11.2	10.6	10.0	8.8	9.9	15.3	13.6	12.8		11.6	10.5	10.5	9.0	9.8		10.6
3					10.0									10.5	9.0	9.8	9.6	10.5
4	12.7	11.5	11.2	10.6	10.0	8.8	9.9	15.3	13.5	12.8		12.1	10.4	11.0	9.0	9.8	9.6	10.5
5					10.0									10.6	8.9	9.8	9.5	10.5
6	12.8	11.5	11.2	10.7	10.0	9.0	9.9	15.4	13.5	12.8		12.3	10.2	10.6	9.0	9.8	9.5	10.5
7					10.1								10.1	10.6	8.9	9.7	9.5	10.4
8	12.8	11.5	11.2	10.7		9.0	9.9	15.5	13.5	12.8		12.5	9.7	10.2	8.9	9.7	9.5	10.4
9					10.1								9.6	10.7	8.8	9.6	9.5	10.4
10	12.8	11.5	11.2	9.9	9.3	9.0	9.9	15.5	13.4	12.8		12.9	9.5	10.3	8.7	9.5	9.5	10.4
11													9.4	10.3	8.7	9.4	9.5	10.3
12	12.8	11.5	11.2	9.0	9.0	8.9	9.9	15.3	13.4	12.8		12.8	9.4	9.7	8.6	9.3	9.5	10.3
13													9.2	9.7	8.3	9.3	9.5	
14		11.5	11.2	7.6	7.6	9.0	9.9	15.5	13.4	12.8		12.8	9.1	9.6	6.7	9.3	9.5	
15					6.0	8.9	9.9						8.6	9.5	5.8	9.3	9.5	
16		11.5	11.2	5.8	6.0	8.9	9.9	15.5	13.4	12.8		12.9	8.0	9.3	4.6	9.2	9.5	
17		11.5	11.2			8.6							7.5	8.6		9.1	9.5	
18		11.5						15.3	13.4	12.7						9.0		
19										12.7								

Table 2.179 Values of pH, alkalinity, conductivity and colour recorded in Lough Owel between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
28/03/96	8.24	107	-	2
24/04/96	8.28	105	280	4
23/05/96	8.30	102	275	5
27/06/96	8.57	93	254	4
24/07/96	8.52	86	242	5
28/08/96	8.30	86	245	6
26/09/96	8.23	86	244	5
24/10/96	8.23	87	246	6
22/01/97	8.14	99	271	7
13/03/97	8.34	103	277	6
16/04/97	8.48	102	246	8
15/05/97	8.38	98	237	6
19/06/97	8.42	93	230	5
09/07/97	8.46	93	229	7
20/08/97	8.34	90	249	6
25/09/97	8.38	93	257	6
21/10/97	8.21	95	261	7
04/12/97	8.20	102	274	7

Table 2.180 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Owel between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
28/03/96	14.6	11.1	3.4	6.8	1.2	44.1
24/04/96	14.8	12.5	3.5	7.0	1.2	42.7
23/05/96	14.7	11.0	3.4	6.9	1.0	40.7
27/06/96	14.0	11.2	3.3	7.0	1.0	37.2
24/07/96	13.8	11.2	3.4	6.9	1.0	36.9
28/08/96	14.2	11.0	3.5	7.0	1.1	34.9
26/09/96	14.1	11.1	3.5	7.3	1.1	34.3
24/10/96	14.2	11.1	3.4	7.2	1.1	34.9
22/01/97	13.9	11.3	3.4	7.1	1.1	40.2
13/03/97	13.9	11.6	3.4	6.6	1.1	42.4
16/04/97	11.5	9.9	3.4	6.7	1.1	23.5
15/05/97	14.7	11.5	3.4	6.7	1.1	39.0
19/06/97	13.8	10.9	3.4	7.0	1.1	37.2
09/07/97	14.2	11.0				
20/08/97	14.7	11.0				
25/09/97	14.7	11.5				
21/10/97	14.9	12.2				
04/12/97	14.8	11.7				

Table 2.181 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Owel between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
28/03/96	9	5	0.71	0.68	0.26	0.66	0.48	0.46
24/04/96	13	1	0.71	0.66	0.21	0.39	0.29	0.28
23/05/96	7	2	0.62	0.60	0.14	0.28	0.23	0.20
27/06/96	13	3	0.52	0.45	<.05	0.19	0.14	0.13
24/07/96	7	3	0.65	0.47	<.05	0.38	0.36	0.39
28/08/96	10	5	0.55	0.45	<.05	0.69	0.64	0.68
26/09/96	7	3	0.58	0.50	<.05	0.74	0.71	0.70
24/10/96	5	3	0.52	0.47	<.05	0.77	0.74	0.69
22/01/97	8	2	0.64	0.61	0.12	0.81	0.77	0.77
13/03/97	10	4	0.69	0.64	0.19	0.60	0.54	0.53
16/04/97	14	3	0.63	0.57	0.25	0.39	0.29	0.29
15/05/97	16	4	0.56	0.51	0.05	0.29	0.21	0.19
19/06/97	15	3	0.60	0.48	<.05	0.33	0.32	0.31
09/07/97	10	7	0.60	0.48	<.05	0.51	0.50	0.49
20/08/97	8	3	0.61	0.53	<.05	0.81	0.80	0.78
25/09/97	11	3	0.58	0.40	<.05	1.05	1.01	0.94
21/10/97	6	4	0.38	0.34	<.05	1.07	1.01	0.95
04/12/97	10	5	0.59	0.56	0.06	1.13	1.05	1.08

Table 2.182 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Owel.

Date	Chlorophyll *a* µg l^{-1}	Turbidity NTU	Secchi depth m
28/03/96	6	-	4.2
24/04/96	4	-	4.1
23/05/96	3	-	6.0
27/06/96	4	0.5	5.3
24/07/96	5	1.1	4.1
28/08/96	9	0.7	4.1
26/09/96	6	0.5	6.8
24/10/96	10	0.7	5.8
22/01/97	7	0.6	7.6
13/03/97	7	0.7	5.7
16/04/97	5	0.8	6.1
15/05/97	5	0.7	4.6
19/06/97	9	1.1	4.7
09/07/97	5	0.8	-
20/08/97	8	0.9	4.8
25/09/97	10	0.9	3.5
21/10/97	6	0.6	5.6
04/12/97	4	0.6	7.2

Table 2.183 Summary statistics of Lough Owel.

	Mean	95% C.I.	n	Max.	Min.
pH	8.32	0.06	18	8.57	8.14
Alkalinity mg l^{-1} $CaCO_3$	96	3	18	107	86
Conductivity µS cm^{-1}	254	8	17	280	229
Turbidity NTU	0.76	0.09	15	1.09	0.54
Colour mg l^{-1} PtCo	6	1	18	8	2
Chlorophyll *a* µg l^{-1}	6.3	1.0	18	10.4	3.0
MRP µg l^{-1}	4	1	18	7	1
TP µg l^{-1}	10	1	18	16	5
TDP µg l^{-1}	4	1	18	8	< 7
NO_3^--N mg l^{-1}	0.07	0.04	18	0.26	< .05
TN mg l^{-1}	0.60	0.04	18	0.71	0.38
TDN mg l^{-1}	0.52	0.04	18	0.68	0.34
SiO_2-Si mg l^{-1}	0.55	0.13	18	1.08	0.13
TSi mg l^{-1}	0.62	0.13	18	1.13	0.19
TDSi mg l^{-1}	0.56	0.14	18	1.05	0.14
Cl^- mg l^{-1}	14.2	0.4	18	14.9	11.5
SO_4^{2-} mg l^{-1}	11.3	0.3	18	12.5	9.9
Mg^{2+} mg l^{-1}	3.4	0.0	13	3.5	3.3
Na^+ mg l^{-1}	6.9	0.1	13	7.3	6.6
K^+ mg l^{-1}	1.1	0.0	13	1.2	1.0
Ca^{2+} mg l^{-1}	37.5	2.9	13	44.1	23.5

Table 2.184 Temperature °C profiles of Lough Pollaphuca.

Depth (m)	25 Apr 96	25 Jun 96	25 Jul 96	24 Sep 96	27 Jan 97	18 Apr 97	17 Jun 97	10 Jul 97	23 Sep 97	02 Dec 97
0	10.2	16.9	-	13.4	4.4	11.6	16.4	18.0	14.8	7.4
1	10.2	16.9		13.4				17.7	14.8	7.5
2	10.0	16.7	17.8	13.4	4.4		16.1	17.7	14.9	7.5
3	9.9	16.0		13.4			15.0	17.5	14.9	7.5
4	9.8	15.8	17.7	13.4	4.3		14.7	14.6	14.9	7.5
5		15.8		13.4			14.7	13.5	14.9	7.5
6		15.8	17.7	13.4	4.3			13.1	14.9	7.5
7		15.7						12.9	14.7	7.5
8		15.6	17.4		4.3				14.1	
9		15.6							14.1	
10					4.3				14.1	

Table 2.185 Oxygen mg l^{-1} profiles of Lough Pollaphuca.

Depth (m)	25 Apr 96	25 Jun 96	25 Jul 96	24 Sep 96	27 Jan 97	18 Apr 97	17 Jun 97	10 Jul 97	23 Sep 97	02 Dec 97
0	11.3	11.6	-	13.1	13.8	-	-	8.7	9.9	10.6
1	11.3	11.7		12.9				8.8	9.8	10.5
2	11.3	11.7	8.8	13.0	14.0			8.8	9.9	10.5
3	11.3	11.6		12.9				8.8	9.8	10.5
4	11.3	11.4	8.7	13.1	14.0			8.4	9.8	10.5
5		11.6		13.1				8.1	9.8	10.5
6		11.7	8.6	12.9	14.0			7.8	9.8	10.5
7		11.5						7.8	9.8	10.5
8		11.5	8.2		14.1				9.5	
9		11.3							9.5	
10					14.0				9.4	

Table 2.186 Values of pH, alkalinity, conductivity and colour recorded in Lough Pollaphuca between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
25/04/96	7.30	13	72	81
25/06/96	7.55	22	94	57
25/07/96	7.70	25	97	46
24/09/96	7.66	27	102	47
27/01/97	7.35	17	82	88
18/04/97	7.63	22	84	78
17/06/97	7.80	28	91	55
10/07/97	7.75	26	85	73
23/09/97	7.78	25	95	77
02/12/97	6.99	9	57	129

Table 2.187 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Pollaphuca between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
25/04/96	7.8	5.2	1.1	5.1	0.5	6.5
25/06/96	8.1	5.0	1.4	5.3	0.6	9.9
25/07/96	8.4	5.2	1.5	5.5	0.6	10.9
24/09/96	8.5	5.2	1.5	5.7	0.6	11.7
27/01/97	7.9	4.4	1.3	5.1	0.5	8.3
18/04/97	8.9	4.3	1.4	5.5	0.5	10.1
17/06/97	8.6	4.3	1.5	5.6	0.6	11.2
10/07/97	8.6	4.3				
23/09/97	8.3	4.0				
02/12/97	6.3	2.8				

Table 2.188 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Pollaphuca between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
25/04/96	14	2	0.89	0.79	0.53	1.26	1.04	0.99
25/06/96	< 7	4	0.95	0.88	0.54	0.74	0.70	0.70
25/07/96	< 7	3	0.79	0.76	0.51	0.60	0.53	0.50
24/09/96	5	4	0.75	0.65	0.41	0.79	0.71	0.70
27/01/97	9	8	0.87	0.84	0.58	1.78	1.79	1.65
18/04/97	7	8	0.95	0.93	0.61	1.40	1.18	1.15
17/06/97	9	4	0.84	0.82	0.51	0.80	0.76	0.75
10/07/97	6	9	0.84	0.82	0.47	0.88	0.85	0.84
23/09/97	5	4	0.67	0.61	0.36	1.04	0.98	0.92
02/12/97	19	14	0.74	0.69	0.27	1.45	1.44	1.43

Table 2.189 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Pollaphuca.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
25/04/96	0.5	-	0.9
25/06/96	3.8	1.93	1.0
25/07/96	8.3	2.34	2.1
24/09/96	7.4	2.54	1.6
27/01/97	2.3	4.15	1.4
18/04/97	6.6	5.49	1.2
17/06/97	5.4	2.52	1.9
10/07/97	4.6	1.79	2.0
23/09/97	11.2	4.10	1.1
02/12/97	1.7	4.55	0.7

Table 2.190 Summary statistics of Lough Pollaphuca.

	Mean	95% C.I.	n	Max.	Min.
pH	7.47	0.29	10	7.80	6.99
Alkalinity mg l^{-1} $CaCO_3$	21	4	10	28	9
Conductivity µS cm^{-1}	86	8	10	102	57
Turbidity NTU	3.27	0.86	9	5.49	1.79
Colour mg l^{-1} PtCo	73	15	10	129	46
Chlorophyll *a* µg l^{-1}	5.2	2.0	10	11.2	0.5
MRP µg l^{-1}	6	2	10	14	2
TP µg l^{-1}	8	3	10	19	< 7
TDP µg l^{-1}	4	3	10	14	< 7
NO_3^--N mg l^{-1}	0.48	0.06	10	0.61	0.27
TN mg l^{-1}	0.83	0.06	10	0.95	0.67
TDN mg l^{-1}	0.78	0.06	10	0.93	0.61
SiO_2-Si mg l^{-1}	0.96	0.22	10	1.65	0.50
TSi mg l^{-1}	1.07	0.24	10	1.78	0.60
TDSi mg l^{-1}	1.00	0.24	10	1.79	0.53
Cl^- mg l^{-1}	8.1	0.4	10	8.9	6.3
SO_4^{2-} mg l^{-1}	4.5	0.5	10	5.2	2.8
Mg^{2+} mg l^{-1}	1.4	0.1	7	1.5	1.1
Na^+ mg l^{-1}	5.4	0.2	7	5.7	5.1
K^+ mg l^{-1}	0.5	0.0	7	0.6	0.5
Ca^{2+} mg l^{-1}	9.8	1.4	7	11.7	6.5

Table 2.191 Temperature °C profiles of Lough Ramor.

Depth (m)	28 Mar 96	23 Apr 96	23 May 96	26 Jun 96	23 Jul 96	28 Aug 96	25 Sep 96	24 Oct 96	21 Jan 97	12 Mar 97	15 Apr 97	15 May 97	18 Jun 97	08 Jul 97	20 Aug 97	24 Sep 97	21 Oct 97	03 Dec 97
0	5.4	10.4	12.4	17.5	20.1	-	13.4	12.2	5.0	7.9	14.0	12.1	17.6	21.9	20.9	15.0	11.3	5.8
1	5.4	10.4	12.3	17.5	20.1		13.4	12.2	5.0	7.9		12.1	17.5	18.5	20.9	15.0	11.3	5.8
2	5.4	10.4	12.3	17.1	20.1		13.3	12.2	5.1	7.9		11.9	16.8	17.7	20.9	15.0	11.3	5.8
3	5.4	10.4	12.3	16.7	20.1			12.1	5.1	7.9		11.9	16.7	16.9	20.9		11.3	

Table 2.192 Oxygen mg l^{-1} profiles of Lough Ramor.

Depth (m)	28 Mar 96	23 Apr 96	23 May 96	26 Jun 96	23 Jul 96	28 Aug 96	25 Sep 96	24 Oct 96	21 Jan 97	12 Mar 97	15 Apr 97	15 May 97	18 Jun 97	08 Jul 97	20 Aug 97	24 Sep 97	21 Oct 97	03 Dec 97
0	12.9	11.1	10.8	10.9	8.6	-	11.7	14.3	12.4	13.6	-	11.4	14.9	11.5	9.8	9.9	9.5	10.2
1	12.9	11.1	10.8	11.2	8.7		11.7	14.4	12.6	13.8		10.8	14.9	11.7	9.8	9.8	9.5	10.2
2	12.9	11.1	10.9	10.6	8.7		11.6	14.6	12.5	13.9		11.6	14.5	9.7	9.8	9.4	9.5	10.2
3	12.9	11.1	10.9	9.9	8.8			14.4	12.5	13.9		11.7	14.3	6.0	9.8		9.5	

Table 2.193 Values of pH, alkalinity, conductivity and colour recorded in Lough Ramor between March 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
28/03/96	7.78	29	181	27
23/04/96	7.70	31	180	61
23/05/96	7.80	33	185	42
26/06/96	8.50	51	198	43
23/07/96	8.03	59	214	40
28/08/96	8.37	61	210	45
25/09/96	8.06	65	215	43
24/10/96	7.81	58	214	52
21/01/97	7.73	39	195	52
12/03/97	8.14	35	182	51
15/04/97	8.31	44	173	42
15/05/97	8.07	46	174	58
18/06/97	9.18	59	187	41
08/07/97	9.26	60	183	38
20/08/97	9.07	69	209	57
24/09/97	8.11	63	208	44
21/10/97	7.71	50	191	83
03/12/97	7.63	46	192	64

Table 2.194 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Ramor between March 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
28/03/96	15.9	17.1	3.6	8.8	3.0	16.6
23/04/96	14.7	18.1	3.8	8.4	3.3	16.4
23/05/96	14.8	17.1	3.9	9.4	2.9	16.5
26/06/96	14.3	17.2	4.2	11.8	3.6	18.3
23/07/96	15.1	16.6	4.7	11.9	3.7	20.4
28/08/96	14.0	16.0	4.7	10.7	4.0	20.1
25/09/96	14.2	15.2	4.9	12.0	3.9	20.3
24/10/96	13.9	17.0	4.6	11.9	4.0	19.3
21/01/97	13.4	15.3	4.2	9.7	3.3	17.7
12/03/97	14.4	13.4	3.7	9.5	3.2	16.6
15/04/97	17.2	15.0	4.0	8.9	3.3	17.3
15/05/97	15.4	15.1	4.1	10.9	3.5	17.1
18/06/97	15.3	15.1	4.6	12.2	3.6	19.4
08/07/97	14.4	13.8				
20/08/97	14.3	11.3				
24/09/97	14.7	13.7				
21/10/97	13.9	14.8				
03/12/97	14.4	14.0				

Table 2.195 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Ramor between March 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3^--N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
28/03/96	52	18	3.13	2.96	2.52	1.90	1.57	1.94
23/04/96	70	10	3.12	2.95	2.32	1.30	0.74	0.69
23/05/96	60	8	2.10	1.97	1.37	1.28	1.02	0.95
26/06/96	93	6	1.52	1.07	0.25	1.49	0.95	1.02
23/07/96	88	10	1.09	0.73	<.05	0.87	0.33	0.29
28/08/96	114	14	1.27	0.75	0.13	1.21	0.67	0.68
25/09/96	108	31	1.39	0.73	<.05	2.20	1.93	2.02
24/10/96	88	41	1.80	1.64	0.85	3.06	2.74	2.67
21/01/97	62	35	3.12	3.04	2.33	3.02	2.87	2.93
12/03/97	62	6	3.31	3.12	2.44	0.69	0.02	0.01
15/04/97	60	8	2.21	1.88	1.32	0.34	0.10	0.06
15/05/97	93	13	1.82	1.46	0.92	0.87	0.54	0.49
18/06/97	72	3	1.30	0.84	0.23	0.44	0.04	0.01
08/07/97	59	6	1.30	0.84	<.05	0.45	0.30	0.29
20/08/97	205	55	2.09	0.88	<.05	2.41	2.06	2.06
24/09/97	105	26	1.25	0.82	<.05	4.10	3.72	3.55
21/10/97	111	49	1.95	1.69	0.99	3.42	3.18	3.11
03/12/97	81	44	2.29	2.18	1.30	3.48	3.26	3.22

Table 2.196 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Ramor.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
28/03/96	42.4	-	1.0
23/04/96	21.4	-	0.9
23/05/96	38.4	-	0.9
26/06/96	88.1	15.67	0.5
23/07/96	59.8	14.27	0.6
28/08/96	127.2	15.70	-
25/09/96	87.4	21.93	0.6
24/10/96	17.0	11.30	1.0
21/01/97	14.9	2.66	2.1
12/03/97	70.4	7.68	0.9
15/04/97	30.2	3.73	1.4
15/05/97	37.6	11.00	0.9
18/06/97	92.6	8.02	0.9
08/07/97	30.1	6.19	0.9
20/08/97	184.9	35.03	0.3
24/09/97	56.6	13.00	0.7
21/10/97	27.1	10.40	0.8
03/12/97	20.3	4.97	-

Table 2.197 Summary statistics of Lough Ramor.

	Mean	95% C.I.	n	Max.	Min.
pH	7.99	0.18	18	9.26	7.63
Alkalinity mg l^{-1} $CaCO_3$	50	6	18	69	29
Conductivity µS cm^{-1}	194	7	18	215	173
Turbidity NTU	12.10	4.15	15	35.03	2.66
Colour mg l^{-1} PtCo	49	6	18	83	27
Chlorophyll *a* µg l^{-1}	58.1	20.6	18	184.9	14.9
MRP µg l^{-1}	21	8	18	55	3
TP µg l^{-1}	88	16	18	205	52
TDP µg l^{-1}	34	8	18	75	17
NO_3^--N mg l^{-1}	0.95	0.43	18	2.52	< .05
TN mg l^{-1}	2.00	0.34	18	3.31	1.09
TDN mg l^{-1}	1.64	0.41	18	3.12	0.73
SiO_2-Si mg l^{-1}	1.44	0.57	18	3.55	0.01
TSi mg l^{-1}	1.81	0.55	18	4.10	0.34
TDSi mg l^{-1}	1.45	0.58	18	3.72	0.02
Cl^- mg l^{-1}	14.7	0.4	18	17.2	13.4
SO_4^{2-} mg l^{-1}	15.3	0.8	18	18.1	11.3
Mg^{2+} mg l^{-1}	4.2	0.2	13	4.9	3.6
Na^+ mg l^{-1}	10.5	0.8	13	12.2	8.4
K^+ mg l^{-1}	3.5	0.2	13	4.0	2.9
Ca^{2+} mg l^{-1}	18.2	0.8	13	20.4	16.4

Table 2.198 Temperature °C profiles of Lough Rea.

Depth (m)	09 Apr 96	09 Jun 96	07 Jul 96	08 Sep 96	12 Jan 97	06 Apr 97	31 May 97	29 Jun 97	14 Sep 97	07 Dec 97
0	8.3	15.0	15.5	17.3	2.2	10.2	18.6	14.7	15.1	7.3
1					2.2				15.1	
2	8.2	15.0	15.5	17.3		10.1	18.5	14.6	15.1	7.3
3					2.1				15.1	7.3
4	8.2	15.0	15.5	17.1	2.1	10.0	18.3	14.6	15.1	7.3
5							17.5		15.1	
6	8.2	15.0	15.5	16.8	2.1	9.8	15.7	14.6	15.1	7.3
7							14.7		15.1	7.3
8	8.2	14.9	15.5	16.7	2.1	9.7	14.3	14.4	15.1	
9							14.0		15.1	
10	8.1	14.9	15.5	16.5	2.1	9.7	13.7	14.2	15.1	
11							13.3		15.0	
12	7.7	14.4	15.4	16.4	2.1	9.7	12.9	14.0	15.1	
13							12.6		15.0	
14	7.5	14.2	15.3	16.3	2.1	9.7	12.3	13.9	15.0	
15		14.1					12.3		15.0	
16	7.5		15.3	16.3	2.1	9.7	12.2	13.9	15.0	
17							12.1		15.0	
18	7.2		15.2	16.2	2.1	9.7	12.1	13.9	15.0	
19							12.1	13.9	15.0	
20	7.0		15.2	16.1		9.7	12.0	13.9	15.0	
21				16.0					15.0	
22	6.7					9.7			15.0	
23						9.7				
24	6.7									

Table 2.199 Oxygen mg l^{-1} profiles of Lough Rea.

Depth (m)	09 Apr 96	09 Jun 96	07 Jul 96	08 Sep 96	12 Jan 97	06 Apr 97	31 May 97	29 Jun 97	14 Sep 97	07 Dec 97
0	12.3	11.6	12.5	11.0	13.1	11.3	15.5	10.2	9.8	9.3
1					13.2				9.8	
2	13.1	11.8	12.3	11.5		11.3	15.5	10.3	9.8	9.3
3					13.1				9.8	9.3
4	13.3	11.8	12.3	11.4	13.4	11.0	15.3	10.4	9.8	9.3
5							15.5		9.8	
6	14.0	11.9	12.2	11.0	13.4	10.4	15.3	10.5	9.8	9.3
7							15.1		9.7	9.3
8	14.2	11.8	12.2	10.3	13.4	10.7	14.9	10.5	9.7	
9							15.2		9.7	
10	14.2	11.8	12.0	9.6	13.4	10.8	14.2	10.5	9.7	
11							12.6		9.7	
12	14.5	11.3	12.0	8.7	13.4	10.7	11.9	10.4	9.7	
13							11.1		9.7	
14	14.5	11.0	11.7	8.1	13.4	10.8	10.8	10.2	9.7	
15		10.6					11.0		9.7	
16	14.6		11.1	7.7	13.4	10.6	10.5	10.3	9.6	
17							9.8		9.6	
18	14.5		10.7	6.8	13.4	10.5	9.8	9.9	9.6	
19							8.8	9.9	9.6	
20	14.4		10.5	5.6		10.7	8.1	9.8	9.6	
21				4.6					9.5	
22	14.4					10.7			9.5	
23						10.6				
24	14.1									

Table 2.200 Values of pH, alkalinity, conductivity and colour recorded in Lough Rea between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
09/04/96	8.38	129	324	2
09/06/96	8.40	109	284	4
07/07/96	8.47	96	263	5
08/09/96	8.69	84	240	4
12/01/97	8.19	119	310	6
06/04/97	8.36	125	320	4
31/05/97	8.58	97	237	4
29/06/97	8.46	94	233	5
14/09/97	8.33	93	257	6
07/12/97	8.22	117	302	5

Table 2.201 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Rea between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
09/04/96	18.7	7.2	7.3	9.3	1.4	45.2
09/06/96	18.0	7.1	7.4	9.7	1.3	36.2
07/07/96	19.3	7.5	7.2	9.9	1.3	30.6
08/09/96	18.3	7.3	7.3	9.6	1.3	25.9
12/01/97	17.5	7.6	7.6	9.4	1.3	39.5
06/04/97	18.9	8.1	7.3	10.0	1.3	42.4
31/05/97	19.3	7.7	7.3	9.6	1.3	30.9
29/06/97	17.8	7.4				
14/09/97	18.1	8.0				
07/12/97	18.6	8.1				

Table 2.202 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Rea between April 1996 and December 1997.

Date	TP µg l^{-1}	MRP µg l^{-1}	TN mg l^{-1}	TDN mg l^{-1}	NO_3^--N mg l^{-1}	TSi mg l^{-1}	TDSi mg l^{-1}	SiO_2-Si mg l^{-1}
09/04/96	12	1	0.95	0.90	0.38	0.98	0.80	0.79
09/06/96	9	2	0.86	0.81	0.06	0.58	0.54	0.55
07/07/96	5	5	0.71	0.66	<.05	0.95	0.89	0.91
08/09/96	5	5	0.46	0.38	<.05	1.87	1.87	1.93
12/01/97	12	5	0.94	0.86	0.15	2.16	2.17	2.14
06/04/97	4	6	0.85	0.79	0.25	1.21	1.16	1.15
31/05/97	<7	3	0.60	0.58	<.05	0.71	0.67	0.70
29/06/97	7	7	0.74	0.62	<.05	1.11	1.06	1.06
14/09/97	<7	6	0.57	0.58	<.05	1.69	1.69	1.64
07/12/97	<7	6	0.68	0.66	0.09	1.79	1.75	1.68

Table 2.203 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Rea.

Date	Chlorophyll *a* µg l^{-1}	Turbidity NTU	Secchi depth m
09/04/96	2.9	-	4.5
09/06/96	4.2	-	5.0
07/07/96	4.0	0.80	5.5
08/09/96	6.6	0.06	5.2
12/01/97	1.1	0.61	6.5
06/04/97	3.3	0.86	6.9
31/05/97	3.3	0.71	5.9
29/06/97	4.0	0.64	6.1
14/09/97	1.4	0.63	9.4
07/12/97	1.6	0.62	6.2

Table 2.204 Summary statistics of Lough Rea.

	Mean	95% C.I.	n	Max.	Min.
pH	8.39	0.10	10	8.69	8.19
Alkalinity mg l^{-1} $CaCO_3$	106	10	10	129	84
Conductivity µS cm^{-1}	277	22	10	324	233
Turbidity NTU	0.62	0.17	8	0.86	0.06
Colour mg l^{-1} PtCo	5	1	10	6	2
Chlorophyll *a* µg l^{-1}	3.2	1.0	10	6.6	1.1
MRP µg l^{-1}	5	1	10	7	1
TP µg l^{-1}	6	2	10	12	< 7
TDP µg l^{-1}	< 7	2	10	5	< 7
NO_3^--N mg l^{-1}	0.10	0.08	10	0.38	< .05
TN mg l^{-1}	0.74	0.10	10	0.95	0.46
TDN mg l^{-1}	0.68	0.10	10	0.90	0.38
SiO_2-Si mg l^{-1}	1.26	0.34	10	2.14	0.55
TSi mg l^{-1}	1.31	0.33	10	2.16	0.58
TDSi mg l^{-1}	1.26	0.35	10	2.17	0.54
Cl^- mg l^{-1}	18.4	0.4	10	19.3	17.5
SO_4^{2-} mg l^{-1}	7.6	0.2	10	8.1	7.1
Mg^{2+} mg l^{-1}	7.3	0.1	7	7.6	7.2
Na^+ mg l^{-1}	9.6	0.2	7	10.0	9.3
K^+ mg l^{-1}	1.3	0.0	7	1.4	1.3
Ca^{2+} mg l^{-1}	35.8	5.2	7	45.2	25.9

Table 2.205 Temperature °C profiles of Lough Talt.

Depth (m)	14 Apr 96	14 Jun 96	13 Jul 96	14 Sep 96	17 Jan 97	12 Apr 97	06 Jun 97	05 Jul 97	20 Sep 97	13 Dec 97
0	6.9	14.5	14.9	15.3	4.0	10.6	16.8	13.5	13.8	7.6
1									13.8	7.6
2	6.8	13.5	14.9	15.3	4.0		16.8	13.2	13.8	7.6
3									13.8	7.6
4	6.7	13.0	14.8	15.1	4.0		16.4	13.0	13.8	7.5
5							14.0		13.7	7.5
6	6.7	12.8	14.6	15.1	4.0		12.6	12.9	13.7	7.5
7							12.3		13.7	7.5
8	6.6	12.7	14.6	15.1	3.9		11.9	12.8	13.7	7.5
9							11.5		13.7	7.5
10	6.6	12.7	14.6	14.9	3.9		11.4	12.8	13.7	7.5
11							11.3		13.7	7.5
12	6.6	12.6	14.5	14.9	3.9		11.2	12.8	13.7	7.5
13							10.7		13.7	7.5
14	6.6	12.6	14.3	14.7	3.9		10.6	12.7	13.7	7.5
15							10.5		13.7	7.5
16	6.6	12.5	13.9	14.7	3.9		10.5	12.7	13.7	7.5
17									13.7	7.5
18	6.6	12.4	13.9	14.7	3.9		10.4	12.7	13.7	7.5
19									13.7	7.5
20	6.6	12.3	13.7	14.6	3.9		10.4	12.6	13.7	7.5
21									13.7	7.5
22	6.6	12.2	13.7	14.6	3.9		10.4	12.4	13.7	7.5
23									13.7	7.5
24	6.5	11.3	13.7	14.5	3.9		10.2	12.3	13.7	7.5
25									13.7	7.5
26	6.5	10.0	13.6	14.4	3.9		10.2	12.3	13.7	7.5
27									13.7	7.5
28	6.5	8.9	13.5	13.7	3.9		10.2	12.2	13.7	7.5
29			13.4	11.9					13.7	7.5
30		8.7	11.3	11.0				12.2	13.7	
31			11.3	10.3				12.1	13.7	
32			11.3	9.7				12.1		

Table 2.206 Oxygen mg l^{-1} profiles of Lough Talt.

Depth (m)	14 Apr 96	14 Jun 96	13 Jul 96	14 Sep 96	17 Jan 97	12 Apr 97	06 Jun 97	05 Jul 97	20 Sep 97	13 Dec 97
0	12.1	10.5	10.6	10.1	12.7	-	10.5	12.6	9.6	10.5
1									9.6	10.5
2	12.2	10.5	10.6	10.1	12.9		10.1	12.8	9.6	10.5
3									9.6	10.5
4	12.4	10.4	10.6	9.9	12.9		10.3	13.0	9.6	10.5
5							11.1		9.6	10.5
6	12.4	10.3	10.5	9.9	12.9		10.7	13.3	9.6	10.4
7							10.9		9.6	10.4
8	12.6	10.2	10.5	9.8	12.9		10.8	13.6	9.6	10.4
9							10.5		9.6	10.4
10	12.7	10.3	10.5	9.6	12.9		10.4	13.7	9.6	10.4
11							10.3		9.6	10.4
12	12.8	10.2	10.6	9.2	12.9		10.3	13.7	9.6	10.4
13							10.2		9.6	10.4
14	12.8	10.2	10.5	8.9	12.9		10.2	13.7	9.6	10.4
15							10.2		9.6	10.5
16	12.9	10.2	10.3	8.9	13.0		10.2	13.7	9.6	10.6
17									9.6	10.6
18	12.9	10.2	10.1	8.7	12.9		10.2	13.7	9.6	10.6
19									9.6	10.6
20	12.8	10.1	10.1	8.7	12.9		10.3	13.7	9.5	10.6
21									9.5	10.6
22	13.0	10.1	10.1	8.7	12.9		10.2	13.6	9.5	10.5
23									9.4	10.6
24	13.0	10.0	10.0	8.5	12.9		10.2	13.5	9.4	10.5
25									9.4	10.5
26	13.0	9.7	10.1	8.1	13.0		10.1	13.5	9.4	10.5
27									9.4	10.5
28	12.8	9.6	10.0	7.3	12.8		10.1	13.5	9.4	10.5
29			9.9	5.1					9.4	10.5
30		9.4	8.0	4.5				13.5	9.4	
31			7.3	4.2				13.5	9.4	
32			6.5	3.8				13.4		

Table 2.207 Values of pH, alkalinity, conductivity and colour recorded in Lough Talt between April 1996 and December 1997.

Date	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µS cm^{-1}	Colour mg l^{-1} PtCo
14/04/96	8.14	72	196	19
14/06/96	8.27	74	198	18
13/07/96	8.30	75	199	16
14/09/96	8.20	75	200	17
17/01/97	8.07	73	196	22
12/04/97	8.19	72	195	22
06/06/97	8.41	74	179	16
05/07/97	8.22	73	177	19
20/09/97	8.22	73	194	19
13/12/97	8.15	73	195	24

Table 2.208 Concentrations of major ions (chloride, sulphate, magnesium, sodium, potassium and calcium) found in Lough Talt between April 1996 and December 1997.

Date	Cl^- mg l^{-1}	SO_4^{2-} mg l^{-1}	Mg^{2+} mg l^{-1}	Na^+ mg l^{-1}	K^+ mg l^{-1}	Ca^{2+} mg l^{-1}
14/04/96	13.3	3.8	2.0	7.7	0.6	27.1
14/06/96	13.0	3.9	2.0	7.3	0.7	27.6
13/07/96	12.9	4.2	2.0	7.8	0.7	28.4
14/09/96	12.5	4.0	2.1	7.8	0.7	28.1
17/01/97	12.3	4.2	2.0	7.6	0.7	28.2
12/04/97	13.5	2.6	1.9	7.5	0.6	15.9
06/06/97	12.5	4.0	2.0	7.6	0.7	27.7
05/07/97	12.4	4.0				
20/09/97	13.0	3.9				
13/12/97	12.7	3.9				

Table 2.209 Concentrations of total phosphorus (TP), molybdate reactive phosphorus (MRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3-N, total silica (TSi), total dissolved silica (TDSi) and SiO_2-Si recorded in Lough Talt between April 1996 and December 1997.

Date	TP $\mu g\ l^{-1}$	MRP $\mu g\ l^{-1}$	TN $mg\ l^{-1}$	TDN $mg\ l^{-1}$	NO_3-N $mg\ l^{-1}$	TSi $mg\ l^{-1}$	TDSi $mg\ l^{-1}$	SiO_2-Si $mg\ l^{-1}$
14/04/96	6	1	0.23	0.22	<.05	1.37	1.36	1.27
14/06/96	<7	3	0.36	0.25	<.05	1.04	1.02	1.07
13/07/96	<7	6	0.21	0.17	<.05	1.02	0.99	1.01
14/09/96	<7	3	0.16	0.15	<.05	1.12	1.08	1.15
17/01/97	<7	3	0.13	0.13	<.05	1.32	1.32	1.25
12/04/97	<7	6	0.20	0.16	0.05	1.21	1.19	1.22
06/06/97	<7	3	0.12	0.05	<.05	1.05	1.03	1.01
05/07/97	<7	8	0.15	0.13	<.05	1.10	1.06	1.08
20/09/97	<7	3	0.17	0.12	<.05	1.15	1.13	1.08
13/12/97	4	5	0.19	0.18	<.05	1.22	1.20	1.20

Table 2.210 Values of chlorophyll *a*, turbidity and Secchi depth recorded in Lough Talt.

Date	Chlorophyll *a* $\mu g\ l^{-1}$	Turbidity NTU	Secchi depth m
14/04/96	1.4	-	4.2
14/06/96	2.2	-	4.7
13/07/96	3.1	0.45	4.5
14/09/96	3.2	0.56	5.0
17/01/97	1.5	0.52	3.9
12/04/97	2.1	0.40	5.1
06/06/97	2.7	0.44	3.9
05/07/97	2.3	0.55	4.3
20/09/97	2.9	0.57	5.9
13/12/97	1.3	0.58	5.1

Table 2.211 Summary statistics of Lough Talt.

	Mean	95% C.I.	n	Max.	Min.
pH	8.21	0.06	10	8.41	8.07
Alkalinity mg l^{-1} $CaCO_3$	73	1	10	75	72
Conductivity µS cm^{-1}	193	5	10	200	177
Turbidity NTU	0.51	0.05	8	0.58	0.40
Colour mg l^{-1} PtCo	19	2	10	24	16
Chlorophyll *a* µg l^{-1}	2.3	0.4	10	3.2	1.3
MRP µg l^{-1}	4	1	10	8	1
TP µg l^{-1}	< 7	2	10	6	< 7
TDP µg l^{-1}	< 7	1	10	5	< 7
NO_3^--N mg l^{-1}	< .05	0.01	10	0.05	< .05
TN mg l^{-1}	0.19	0.04	10	0.36	0.12
TDN mg l^{-1}	0.16	0.03	10	0.25	< .12
SiO_2-Si mg l^{-1}	1.13	0.06	10	1.27	1.01
TSi mg l^{-1}	1.16	0.07	10	1.37	1.02
TDSi mg l^{-1}	1.14	0.08	10	1.36	0.99
Cl^- mg l^{-1}	12.8	0.2	10	13.5	12.3
SO_4^{2-} mg l^{-1}	3.8	0.3	10	4.2	2.6
Mg^{2+} mg l^{-1}	2.0	0.0	7	2.1	1.9
Na^+ mg l^{-1}	7.6	0.1	7	7.8	7.3
K^+ mg l^{-1}	0.7	0.0	7	0.7	0.6
Ca^{2+} mg l^{-1}	26.1	3.4	7	28.4	15.9

APPENDIX 3 MONTHLY NET RAINFALL FOR 31 CATCHMENTS

Table 3.1 Monthly net rainfall (mm) recorded between Jan. 1996 and Dec. 1997.

Date	Ballycullinan	Ballyquirke	Bray	Bunny	Caragh	Cullaun	Dan
Jan 1996	83.85	83.31	305.61	79.12	328.78	82.94	419.32
Feb 1996	90.41	110.75	113.43	104.34	215.07	100.85	154.46
Mar 1996	80.23	91.67	109.67	77.61	113.41	79.23	129.03
Apr 1996	3.35	42.52	63.73	12.42	143.29	7.98	88.58
May 1996	-17.74	-0.98	49.40	-9.96	54.44	-13.98	69.32
Jun 1996	-76.89	-47.16	-78.30	-66.73	44.98	-69.66	-55.60
Jul 1996	-28.04	-5.29	-18.96	-14.11	30.19	-18.69	-18.59
Aug 1996	11.83	15.67	38.77	18.35	136.93	21.52	84.61
Sep 1996	-20.70	14.46	-16.69	-6.71	47.56	-10.17	4.25
Oct 1996	184.47	193.79	185.47	177.15	473.92	170.62	292.56
Nov 1996	137.93	146.45	196.51	138.24	265.91	130.90	186.51
Dec 1996	42.17	55.83	78.83	38.34	89.56	37.43	109.02
Jan 1997	33.74	32.42	63.41	31.47	112.12	32.47	75.19
Feb 1997	159.71	190.84	115.44	167.50	365.64	161.77	201.44
Mar 1997	8.37	23.07	-6.84	14.89	56.12	11.20	-1.12
Apr 1997	-9.55	-8.28	-9.71	-13.37	-12.94	-11.90	-0.19
May 1997	-15.78	-4.69	33.05	-2.48	8.16	-6.16	44.69
Jun 1997	13.96	38.07	117.31	17.62	62.49	21.04	128.49
Jul 1997	4.28	22.83	-6.70	18.88	30.99	14.02	31.36
Aug 1997	148.39	114.75	65.43	124.29	228.88	131.16	123.19
Sep 1997	43.91	81.64	-9.14	50.30	139.76	42.30	17.41
Oct 1997	123.43	107.70	119.27	121.46	147.56	122.24	132.01
Nov 1997	100.70	91.00	338.39	99.35	364.90	94.89	379.39
Dec 1997	135.01	165.46	165.88	137.68	327.51	130.15	228.92

Table 2.1 continued.

Date	Doolough	Dromore	Easky	Egish	Feeagh	Gara S.	Gowna
Jan 1996	78.74	82.47	96.25	94.86	83.91	89.62	68.50
Feb 1996	110.36	88.40	104.65	71.78	159.34	97.83	72.60
Mar 1996	77.72	75.68	54.51	57.93	54.43	53.19	37.77
Apr 1996	18.63	6.87	43.73	58.61	49.45	30.90	36.62
May 1996	-0.26	-20.76	15.67	2.13	3.21	-4.67	-7.46
Jun 1996	-61.34	-74.29	-42.33	-59.46	-32.07	-43.74	-65.26
Jul 1996	11.48	-26.32	43.60	-28.54	22.29	4.37	-10.63
Aug 1996	17.31	17.89	100.88	67.78	53.53	34.91	87.72
Sep 1996	-1.51	-19.66	19.20	-15.46	35.59	6.87	-7.62
Oct 1996	229.73	171.59	230.83	105.89	241.61	154.41	134.11
Nov 1996	185.34	129.70	179.51	104.45	242.71	121.52	95.86
Dec 1996	37.38	39.56	77.00	55.86	93.55	58.97	44.82
Jan 1997	46.16	32.54	28.96	29.75	46.94	31.15	31.16
Feb 1997	150.41	157.60	236.40	117.81	212.70	178.24	145.97
Mar 1997	27.77	5.58	73.45	-0.26	73.36	25.99	19.20
Apr 1997	3.04	-15.50	2.99	-8.56	-4.00	-4.10	2.15
May 1997	20.39	-12.71	29.94	10.54	26.05	23.33	-1.05
Jun 1997	32.18	16.89	53.70	27.66	5.94	18.90	14.38
Jul 1997	16.70	2.14	69.84	4.49	51.29	49.68	35.60
Aug 1997	141.85	137.12	45.18	1.42	50.15	16.54	29.10
Sep 1997	85.36	33.68	76.28	4.66	117.45	47.81	22.71
Oct 1997	124.57	120.94	76.19	78.58	91.72	90.54	84.19
Nov 1997	114.12	88.13	164.74	90.59	145.48	124.03	97.47
Dec 1997	175.29	117.13	181.64	125.02	242.99	137.55	111.92

Table 2.1 continued.

Date	Graney	Inchiquin	Leane	Lene	Lettercraffroe	Lickeen	Maumwee
Jan 1996	82.36	80.40	233.19	72.99	99.78	69.79	135.34
Feb 1996	109.90	106.01	174.87	58.20	118.06	62.57	212.38
Mar 1996	75.88	84.74	91.72	51.59	98.11	59.03	129.82
Apr 1996	16.41	17.67	85.71	45.17	47.86	-1.42	86.11
May 1996	-9.73	-0.10	11.93	-6.27	-1.14	-23.52	61.23
Jun 1996	-68.10	-65.25	-32.08	-64.86	-40.24	-76.19	17.11
Jul 1996	-4.85	-14.34	-0.50	-36.08	-0.56	-27.71	29.32
Aug 1996	41.25	11.10	104.49	47.09	25.91	-9.47	52.23
Sep 1996	-3.78	-0.85	17.81	-9.57	28.54	-17.12	57.80
Oct 1996	160.68	206.65	371.07	127.31	212.72	163.86	333.14
Nov 1996	132.69	149.34	224.87	84.63	174.69	114.32	339.00
Dec 1996	42.33	43.24	69.38	44.05	61.66	30.78	105.72
Jan 1997	38.13	31.11	78.07	30.84	41.98	27.85	72.78
Feb 1997	162.56	181.20	300.92	135.72	202.28	120.01	416.76
Mar 1997	5.46	29.34	35.52	3.56	34.52	7.35	113.88
Apr 1997	-11.80	-6.91	-18.35	7.63	-13.67	-13.60	14.92
May 1997	17.56	-5.12	-6.28	5.26	2.83	-30.26	28.88
Jun 1997	23.78	24.80	65.29	22.11	40.66	-9.10	42.91
Jul 1997	13.19	25.98	16.31	3.32	31.16	18.69	98.51
Aug 1997	103.46	148.73	178.92	28.76	127.73	120.27	172.38
Sep 1997	34.72	65.80	54.38	10.47	92.77	70.43	220.86
Oct 1997	109.63	131.55	100.60	89.01	110.79	111.21	146.93
Nov 1997	98.00	113.07	290.75	80.99	99.44	112.06	175.90
Dec 1997	120.84	165.83	244.34	100.20	181.41	163.93	308.03

Table 2.1 continued.

Date	Moher	Muckno	Muckross	Mullagh	Oughter	Owel	Pollaphuca
Jan 1996	114.85	99.63	262.99	75.60	77.97	75.77	267.68
Feb 1996	135.24	71.80	191.49	68.38	75.95	53.26	98.92
Mar 1996	73.23	51.79	102.36	55.86	36.49	49.30	91.81
Apr 1996	26.42	52.72	114.46	62.06	42.96	40.01	55.40
May 1996	0.59	4.84	38.04	5.62	5.10	-6.71	50.01
Jun 1996	-36.42	-59.32	10.90	-64.88	-61.35	-68.69	-73.17
Jul 1996	0.63	-31.01	4.68	-11.90	-13.75	-38.61	-19.32
Aug 1996	26.48	72.98	125.07	53.06	83.61	44.83	54.33
Sep 1996	21.96	-16.14	34.23	-13.36	-13.94	-5.92	-13.11
Oct 1996	205.27	107.25	453.13	120.50	132.14	132.88	205.71
Nov 1996	149.03	101.34	282.31	111.14	91.50	81.17	174.27
Dec 1996	49.22	54.63	83.36	55.58	53.01	47.35	77.51
Jan 1997	29.77	30.99	93.92	28.54	27.33	28.53	51.73
Feb 1997	233.06	112.48	376.57	131.36	122.37	127.97	138.43
Mar 1997	56.67	2.03	59.78	3.50	14.25	4.35	-12.04
Apr 1997	-18.73	-7.56	-13.61	-9.22	-1.30	6.26	-9.03
May 1997	23.91	15.31	-0.27	-1.89	-5.12	24.14	17.70
Jun 1997	4.20	19.12	74.46	23.95	14.63	17.10	109.12
Jul 1997	43.84	8.38	19.96	3.19	27.74	-8.29	8.90
Aug 1997	83.62	1.07	185.85	9.75	25.56	35.33	66.19
Sep 1997	85.23	4.10	81.48	4.16	15.09	11.60	4.83
Oct 1997	83.57	77.39	122.71	77.26	79.77	88.37	109.78
Nov 1997	143.01	94.95	342.18	88.45	96.07	73.90	245.16
Dec 1997	172.07	126.19	290.72	120.11	117.81	95.46	170.65

Table 2.1 continued.

Date	Ramor	Rea	Talt
Jan 1996	84.93	83.71	86.24
Feb 1996	76.90	111.45	117.74
Mar 1996	52.67	68.17	42.79
Apr 1996	56.28	1.39	30.26
May 1996	12.98	15.72	7.79
Jun 1996	-62.03	-71.46	-50.41
Jul 1996	-18.01	11.56	21.81
Aug 1996	60.29	45.39	68.21
Sep 1996	-11.54	-13.92	19.18
Oct 1996	134.75	153.92	196.99
Nov 1996	105.95	123.03	168.27
Dec 1996	55.18	43.70	68.76
Jan 1997	26.29	32.14	24.84
Feb 1997	125.64	171.83	197.85
Mar 1997	8.12	9.11	61.36
Apr 1997	-9.49	-9.99	-2.63
May 1997	-4.45	13.89	4.34
Jun 1997	21.72	17.92	22.24
Jul 1997	19.10	7.91	58.51
Aug 1997	15.01	86.27	49.86
Sep 1997	12.32	46.88	64.31
Oct 1997	86.33	94.91	80.27
Nov 1997	98.98	92.35	134.22
Dec 1997	128.89	112.25	163.37

APPENDIX 4 CATCHMENT CHARACTICS FOR 158 LAKES

Table 4.1 The County, date of sampling, national grid reference, national lake code number, catchment area and lake area for 158 lake catchments.

Lake	County	Date	National grid reference	National lake code number	Catchment area (ha)	Lake area (ha)
Abisdealy	Cork	10/07/97	W 138 315	20-00233-0030-000	592	15
Achryane	Clare	21/06/97	R 185 648	28-00154-0070-000	245	8
Acoose	Kerry	11/09/96	V 755 850	22-00208-0080-000	1048	66
Agaddy	Galway	18/06/97	L 694 468	32- t4_32-0610-000	18	3
Anelteen	Sligo	05/06/97	G 765 362	35-00117-0050-000	75	5
Annagh	Longford	01/10/96	N 217 920	26-0155a-1980-000	320	30
Anscaul	Kerry	12/07/97	Q 585 050	22-00200-0010-000	1001	26
Anure	Donegal	04/07/96	B 820 165	38-00022-0060-000	3785	159
Ardra	Cavan	01/10/96	H 300 020	36-00123-3320-000	175	12
Atarriff	Cork	09/07/97	W 260 460	20-00229-0060-000	23	6
Atedaun	Clare	20/06/97	R 297 885	27-00158-0980-000	34608	39
Atooreen	Cork	11/07/97	W 042 582	21-00225-0010-000	24	3
Auva	Donegal	04/06/97	G 532 812	37-00052-0070-000	155	19
Aweelamore	Galway	18/06/97	L 726 453	31-00136-0230-000	127	10
Ballin L	Cork	10/07/97	W 200 390	20-000y2-0140-000	133	7
Ballygawley	Sligo	05/06/97	G 694 288	35-00116-0030-000	211	27
Ballynacarriga	Cork	09/07/97	W 284 504	20-00229-0050-000	1121	7
Barfinnihy	Kerry	11/09/96	V 849 768	21-00216-0020-000	89	14
Barley	Cork	11/07/97	V 876 566	21-00219-0020-000	227	32
Barra	Donegal	06/07/96	B 935 120	38-00048-0490-000	2076	62
Beagh	Donegal	04/07/96	C 020 214	38-00027-0210-000	3515	263
Beg	Galway	17/06/97	M 127 322	31-00141-0260-000	23	4
Belhavel	Leitrim	05/06/97	G 876 294	35-00117-0170-000	2176	118
Beltra	Mayo	25/08/96	M 072 980	32-00108-0140-000	9900	413
Black	Kerry	11/09/96	V 876 875	22-00207-0150-000	1061	8
Black	Monaghan	01/10/96	H 710 110	36-00123-5550-000	152	19
Bofin	Galway	19/06/97	M 035 440	30-00143-1150-000	2714	93
Bofinna	Cork	10/07/97	W 041 488	21-00227-0050-000	49	8
Bracklagh	Cavan	01/10/96	N 395 825	26-00157-0630-000	152	9
Bray Upper	Wicklow	27/05/97	O 136 154	10-00169-0050-000	255	12
Brin	Kerry	13/07/97	V 784 774	21-00215-0030-000	545	24
Bunaveela	Mayo	06/06/97	F 988 090	32-00107-0110-000	462	46
Burke	Clare	20/06/97	R 236 778	28-00149-0330-000	183	10

Table 4.1 (continued).

Lake	County	Date	National grid reference	National lake code number	Catchment area (ha)	Lake area (ha)
Cam	Kerry	12/07/97	Q 598 080	23-00199-0030-000	381	7
Cappnaboul	Cork	11/07/97	W 034 536	21-00226-0010-000	112	4
Carigeencor	Leitrim	05/06/97	G 833 340	35-00117-0110-000	282	45
Castlenalact	Cork	09/07/97	W 485 600	20-00229-0020-000	304	10
Cloon	Kerry	11/09/96	V 703 780	22-00208-0090-000	1684	78
Cloonee	Kerry	13/07/97	V 827 640	21-00220-0030-000	2048	41
Cloonties	Cork	10/07/97	W 231 367	20-00234-0010-000	14	3
Colgagh	Sligo	05/06/97	G 741 363	35-00117-0010-000	375	33
Columbkille	Donegal	04/06/97	G 937 628	36-00123-0140-000	25	7
Commeenadillure	Kerry	13/07/97	V 850 614	21-00220-0060-000	112	18
Corraneary	Monaghan	01/10/96	H 650 055	36-00123-5410-000	644	25
Coumeenoughter	Kerry	12/07/97	Q 480 058	23-00203-0100-000	65	3
Craveys	Mayo	06/06/97	L 979 934	32-000g5-0020-000	15	1
Croagh	Donegal	03/06/97	G 779 822	37-000e6-0010-000	94	10
Croaghcrom	Mayo	07/06/97	M 047 732	30-00143-2080-000	99	8
Cullaunyheeda	Clare	10/09/96	R 485 745	27-00158-0750-000	2887	136
Cummeenduff	Kerry	11/09/96	V 840 814	22-00207-0220-000	1815	31
Curraghalicky	Cork	09/07/97	W 234 468	20-00229-0090-000	795	25
Dambaduff	Mayo	22/08/96	M 083 856	34-00110-2330-000	607	16
Dargan	Sligo	05/06/97	G 724 282	35-00116-0040-000	246	10
Derg	Clare	01/10/96	R 790 870	25-0155b-0450-000	1060800	11750
Derravaragh	Westmeath	01/10/96	N 420 680	26-00157-0370-000	59049	923
Derrintaggart	Mayo	06/06/97	L 982 961	32-000h5-0030-000	177	2
Derrybrick	Cavan	01/10/96	H 349 112	36-00123-2530-000	136	36
Doo	Mayo	24/08/96	F 711 094	33- i5_33-0760-000	49	13
Doon	Leitrim	05/06/97	G 794 364	35-00117-0090-000	288	13
Doon	Kerry	12/07/97	Q 503 060	23-00203-0070-000	22	2
Drumleen	Mayo	06/06/97	G 060 099	34-00110-2840-000	94	21
Dubh	Kerry	12/07/97	Q 470 063	23-00203-0110-000	206	6
Durlough	Donegal	03/06/97	G 666 874	37-00052-0110-000	23	3
Ennell	Westmeath	01/10/96	N 400 470	25-0155b-0950-000	12656	1189
Erril	Leitrim	01/10/96	N 047 964	26-0155a-1990-000	135	27
Fadda	Cork	11/07/97	V 662 543	21-00226-0030-000	35	10

Table 4.1 (continued).

Lake	County	Date	National grid reference	National lake code number	Catchment area (ha)	Lake area (ha)
Fadda	Kerry	13/07/97	V 757 662	21-0001l3-0020-000	29	4
Farrantoreen	Kerry	10/09/96	V 771 956	22-00207-0020-000	567	5
Fin	Clare	10/09/96	R 432 692	27-00250-0100-000	382	74
Fin	Sligo	05/06/97	G 598 207	35-00116-0160-000	27	2
Finn	Donegal	06/07/96	B 912 015	01-00062-0210-000	1095	113
Formoyle	Galway	17/06/97	M 023 327	31-00138-0320-000	4172	28
Gall	Mayo	26/08/96	F 710 084	33- i5_33-0730-000	81	15
Gartan	Donegal	04/07/96	C 053 160	39-00031-0270-000	7782	203
Garty	Cavan	01/10/96	N 280 980	36-00123-3530-000	1792	82
Geal	Kerry	12/07/97	Q 478 065	23-00203-0090-000	507	17
Ghearrain Bhain	Galway	18/06/97	L 660 574	32-000u4-0110-000	186	14
Gill	Kerry	12/07/97	Q 600 138	23-000z3-0010-000	1578	142
Glan	Kerry	13/07/97	V 622 622	21-000m3-0010-000	94	4
Glanmore	Kerry	11/07/97	V 775 550	21-00222-0010-000	2343	57
Glenbeg	Cork	11/07/97	V 705 530	21-000h3-0040-000	724	67
Glendalough Lower	Wicklow	27/05/97	T 117 966	10-00171-0030-000	2033	6
Glendalough Upper	Wicklow	27/05/97	T 105 962	10-00171-0040-000	1908	34
Gouganebarra	Cork	10/07/97	W 090 660	19-00228-0290-000	564	26
Guinikin	Cavan	01/10/96	N 270 968	36-00123-3610-000	458	7
Guitane	Kerry	13/09/96	W 025 845	22-00207-0530-000	1825	249
Holy	Cavan	01/10/96	H 317 170	36-00123-2020-000	54	14
Illion	Donegal	05/07/96	B 747 093	38-0001l6-0250-000	363	16
Inchiquin	Kerry	13/07/97	V 842 626	21-00220-0050-000	1575	77
Inniscarra	Cork	09/07/97	W 456 714	19-00228-0070-000	78398	1051
Islandeady	Mayo	22/08/96	M 090 875	34-00110-2390-000	5556	138
Keagh	Clare	20/06/97	R 101 812	28-00150-0010-000	45	7
Keel	Mayo	25/08/96	F 645 053	33- i5_33-0820-000	1302	85
Kilbrean	Kerry	12/09/96	W 004 934	22-00207-0300-000	26	4
Kilconny	Cavan	01/10/96	H 357 180	36-00123-2160-000	252	10
Kiltyfanned	Donegal	04/06/97	G 578 882	38- h6_38-0040-000	150	7
Kinlooey	Mayo	22/08/96	M 035 818	32-00125-0060-000	1465	13
Knocka	Clare	21/06/97	R 137 632	28-00154-0050-000	260	33

Table 4.1 (continued).

Lake	County	Date	National grid reference	National lake code number	Catchment area (ha)	Lake area (ha)
Leacrach	Galway	17/06/97	M 038 300	31-00138-0250-000	134	17
Levally	Mayo	06/06/97	G 145 045	34-00110-0930-000	2075	123
Lockagh	Kerry	12/09/96	W 009 939	22-00207-0320-000	82	3
Loosescavanagh	Kerry	11/09/96	V 887 795	22-00207-0280-000	276	21
Loughaunalyer	Galway	19/06/97	L 793 334	31-000r4-1730-000	73	7
Loughaunore	Galway	19/06/97	L 830 320	31-000r4-1370-000	136	5
Loughavaul	Cork	11/07/97	V 913 530	21-000f3-0050-000	40	4
Loughavaul Little	Cork	11/07/97	V 910 532	21-000f3-0040-000	34	2
Lougheraherk	Donegal	04/06/97	G 594 884	37-00052-0100-000	255	7
Lower	Cavan	01/10/96	N 262 980	36-00123-3420-000	2565	29
Lurgan	Galway	19/06/97	L 997 462	31-000r4-1230-000	40	15
Meela	Donegal	05/07/96	B 742 135	38-0001l6-0110-000	986	57
Meenaviller	Donegal	04/06/97	G 570 758	37-00052-0130-000	6	2
Moanmore	Clare	21/06/97	Q 978 612	28-00154-0020-000	323	13
More	Mayo	06/06/97	G 114 043	34-00110-1050-000	85	3
na Cuige rua	Galway	19/06/97	L 825 466	31-00136-0440-000	459	21
na hAille	Galway	17/06/97	M 028 304	31-00138-0160-000	228	1
Nabrucka	Galway	22/06/97	L 800 466	31-00136-0340-000	1338	19
Nafullanrany	Donegal	04/07/96	B 766 175	38-0001l6-0480-000	141	16
Nageltia	Mayo	07/06/97	M 110 790	30-00143-2200-000	319	35
Nahanagan	Wicklow	27/05/97	T 080 990	10-00171-0060-000	209	20
Nahillion	Galway	18/06/97	L 725 534	32-00134-0020-000	211	41
Nalughnaman	Donegal	03/06/97	G 658 887	37-00052-0120-000	187	55
Namafin	Donegal	03/06/97	G 797 838	37-00055-0010-000	190	24
Nambrack	Mayo	24/08/96	F 703 089	33- i5_33-0780-000	73	10
Nambrackkeagh	Galway	19/06/97	L 824 440	32-000u4-0070-000	142	2
Nancaneen	Mayo	24/08/96	F 695 047	33- i5_33-0740-000	141	2
Nasnahida	Donegal	06/07/96	B 853 079	38-00047-0130-000	232	17
North	Galway	18/06/97	L 640 443	32- t4_32-1220-000	22	4
Nucorralea	Mayo	22/08/96	M 116 767	30-00143-2090-000	1175	37
Numeeltoge	Donegal	03/06/97	G 735 932	38-000i6-0010-000	17	3
O'Mulligan	Donegal	04/06/97	G 561 755	37- h6_37-0040-000	14	2

Table 4.1 (continued).

Lake	County	Date	National grid reference	National lake code number	Catchment area (ha)	Lake area (ha)
Oorid	Galway	22/06/97	L 925 460	31-00136-0670-000	793	60
Ouler	Wicklow	27/05/97	O 092 022	10-00171-0080-000	103	13
Parlsee	Cavan	01/10/96	H 396 160	36-00123-2640-000	155	43
Pollacappul	Galway	18/06/97	L 750 584	32-00133-0040-000	2509	25
Pond	Donegal	03/06/97	G 697 989	38-000j6-0040-000	28	7
Ree	Roscommon	01/10/96	N 030 520	26-0155a-0320-000	334701	10640
Rinn	Leitrim	01/10/96	N 100 930	26-0155a-1770-000	14644	166
Ross	Galway	17/06/97	M 190 365	30-00143-0330-000	3183	138
Shanakeever	Galway	18/06/97	L 670 523	32-000u4-0060-000	873	6
Sheelin	Cavan	01/10/96	N 440 840	26-00157-0690-000	25132	1848
Shliabh	Galway	17/06/97	M 155 305	31-00141-0160-000	232	15
Shreelane	Cork	10/07/97	W 176 360	20-000y2-0110-000	297	10
Sillan	Monaghan	01/10/96	H 700 070	36-00123-5720-000	4898	160
Slat	Kerry	12/07/97	Q 610 078	23-00199-0020-000	737	11
Sraheens	Mayo	24/08/96	F 715 001	33- i5_33-0600-000	129	16
St Peter's	Donegal	04/06/97	G 867 784	37-00057-0030-000	95	16
Summy	Donegal	03/06/97	G 704 970	38-00049-0030-000	67	5
Swan	Cavan	01/10/96	N 314 915	36-00123-4310-000	194	46
Tawnagh	Galway	19/06/97	L 880 468	31-00136-0540-000	2206	9
Tawny	Galway	17/06/97	M 112 395	30-00143-0490-000	32	3
Tay	Wicklow	27/05/97	O 160 075	10-00171-0090-000	1928	50
Tullybrcan	Monaghan	01/10/96	H 635 039	36-00123-5340-000	81	4
Unna	Donegal	04/06/97	G 570 813	37-00052-0050-000	549	27
Upper	Kerry	13/07/97	V 900 820	22-00207-0260-000	11173	166
Vartry	Wicklow	27/05/97	O 205 025	10-00170-0020-000	5979	159
Waskel	Donegal	05/07/96	B 740 160	38-00016-0370-000	431	30
White	Monaghan	01/10/96	H 665 184	36-00123-4940-000	12287	47
White	Galway	18/06/97	L 730 444	32- t4_32-1170-000	6	1

Table 4.2 Catchment to lake area ratio, sampled lake area (pr.), elevation (catchment mean), annual precipitation, average annual maximum daily temperature, average annual minimum daily temperature and annual mean sunshine hours for 158 lake catchments.

Lake	Catchment / lake area	Sampled lake area (pr)	Elevation (m)	Annual precipitation (mm)	Average annual max. daily temperature °C	Average annual min. daily temperature °C	Annual mean sunshine hours day^{-1}
Abisdealy	39	0.025	54	1514	13.3	7.2	3.94
Achryane	32	0.031	78	1261	13.1	5.8	3.54
Acoose	16	0.063	341	2146	11.1	4.6	3.86
Agaddy	7	0.151	14	1492	13.0	6.8	3.62
Anelteen	17	0.060	80	1198	12.4	5.2	3.26
Annagh	11	0.094	100	988	12.6	4.8	3.31
Anscaul	38	0.026	316	2170	11.2	4.8	3.88
Anure	24	0.042	186	1702	11.0	4.8	3.29
Ardra	14	0.070	95	976	12.6	4.8	3.32
Atarriff	4	0.269	180	1670	12.4	5.9	3.88
Atedaun	896	0.001	86	1212	13.0	5.5	3.47
Atooreen	7	0.142	116	1597	12.9	6.4	3.86
Auva	8	0.124	210	1741	11.0	4.6	3.31
Aweelamore	13	0.076	20	1477	13.0	6.7	3.60
Ballin L	18	0.056	110	1576	12.9	6.6	3.91
Ballygawley	8	0.130	97	1242	12.4	5.1	3.27
Ballynacarriga	154	0.006	108	1498	12.9	6.4	3.86
Barfinnihy	6	0.155	430	2290	10.5	3.8	3.85
Barley	7	0.140	338	2140	11.2	4.7	3.91
Barra	33	0.030	328	1919	10.0	3.5	3.27
Beagh	13	0.075	258	1785	10.5	4.1	3.28
Beg	945	0.001	65	1283	13.0	5.7	3.45
Belhavel	18	0.054	144	1263	12.0	4.6	3.26
Beltra	24	0.042	142	1597	12.0	5.2	3.43
Black	139	0.007	343	2073	11.2	4.4	3.81
Black	8	0.128	130	1007	12.2	4.7	3.43
Bofin	29	0.034	103	1431	12.6	5.5	3.47
Bofinna	6	0.160	140	1675	12.7	6.3	3.89
Bracklagh	16	0.061	65	868	12.9	5.1	3.36
Bray Upper	21	0.048	450	1648	10.0	2.6	3.88
Brin	23	0.044	318	2098	11.3	4.8	3.87
Bunaveela	10	0.100	213	1828	11.3	4.8	3.47
Burke	18	0.057	78	1230	13.1	5.6	3.50

Table 4.2 (continued).

Lake	Catchment / lake area	Sampled lake area (pr)	Elevation (m)	Annual precipitation (mm)	Average annual max. daily temperature °C	Average annual min. daily temperature °C	Annual mean sunshine hours day^{-1}
Cam	55	0.018	440	2410	10.3	3.8	3.86
Cappnaboul	28	0.036	100	1582	13.0	6.6	3.88
Carigeencor	6	0.160	60	1122	12.6	5.3	3.26
Castlenalact	30	0.033	110	1401	12.9	6.2	3.82
Cloon	22	0.046	275	2058	11.6	5.2	3.90
Cloonee	50	0.020	270	2009	11.7	5.3	3.90
Cloonties	5	0.218	97	1545	13.0	6.7	3.91
Colgagh	11	0.088	49	1145	12.7	5.5	3.26
Columbkille	4	0.258	132	1319	11.9	4.8	3.25
Commeenadillure	6	0.165	445	2359	10.4	3.8	3.90
Corraneary	26	0.039	142	1027	12.2	4.5	3.41
Coumeenoughter	21	0.047	500	2619	9.8	3.5	3.93
Craveys	10	0.100	7	1371	13.0	6.5	3.47
Croagh	10	0.104	140	1476	11.6	4.9	3.27
Croaghcrom	12	0.082	97	1462	12.5	5.6	3.45
Cullaunyheeda	21	0.047	34	1028	13.5	5.8	3.47
Cummeenduff	59	0.017	403	2229	10.7	4.0	3.84
Curraghalicky	32	0.031	148	1612	12.6	6.1	3.87
Dambaduff	38	0.027	59	1388	12.7	5.9	3.43
Dargan	24	0.042	105	1244	12.3	5.0	3.27
Derg	90	0.011	88	1021	13.1	5.2	3.44
Derravaragh	64	0.016	92	903	12.8	4.9	3.39
Derrintaggart	73	0.014	39	1442	12.7	6.2	3.47
Derrybrick	4	0.268	60	912	12.8	5.1	3.32
Doo	4	0.265	8	1620	12.7	7.0	3.61
Doon	23	0.044	153	1334	11.9	4.6	3.26
Doon	9	0.106	337	2269	11.1	4.8	3.91
Drumleen	5	0.221	72	1494	12.4	5.9	3.44
Dubh	36	0.028	425	2472	10.4	4.1	3.93
Durlough	9	0.118	180	1634	11.3	4.7	3.29
Ennell	11	0.094	101	912	12.8	4.8	3.43
Erril	5	0.198	43	924	13.0	5.3	3.28
Fadda	3	0.289	75	1734	13.1	7.2	3.98

Table 4.2 (continued).

Lake	Catchment / lake area	Sampled lake area (pr)	Elevation (m)	Annual precipitation (mm)	Average annual max. daily temperature °C	Average annual min. daily temperature °C	Annual mean sunshine hours day^{-1}
Fadda	7	0.144	20	1533	13.5	7.4	3.91
Farrantoreen	122	0.008	48	1516	13.3	6.9	3.82
Fin	5	0.193	42	1069	13.4	5.8	3.49
Fin	16	0.062	90	1251	12.4	5.2	3.28
Finn	10	0.103	224	1671	10.9	4.3	3.27
Formoyle	147	0.007	152	1525	12.3	5.1	3.48
Gall	5	0.190	8	1618	12.7	7.0	3.61
Gartan	38	0.026	200	1628	11.0	4.5	3.27
Garty	22	0.046	98	979	12.6	4.8	3.32
Geal	29	0.034	340	2293	11.0	4.8	3.93
Ghearrain Bhain	14	0.074	80	1672	12.5	6.3	3.64
Gill	11	0.090	178	1866	12.3	5.9	3.85
Glan	21	0.048	75	1739	13.0	7.2	3.98
Glanmore	41	0.024	266	2054	11.7	5.5	3.94
Glenbeg	11	0.092	299	2169	11.4	5.3	3.97
Glendalough Lower	367	0.003	447	1659	10.0	2.7	3.92
Glendalough Upper	56	0.018	465	1695	9.9	2.6	3.91
Gouganebarra	22	0.045	358	2046	11.1	4.3	3.83
Guinikin	67	0.015	79	941	12.7	5.0	3.32
Guitane	7	0.137	290	1892	11.6	4.7	3.78
Holy	4	0.260	45	899	12.9	5.3	3.30
Illion	22	0.045	93	1514	11.7	5.6	3.29
Inchiquin	20	0.049	305	2075	11.4	5.0	3.90
Inniscarra	75	0.013	185	1528	12.4	5.4	3.77
Islandeady	40	0.025	68	1408	12.6	5.8	3.43
Keagh	7	0.152	182	1513	12.3	4.9	3.53
Keel	15	0.066	122	1894	11.8	6.1	3.65
Kilbrean	7	0.135	165	1627	12.5	5.7	3.76
Kilconny	26	0.038	58	919	12.8	5.2	3.31
Kiltyfanned	20	0.049	120	1562	11.7	5.3	3.31
Kinlooey	111	0.009	72	1438	12.6	5.8	3.45
Knocka	8	0.127	73	1278	13.1	5.8	3.55

Table 4.2 (continued).

Lake	Catchment / lake area	Sampled lake area (pr)	Elevation (m)	Annual precipitation (mm)	Average annual max. daily temperature °C	Average annual min. daily temperature °C	Annual mean sunshine hours day^{-1}
Leacrach	8	0.128	100	1406	12.7	5.5	3.48
Levally	17	0.059	111	1502	12.2	5.4	3.40
Lockagh	32	0.031	176	1646	12.4	5.6	3.75
Loosescavanagh	13	0.078	300	1997	11.5	4.8	3.83
Loughaunalyer	10	0.101	50	1471	12.9	6.3	3.58
Loughaunore	26	0.038	120	1586	12.4	5.7	3.56
Loughavaul	9	0.109	95	1634	13.0	6.8	3.91
Loughavaul Little	14	0.072	90	1625	13.0	6.8	3.91
Lougheraherk	37	0.027	171	1659	11.3	4.9	3.30
Lower	88	0.011	93	973	12.6	4.8	3.31
Lurgan	3	0.380	39	1328	13.0	6.1	3.48
Meela	17	0.058	27	1401	12.2	6.2	3.30
Meenaviller	4	0.283	150	1575	11.5	5.0	3.30
Moanmore	25	0.040	12	1242	13.5	6.5	3.60
More	26	0.039	60	1418	12.6	5.9	3.42
na Cuige rua	21	0.047	51	1471	12.8	6.2	3.56
na hAille	295	0.003	96	1405	12.7	5.6	3.48
Nabrucka	72	0.014	67	1520	12.7	6.2	3.57
Nafullanrany	9	0.113	40	1435	12.0	6.1	3.30
Nageltia	9	0.109	67	1373	12.7	5.8	3.42
Nahanagan	11	0.095	550	1860	9.3	1.8	3.89
Nahillion	5	0.194	165	1788	11.9	5.5	3.60
Nalughnaman	3	0.297	215	1715	11.0	4.4	3.29
Namafin	8	0.127	155	1505	11.5	4.8	3.27
Nambrack	7	0.144	14	1637	12.6	6.9	3.62
Nambrackkeagh	71	0.014	64	1493	12.8	6.1	3.56
Nancaneen	69	0.014	63	1730	12.3	6.5	3.62
Nasnahida	14	0.073	90	1451	11.8	5.5	3.28
North	6	0.177	16	1533	13.0	6.8	3.65
Nucorralea	32	0.031	152	1537	12.1	5.0	3.42
Numeeltoge	5	0.186	50	1359	12.2	5.8	3.28

Table 4.2 (continued).

Lake	Catchment / lake area	Sampled lake area (pr)	Elevation (m)	Annual precipitation (mm)	Average annual max. daily temperature °C	Average annual min. daily temperature °C	Annual mean sunshine hours day^{-1}
O'Mulligan	8	0.131	164	1607	11.4	4.9	3.30
Oorid	13	0.075	223	1752	11.6	4.7	3.51
Ouler	8	0.123	690	2144	8.3	0.6	3.89
Parlsee	4	0.280	55	902	12.8	5.2	3.32
Pollacappul	99	0.010	209	1869	11.6	5.1	3.59
Pond	4	0.249	70	1444	12.0	5.7	3.29
Ree	31	0.032	90	965	12.9	4.9	3.34
Rinn	88	0.011	72	962	12.8	5.0	3.29
Ross	23	0.043	41	1202	13.1	5.9	3.43
Shanakeever	157	0.006	112	1719	12.3	6.0	3.63
Sheelin	14	0.074	97	929	12.7	4.8	3.37
Shliabh	15	0.066	130	1397	12.5	5.2	3.44
Shreelane	29	0.034	90	1555	13.0	6.8	3.92
Sillan	31	0.033	141	1024	12.2	4.6	3.43
Slat	66	0.015	379	2277	10.8	4.3	3.86
Sraheens	8	0.126	22	1617	12.6	6.8	3.61
St Peter's	6	0.166	126	1393	11.8	5.0	3.26
Summy	14	0.073	80	1453	11.9	5.6	3.29
Swan	4	0.239	69	903	12.8	5.0	3.33
Tawnagh	237	0.004	155	1644	12.1	5.3	3.53
Tawny	9	0.108	91	1354	12.7	5.5	3.45
Tay	39	0.026	497	1757	9.6	2.3	3.92
Tullybrcan	21	0.048	130	1002	12.3	4.6	3.41
Unna	20	0.050	206	1712	11.1	4.6	3.30
Upper	67	0.015	295	1973	11.5	4.8	3.82
Vartry	38	0.027	294	1355	11.1	4.1	3.97
Waskel	14	0.069	28	1416	12.1	6.2	3.30
White	263	0.004	128	1020	12.2	4.7	3.40
White	6	0.163	20	1473	13.0	6.7	3.60

Table 4.3 CORINE land cover data for 158 lake catchments. Data are expressed as a proportion of catchment area.

Lake	Arable	Artificial surface	Bare rocks	Beach dunes sands	Broadleaf forest	Complex cultivation	Coniferous forest
Abisdealy	0.070						
Achryane							
Acoose							0.000
Agaddy							
Anelteen							0.024
Annagh							
Anscaul							
Anure							
Ardra							
Atarriff							0.267
Atedaun	0.001		0.154		0.006	0.001	0.001
Atooreen							
Auva							
Aweelamore							
Ballin L							
Ballygawley							
Ballynacarriga	0.014					0.028	0.032
Barfinnihy							
Barley							
Barra							
Beagh					0.031		
Beg							0.460
Belhavel							0.171
Beltra					0.003		0.118
Black							
Black							
Bofin							0.136
Bofinna							0.110
Bracklagh							
Bray Upper							0.049
Brin							
Bunaveela							
Burke							

Table 4.3 (continued).

Lake	Arable	Artificial surface	Bare rocks	Beach dunes sands	Broadleaf forest	Complex cultivation	Coniferous forest
Cam							0.265
Cappnaboul							
Carigeencor							0.002
Castlenalact	0.248						
Cloon							
Cloonee							0.079
Cloonties							
Colgagh							0.006
Columbkille							
Commeenadillure							
Corraneary							
Coumeenoughter							
Craveys		0.234					
Croagh							0.019
Croaghcrom							
Cullaunyheeda					0.026		
Cummeenduff							0.010
Curraghalicky							
Dambaduff							0.091
Dargan							0.200
Derg	0.013	0.005			0.003	0.018	0.026
Derravaragh	0.010	0.004			0.008	0.004	0.023
Derrintaggart							
Derrybrick							
Doo							
Doon							
Doon							
Drumleen							0.187
Dubh							
Durlough							
Ennell	0.025	0.031			0.003		0.018
Erril							
Fadda							0.042

Table 4.3 (continued).

Lake	Arable	Artificial surface	Bare rocks	Beach dunes sands	Broadleaf forest	Complex cultivation	Coniferous forest
Fadda							
Farrantoreen							
Fin							
Fin							
Finn							
Formoyle							0.031
Gall							
Gartan							0.029
Garty							
Geal							
Ghearrain Bhain							0.001
Gill				0.029		0.063	0.098
Glan							
Glanmore					0.009		
Glenbeg							
Glendalough Lower							0.145
Glendalough Upper							0.120
Gouganebarra							0.404
Guinikin		0.010					
Guitane							
Holy							
Illion							
Inchiquin							0.069
Inniscarra	0.036	0.001			0.007	0.005	0.077
Islandeady							0.066
Keagh							
Keel							
Kilbrean							
Kilconny		0.000					
Kiltyfanned							
Kinlooey							0.031
Knocka							

Table 4.3 (continued).

Lake	Arable	Artificial surface	Bare rocks	Beach dunes sands	Broadleaf forest	Complex cultivation	Coniferous forest
Leacrach							
Levally							0.021
Lockagh							
Loosescavanagh					0.151		
Loughaunalyer							
Loughaunore							
Loughavaul							
Loughavaul Little							
Lougheraherk							
Lower		0.007					
Lurgan							
Meela		0.001					
Meenaviller							
Moanmore							
More							
na Cuige rua							0.004
na hAille							
Nabrucka							0.011
Nafullanrany							
Nageltia							
Nahanagan							
Nahillion							0.350
Nalughnaman							
Namafin							
Nambrack				0.008			
Nambrackkeagh							
Nancaneen							
Nasnahida							
North							
Nucorralea							
Numeeltoge							
O'Mulligan							

Table 4.3 (continued).

Lake	Arable	Artificial surface	Bare rocks	Beach dunes sands	Broadleaf forest	Complex cultivation	Coniferous forest
Oorid							0.020
Ouler							
Parlsee							
Pollacappul							0.079
Pond							
Ree	0.001	0.004			0.003	0.001	0.017
Rinn		0.004			0.011		0.008
Ross					0.000		0.050
Shanakeever							0.051
Sheelin	0.003	0.007			0.011	0.005	0.007
Shliabh							0.322
Shreelane					0.005		
Sillan						0.004	
Slat							0.275
Sraheens							
St Peter's							
Summy							
Swan							
Tawnagh							0.122
Tawny							
Tay							0.009
Tullybrcan							
Unna							
Upper					0.061		0.002
Vartry	0.023	0.008				0.013	0.131
Waskel				0.000			
White		0.005			0.002		0.003
White							

Table 4.3 (continued).

Lake	Inland Marshes	Intertidal flats	Mixed Forest	Moors and heathland	Natural grasslands	Pasture high prod.	Pasture low prod.
Abisdealy				0.088		0.538	0.188
Achryane							0.001
Acoose				0.610	0.114		
Agaddy							
Anelteen							
Annagh						0.404	0.063
Anscaul				0.698			0.302
Anure				0.189	0.082		0.041
Ardra						0.688	0.163
Atarriff						0.536	0.197
Atedaun	0.009			0.008	0.130	0.228	0.071
Atooreen							
Auva							
Aweelamore							
Ballin L						0.463	0.445
Ballygawley			0.819				
Ballynacarriga						0.694	0.075
Barfinnihy				0.961	0.039		
Barley				0.436			
Barra				0.356	0.234		0.016
Beagh				0.373	0.264		
Beg							
Belhavel				0.016	0.169		0.002
Beltra			0.033		0.066		
Black				0.314			
Black			0.175			0.310	0.355
Bofin							
Bofinna							0.499
Bracklagh						0.399	
Bray Upper				0.075	0.103		
Brin				0.113	0.539		0.055
Bunaveela					0.068		0.016
Burke							0.982

Table 4.3 (continued).

Lake	Inland Marshes	Intertidal flats	Mixed Forest	Moors and heathland	Natural grasslands	Pasture high prod.	Pasture low prod.
Cam				0.735			
Cappnaboul				0.255		0.364	0.382
Carigeencor					0.421		0.311
Castlenalact						0.718	
Cloon				0.327	0.144		
Cloonee				0.471	0.070		0.038
Cloonties						0.582	0.418
Colgagh						0.113	0.002
Columbkille							
Commeenadillure				0.840			
Corraneary						0.778	0.025
Coumeenoughter				0.004		0.051	
Craveys							
Croagh							0.003
Croaghcrom							
Cullaunyheeda			0.015	0.058	0.030	0.343	0.156
Cummeenduff				0.195	0.009		
Curraghalicky					0.052	0.846	0.000
Dambaduff							
Dargan					0.389	0.200	0.118
Derg	0.006	0.000	0.002	0.014	0.022	0.459	0.088
Derravaragh	0.010	0.003	0.010			0.509	0.082
Derrintaggart							
Derrybrick						0.650	
Doo							
Doon					0.001	0.065	
Doon				0.267			
Drumleen							
Dubh				0.376	0.232		
Durlough							
Ennell	0.013		0.001		0.003	0.447	0.145
Erril						0.038	0.004
Fadda				0.665			

Table 4.3 (continued).

Lake	Inland Marshes	Intertidal flats	Mixed Forest	Moors and heathland	Natural grasslands	Pasture high prod.	Pasture low prod.
Fadda				0.455			
Farrantoreen				0.446			0.303
Fin					0.282	0.327	0.070
Fin						0.467	0.533
Finn				0.362	0.009		0.036
Formoyle					0.001		
Gall							
Gartan			0.015	0.124	0.217	0.003	0.007
Garty						0.309	0.451
Geal				0.410	0.259		
Ghearrain Bhain							
Gill	0.046			0.320			0.270
Glan				0.082			
Glanmore				0.523	0.240		0.032
Glenbeg				0.452	0.299		
Glendalough Lower				0.000	0.398		
Glendalough Upper				0.001	0.424		
Gouganebarra				0.078		0.008	
Guinikin						0.439	0.088
Guitane				0.433	0.047	0.035	0.039
Holy						0.461	
Illion				0.282			
Inchiquin				0.520	0.027		0.049
Inniscarra				0.022	0.046	0.353	0.248
Islandeady							
Keagh							
Keel							
Kilbrean						0.863	0.137
Kilconny						0.296	0.369
Kiltyfanned				0.729	0.137		
Kinlooey						0.057	
Knocka					0.188	0.592	0.000

Table 4.3 (continued).

Lake	Inland Marshes	Intertidal flats	Mixed Forest	Moors and heathland	Natural grasslands	Pasture high prod.	Pasture low prod.
Leacrach							
Levally							
Lockagh						0.758	0.216
Loosescavanagh				0.634	0.000		
Loughaunalyer							
Loughaunore							
Loughavaul							
Loughavaul Little							
Lougheraherk				0.326	0.305		
Lower						0.365	0.347
Lurgan							
Meela				0.108		0.029	
Meenaviller				1.000			
Moanmore							0.301
More							
na Cuige rua							
na hAille							
Nabrucka							
Nafullanrany							
Nageltia							
Nahanagan							
Nahillion							
Nalughnaman				0.170	0.232		
Namafin							
Nambrack							
Nambrackkeagh							
Nancaneen							
Nasnahida							
North							
Nucorralea							
Numeeltoge							
O'Mulligan				1.000			

Table 4.3 (continued).

Lake	Inland Marshes	Intertidal flats	Mixed Forest	Moors and heathland	Natural grasslands	Pasture high prod.	Pasture low prod.
Oorid							
Ouler					0.450		
Parlsee						0.191	
Pollacappul					0.041		
Pond				0.462		0.080	
Ree	0.006	0.000	0.003	0.005	0.050	0.368	0.130
Rinn						0.349	0.297
Ross	0.000			0.088	0.099	0.028	0.011
Shanakeever							
Sheelin	0.001		0.011			0.586	0.072
Shliabh							
Shreelane						0.281	0.639
Sillan						0.658	0.065
Slat				0.725			
Sraheens							
St Peter's							0.123
Summy				0.372			
Swan						0.686	
Tawnagh					0.042		
Tawny							
Tay				0.014	0.409		
Tullybrcan						0.931	
Unna				0.043			
Upper				0.345	0.050		
Vartry	0.016			0.052	0.106	0.524	0.018
Waskel				0.330			
White						0.619	0.132
White							

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Abisdealy						
Achryane			0.967		0.031	
Acoose			0.142			
Agaddy			1.000			
Anelteen	0.501					
Annagh	0.162	0.205	0.051			
Anscaul						
Anure	0.021		0.594		0.031	
Ardra	0.045					
Atarriff						
Atedaun	0.093	0.001	0.030		0.079	
Atooreen			1.000			
Auva			0.847			
Aweelamore			1.000			
Ballin L						
Ballygawley					0.051	
Ballynacarriga					0.150	
Barfinnihy						
Barley			0.411			
Barra			0.247			
Beagh			0.221			
Beg			0.239			
Belhavel	0.104		0.068		0.413	
Beltra		0.040	0.558		0.113	
Black			0.470			
Black						
Bofin			0.762		0.019	
Bofinna			0.241			
Bracklagh	0.556	0.045				
Bray Upper			0.771	0.001		
Brin			0.012		0.115	
Bunaveela			0.815			
Burke					0.018	

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Cam						
Cappnaboul						
Carigeencor	0.096				0.001	
Castlenalact						
Cloon			0.187		0.017	
Cloonee			0.229		0.023	
Cloonties						
Colgagh	0.721				0.038	
Columbkille			1.000			
Commeenadillure						
Corraneary	0.145					
Coumeenoughter						
Craveys	0.074				0.692	
Croagh			0.977			
Croaghcrom			0.917			
Cullaunyheeda	0.204		0.006		0.070	
Cummeenduff	0.013		0.559		0.076	
Curraghalicky			0.055			
Dambaduff	0.029		0.563		0.060	
Dargan						
Derg	0.139	0.061	0.045	0.000	0.036	0.000
Derravaragh	0.181	0.031	0.031		0.034	
Derrintaggart			0.686		0.177	
Derrybrick	0.077					
Doo	0.457		0.073			
Doon	0.133				0.674	
Doon						
Drumleen			0.259		0.345	
Dubh						
Durlough			1.000			
Ennell	0.137	0.003	0.004		0.066	
Erril	0.782					
Fadda			0.293			

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Fadda					0.545	
Farrantoreen	0.252					
Fin					0.085	
Fin						
Finn			0.483			
Formoyle		0.014	0.874			
Gall	0.091		0.687			
Gartan	0.042		0.392	0.003	0.069	
Garty	0.193					
Geal						
Ghearrain Bhain			0.697		0.224	
Gill	0.069				0.014	
Glan			0.619		0.299	
Glanmore			0.132		0.038	
Glenbeg			0.151			
Glendalough Lower			0.424		0.002	
Glendalough Upper			0.422			
Gouganebarra			0.423			
Guinikin	0.462					
Guitane			0.302		0.013	
Holy	0.281					
Illion			0.208		0.462	
Inchiquin			0.231		0.030	
Inniscarra	0.012		0.130		0.041	
Islandeady	0.014		0.354		0.303	
Keagh			1.000			
Keel	0.088		0.663	0.007	0.121	
Kilbrean						
Kilconny	0.334					
Kiltyfanned			0.052			
Kinlooey			0.151		0.323	
Knocka			0.011		0.068	

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Leacrach		0.661	0.214			
Levally	0.074		0.620		0.223	
Lockagh	0.027					
Loosescavanagh			0.117			
Loughaunalyer			1.000			
Loughaunore		0.100	0.896		0.004	
Loughavaul			1.000			
Loughavaul Little			1.000			
Lougheraherk			0.322			
Lower	0.234					
Lurgan		0.528				
Meela	0.001		0.501		0.301	
Meenaviller						
Moanmore			0.593		0.106	
More			1.000			
na Cuige rua			0.886		0.072	
na hAille		0.669	0.257			
Nabrucka			0.882		0.049	
Nafullanrany			0.773		0.091	
Nageltia			0.701		0.192	
Nahanagan			0.874			
Nahillion			0.479			
Nalughnaman			0.281			
Namafin			0.870			
Nambrack	0.725		0.108			
Nambrackkeagh			1.000			
Nancaneen	0.052		0.787		0.032	
Nasnahida			0.909			
North			1.000			
Nucorralea			0.819		0.181	
Numeeltoge	0.565		0.435			
O'Mulligan						

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Oorid			0.846		0.055	
Ouler			0.430			
Parlsee	0.529					
Pollacappul			0.673		0.023	
Pond					0.458	
Ree	0.168	0.062	0.048	0.000	0.059	0.000
Rinn	0.249	0.009	0.015	0.001	0.030	
Ross	0.026	0.032	0.342		0.240	
Shanakeever			0.900			
Sheelin	0.183	0.005	0.009		0.023	
Shliabh			0.609			
Shreelane	0.000					
Sillan	0.232					
Slat						
Sraheens			0.700		0.176	
St Peter's	0.255		0.026		0.400	
Summy	0.484					
Swan			0.059			
Tawnagh			0.755		0.038	
Tawny			1.000			
Tay			0.541			
Tullybrcan	0.069					
Unna			0.845			
Upper	0.004		0.468		0.025	
Vartry			0.024		0.025	
Waskel	0.047		0.048		0.475	
White	0.211		0.007		0.013	
White			1.000			

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Abisdealy						
Achryane			0.967		0.031	
Acoose			0.142			
Agaddy			1.000			
Anelteen	0.501					
Annagh	0.162	0.205	0.051			
Anscaul						
Anure	0.021		0.594		0.031	
Ardra	0.045					
Atarriff						
Atedaun	0.093	0.001	0.030		0.079	
Atooreen			1.000			
Auva			0.847			
Aweelamore			1.000			
Ballin L						
Ballygawley					0.051	
Ballynacarriga					0.150	
Barfinnihy						
Barley			0.411			
Barra			0.247			
Beagh			0.221			
Beg			0.239			
Belhavel	0.104		0.068		0.413	
Beltra		0.040	0.558		0.113	
Black			0.470			
Black						
Bofin			0.762		0.019	
Bofinna			0.241			
Bracklagh	0.556	0.045				
Bray Upper			0.771	0.001		
Brin			0.012		0.115	
Bunaveela			0.815			
Burke					0.018	

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Cam						
Cappnaboul						
Carigeencor	0.096				0.001	
Castlenalact						
Cloon			0.187		0.017	
Cloonee			0.229		0.023	
Cloonties						
Colgagh	0.721				0.038	
Columbkille			1.000			
Commeenadillure						
Corraneary	0.145					
Coumeenoughter						
Craveys	0.074				0.692	
Croagh			0.977			
Croaghcrom			0.917			
Cullaunyheeda	0.204		0.006		0.070	
Cummeenduff	0.013		0.559		0.076	
Curraghalicky			0.055			
Dambaduff	0.029		0.563		0.060	
Dargan						
Derg	0.139	0.061	0.045	0.000	0.036	0.000
Derravaragh	0.181	0.031	0.031		0.034	
Derrintaggart			0.686		0.177	
Derrybrick	0.077					
Doo	0.457		0.073			
Doon	0.133				0.674	
Doon						
Drumleen			0.259		0.345	
Dubh						
Durlough			1.000			
Ennell	0.137	0.003	0.004		0.066	
Erril	0.782					
Fadda			0.293			

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Fadda					0.545	
Farrantoreen	0.252					
Fin					0.085	
Fin						
Finn			0.483			
Formoyle		0.014	0.874			
Gall	0.091		0.687			
Gartan	0.042		0.392	0.003	0.069	
Garty	0.193					
Geal						
Ghearrain Bhain			0.697		0.224	
Gill	0.069				0.014	
Glan			0.619		0.299	
Glanmore			0.132		0.038	
Glenbeg			0.151			
Glendalough Lower			0.424		0.002	
Glendalough Upper			0.422			
Gouganebarra			0.423			
Guinikin	0.462					
Guitane			0.302		0.013	
Holy	0.281					
Illion			0.208		0.462	
Inchiquin			0.231		0.030	
Inniscarra	0.012		0.130		0.041	
Islandeady	0.014		0.354		0.303	
Keagh			1.000			
Keel	0.088		0.663	0.007	0.121	
Kilbrean						
Kilconny	0.334					
Kiltyfanned			0.052			
Kinlooey			0.151		0.323	
Knocka			0.011		0.068	

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Leacrach		0.661	0.214			
Levally	0.074		0.620		0.223	
Lockagh	0.027					
Loosescavanagh			0.117			
Loughaunalyer			1.000			
Loughaunore		0.100	0.896		0.004	
Loughavaul			1.000			
Loughavaul Little			1.000			
Lougheraherk			0.322			
Lower	0.234					
Lurgan		0.528				
Meela	0.001		0.501		0.301	
Meenaviller						
Moanmore			0.593		0.106	
More			1.000			
na Cuige rua			0.886		0.072	
na hAille		0.669	0.257			
Nabrucka			0.882		0.049	
Nafullanrany			0.773		0.091	
Nageltia			0.701		0.192	
Nahanagan			0.874			
Nahillion			0.479			
Nalughnaman			0.281			
Namafin			0.870			
Nambrack	0.725		0.108			
Nambrackkeagh			1.000			
Nancaneen	0.052		0.787		0.032	
Nasnahida			0.909			
North			1.000			
Nucorralea			0.819		0.181	
Numeeltoge	0.565		0.435			
O'Mulligan						

Table 4.3 (continued).

Lake	Pasture (mixed)	Peat bogs (exploited)	Peat bogs (unexploited)	Peat bogs	Principally agriculture	Salt marsh
Oorid			0.846		0.055	
Ouler			0.430			
Parlsee	0.529					
Pollacappul			0.673		0.023	
Pond					0.458	
Ree	0.168	0.062	0.048	0.000	0.059	0.000
Rinn	0.249	0.009	0.015	0.001	0.030	
Ross	0.026	0.032	0.342		0.240	
Shanakeever			0.900			
Sheelin	0.183	0.005	0.009		0.023	
Shliabh			0.609			
Shreelane	0.000					
Sillan	0.232					
Slat						
Sraheens			0.700		0.176	
St Peter's	0.255		0.026		0.400	
Summy	0.484					
Swan			0.059			
Tawnagh			0.755		0.038	
Tawny			1.000			
Tay			0.541			
Tullybrcan	0.069					
Unna			0.845			
Upper	0.004		0.468		0.025	
Vartry			0.024		0.025	
Waskel	0.047		0.048		0.475	
White	0.211		0.007		0.013	
White			1.000			

Table 4.3 (continued).

Lake	Sparsely vegetated areas	Transitional woodland / scrub	Urban green	Fresh water
Abisdealy		0.072		0.043
Achryane				
Acoose	0.072			0.063
Agaddy				
Anelteen		0.475		
Annagh				0.115
Anscaul				
Anure	0.000			0.042
Ardra				0.104
Atarriff				
Atedaun	0.096	0.073		0.019
Atooreen				
Auva				0.153
Aweelamore				
Ballin L				0.092
Ballygawley				0.130
Ballynacarriga				0.007
Barfinnihy				
Barley				0.152
Barra	0.114			0.033
Beagh	0.017	0.017	0.000	0.077
Beg				0.300
Belhavel				0.056
Beltra		0.018		0.050
Black	0.216			
Black				0.160
Bofin		0.025		0.059
Bofinna				0.150
Bracklagh				
Bray Upper				
Brin	0.121			0.046
Bunaveela				0.102
Burke				

Table 4.3 (continued).

Lake	Sparsely vegetated areas	Transitional woodland / scrub	Urban green	Fresh water
Cam				
Cappnaboul				
Carigeencor				
Castlenalact				0.169
Cloon	0.253			0.034
Cloonee	0.021			0.071
Cloonties				0.069
Colgagh		0.011		
Columbkille				0.110
Commeenadillure				
Corraneary				0.160
Coumeenoughter	0.945			0.052
Craveys				
Croagh				
Croaghcrom				
Cullaunyheeda		0.023		0.083
Cummeenduff	0.117			0.069
Curraghalicky				0.021
Dambaduff		0.258		0.047
Dargan		0.092		
Derg		0.021	0.000	0.041
Derravaragh		0.006		0.054
Derrintaggart		0.137		
Derrybrick				0.272
Doo		0.228		0.242
Doon		0.127		
Doon	0.733			
Drumleen				0.209
Dubh	0.392			
Durlough				
Ennell		0.005	0.004	0.095
Erril				0.177
Fadda				

Table 4.3 (continued).

Lake	Sparsely vegetated areas	Transitional woodland / scrub	Urban green	Fresh water
Fadda				
Farrantoreen				
Fin				0.236
Fin				
Finn				0.110
Formoyle		0.064		0.016
Gall				0.222
Gartan	0.012	0.046		0.041
Garty				0.047
Geal	0.294			0.037
Ghearrain Bhain				0.078
Gill				0.092
Glan				
Glanmore		0.000		0.026
Glenbeg				0.097
Glendalough Lower	0.008			0.024
Glendalough Upper	0.008			0.025
Gouganebarra		0.036		0.050
Guinikin				
Guitane				0.130
Holy				0.258
Illion				0.047
Inchiquin	0.017			0.058
Inniscarra		0.005	0.000	0.018
Islandeady		0.259		0.005
Keagh				
Keel		0.051		0.071
Kilbrean				
Kilconny				
Kiltyfanned				0.082
Kinlooey		0.439		
Knocka		0.006		0.135

Table 4.3 (continued).

Lake	Sparsely vegetated areas	Transitional woodland / scrub	Urban green	Fresh water
Leacrach				0.125
Levally				0.062
Lockagh				
Loosescavanagh				0.097
Loughaunalyer				
Loughaunore				
Loughavaul				
Loughavaul Little				
Lougheraherk				0.047
Lower				0.047
Lurgan				0.472
Meela				0.060
Meenaviller				
Moanmore				
More				
na Cuige rua				0.038
na hAille				0.073
Nabrucka				0.057
Nafullanrany				0.136
Nageltia		0.004		0.103
Nahanagan				0.126
Nahillion				0.171
Nalughnaman				0.317
Namafin				0.130
Nambrack				0.159
Nambrackkeagh				
Nancaneen				0.128
Nasnahida				0.091
North				
Nucorralea				
Numeeltoge				
O'Mulligan				

Table 4.3 (continued).

Lake	Sparsely vegetated areas	Transitional woodland / scrub	Urban green	Fresh water
Oorid				0.080
Ouler				0.120
Parlsee				0.280
Pollacappul	0.118			0.067
Pond				
Ree		0.004	0.000	0.069
Rinn				0.028
Ross	0.013	0.026		0.045
Shanakeever		0.012		0.037
Sheelin		0.003		0.074
Shliabh				0.069
Shreelane				0.075
Sillan				0.042
Slat				
Sraheens				0.124
St Peter's				0.196
Summy		0.144		
Swan				0.255
Tawnagh				0.044
Tawny				
Tay		0.001		0.027
Tullybrcan				
Unna				0.112
Upper	0.020			0.024
Vartry		0.010		0.051
Waskel				0.100
White				0.009
White				

Table 4.4 Information obtained from the agricultural census (1991) for 158 catchments. Data are expressed as a proportion of the drainage area (i.e. catchment area - lake area).

Lake	Silage (pr.)	Permanent meadow (pr.)	Sum of rotation under 5 years (pr.)	Rough grazing (pr.)	All crops (pr.)	Cattle (ha^{-1})	Sheep (ha^{-1})
Abisdealy	0.197	0.034	0.387	0.213	0.016	1.726	0.340
Achryane	0.095	0.100	0.333	0.131	0.001	0.969	0.114
Acoose	0.012	0.017	0.051	0.492	0.001	0.296	1.393
Agaddy							
Anelteen	0.030	0.028	0.166	0.005	0.000	0.256	0.783
Annagh	0.197	0.077	0.378	0.085	0.001	1.356	0.097
Anscaul	0.099	0.009	0.331	0.077	0.000	0.642	3.286
Anure	0.001	0.006	0.026	0.156	0.001	0.055	0.804
Ardra	0.156	0.098	0.370	0.127	0.001	1.205	1.131
Atarriff	0.324	0.029	0.561	0.068	0.034	2.672	0.059
Atedaun	0.058	0.062	0.237	0.225	0.003	0.754	0.626
Atooreen							
Auva	0.006	0.015	0.033	0.114		0.029	1.721
Aweelamore		0.002	0.012	0.050		0.034	0.247
Ballin L	0.154	0.028	0.338	0.137	0.010	1.333	0.335
Ballygawley	0.052	0.061	0.434	0.027	0.001	0.688	1.027
Ballynacarriga	0.220	0.021	0.386	0.048	0.036	1.845	0.068
Barfinnihy	0.023	0.009	0.129	0.445	0.002	0.280	1.026
Barley	0.013	0.013	0.042	0.315	0.001	0.174	1.301
Barra	0.002	0.011	0.046	0.143	0.003	0.078	0.659
Beagh	0.007	0.010	0.057	0.047	0.005	0.109	0.499
Beg							
Belhavel	0.014	0.076	0.192	0.224	0.001	0.437	0.798
Beltra	0.032	0.022	0.107	0.241	0.001	0.328	1.266
Black	0.015	0.023	0.053	0.279	0.001	0.169	1.415
Black	0.081	0.061	0.218	0.155		0.891	0.793
Bofin	0.003	0.005	0.044	0.092	0.000	0.100	0.731
Bofinna	0.109	0.025	0.315	0.198	0.003	0.924	1.119
Bracklagh	0.145	0.094	0.561	0.006	0.001	1.428	2.449
Bray Upper	0.015	0.018	0.097	0.025	0.012	0.115	1.958
Brin	0.020	0.003	0.048	0.796	0.000	0.228	2.890
Bunaveela	0.007	0.016	0.048	0.203		0.094	1.359
Burke	0.112	0.169	0.442	0.161		1.102	0.330

Table 4.4 (continued).

Lake	Silage (pr.)	Permanent meadow (pr.)	Sum of rotation under 5 years (pr.)	Rough grazing (pr.)	All crops (pr.)	Cattle (ha^{-1})	Sheep (ha^{-1})
Cam	0.040	0.015	0.129	0.123	0.001	0.353	1.546
Cappnaboul	0.080	0.014	0.259	0.264	0.002	0.694	1.231
Carigeencor	0.023	0.053	0.231	0.121		0.346	0.769
Castlenalact	0.315	0.029	0.499	0.037	0.224	2.400	1.059
Cloon	0.017	0.007	0.066	0.465	0.001	0.252	2.420
Cloonee	0.023	0.014	0.081	0.340	0.001	0.261	1.813
Cloonties	0.394	0.060	0.777	0.406	0.030	3.727	0.799
Colgagh	0.050	0.046	0.272	0.008	0.000	0.430	1.301
Columbkille	0.011	0.034	0.005	0.143	0.001	0.212	0.265
Commeenadillure	0.023	0.018	0.088	0.446	0.002	0.299	2.019
Corraneary	0.216	0.087	0.451	0.052	0.002	1.709	0.266
Coumeenoughter	0.008	0.002	0.053	0.264	0.000	0.097	1.016
Craveys							
Croagh	0.003	0.060	0.008	0.406	0.001	0.260	1.064
Croaghcrom	0.043	0.027	0.101	0.339	0.002	0.320	4.206
Cullaunyheeda	0.132	0.111	0.522	0.088	0.001	1.400	0.870
Cummeenduff	0.044	0.020	0.111	0.244	0.002	0.389	2.152
Curraghalicky	0.199	0.016	0.387	0.109	0.020	1.559	1.211
Dambaduff	0.061	0.040	0.352	0.027	0.002	0.604	0.680
Dargan	0.029	0.046	0.229	0.084	0.001	0.501	0.382
Derg	0.071	0.050	0.340	0.029	0.005	0.959	1.274
Derravaragh	0.110	0.072	0.427	0.024	0.016	1.118	1.446
Derrintaggart	0.057	0.029	0.219	0.368	0.001	0.516	2.444
Derrybrick	0.237	0.097	0.609	0.015		1.601	0.785
Doo	0.011	0.113	0.129	0.181	0.004	0.539	1.617
Doon	0.028	0.050	0.291	0.084		0.367	1.548
Doon	0.059	0.009	0.696	0.017		0.361	4.695
Drumleen	0.045	0.027	0.160	0.358		0.436	2.563
Dubh	0.045	0.010	0.176	0.398	0.001	0.394	2.477
Durlough							
Ennell	0.100	0.066	0.547	0.014	0.042	1.149	1.116
Erril	0.056	0.262	0.486	0.035	0.001	1.090	0.176
Fadda							

Table 4.4 (continued).

Lake	Silage (pr.)	Permanent meadow (pr.)	Sum of rotation under 5 years (pr.)	Rough grazing (pr.)	All crops (pr.)	Cattle (ha^{-1})	Sheep (ha^{-1})
Fadda	0.016	0.017	0.096	0.646		0.449	0.940
Farrantoreen	0.111	0.057	0.263	0.149	0.006	1.055	0.777
Fin	0.139	0.082	1.074	0.012	0.007	1.976	1.051
Fin	0.064	0.069	0.688	0.033		0.854	1.631
Finn	0.002	0.004	0.024	0.266	0.000	0.059	0.724
Formoyle	0.002	0.005	0.021	0.068	0.000	0.087	0.356
Gall	0.008	0.085	0.097	0.136	0.003	0.411	1.217
Gartan	0.003	0.008	0.039	0.077	0.004	0.075	0.409
Garty	0.170	0.114	0.487	0.083	0.003	1.388	0.737
Geal	0.028	0.007	0.133	0.463	0.001	0.284	2.176
Ghearrain Bhain	0.008	0.011	0.051	0.119	0.001	0.139	0.446
Gill	0.072	0.036	0.246	0.149	0.015	0.713	2.006
Glan	0.007	0.006	0.065	0.253	0.003	0.179	1.175
Glanmore	0.010	0.010	0.070	0.353	0.001	0.164	2.119
Glenbeg	0.030	0.023	0.130	0.302	0.001	0.388	1.603
Glendalough Lower	0.003	0.006	0.042	0.056	0.000	0.025	0.784
Glendalough Upper	0.003	0.006	0.042	0.056	0.000	0.025	0.783
Gouganebarra	0.043	0.009	0.145	0.643	0.007	0.431	2.268
Guinikin	0.191	0.092	0.483	0.080	0.001	1.479	0.479
Guitane	0.031	0.012	0.097	0.229	0.001	0.231	1.287
Holy	0.153	0.100	0.428	0.099	0.000	1.318	0.547
Illion	0.003	0.004	0.005	0.067	0.002	0.104	0.084
Inchiquin	0.024	0.014	0.085	0.363	0.002	0.274	1.909
Inniscarra	0.125	0.021	0.319	0.229	0.035	1.132	1.082
Islandeady	0.064	0.041	0.320	0.090	0.002	0.629	0.657
Keagh	0.122	0.225	0.565	0.201	0.001	1.626	0.184
Keel	0.001	0.002	0.074	0.008		0.075	1.378
Kilbrean							
Kilconny	0.109	0.110	0.386	0.043	0.000	1.022	0.532
Kiltyfanned	0.008	0.012	0.022	0.160		0.035	1.892
Kinlooey	0.094	0.023	0.260	0.157	0.003	0.645	1.987
Knocka	0.082	0.132	0.313	0.211	0.001	1.022	0.057

Table 4.4 (continued).

Lake	Silage (pr.)	Permanent meadow (pr.)	Sum of rotation under 5 years (pr.)	Rough grazing (pr.)	All crops (pr.)	Cattle (ha^{-1})	Sheep (ha^{-1})
Leacrach		0.003	0.001	0.058	0.000	0.077	0.026
Levally	0.047	0.028	0.138	0.240	0.002	0.425	1.447
Lockagh	0.097	0.038	0.237	0.123	0.007	0.770	0.694
Loosescavanagh	0.022	0.005	0.063	0.996	0.000	0.133	0.377
Loughaunalyer	0.002	0.003	0.050	0.385	0.002	0.227	0.167
Loughaunore	0.001	0.003	0.023	0.075		0.130	0.168
Loughavaul	0.024	0.024	0.078	0.583	0.001	0.313	2.388
Loughavaul Little							
Lougheraherk	0.008	0.011	0.021	0.154		0.036	1.817
Lower	0.170	0.103	0.467	0.080	0.002	1.358	0.634
Lurgan							
Meela	0.000	0.005	0.055	0.249	0.001	0.126	0.087
Meenaviller							
Moanmore	0.146	0.107	0.274	0.019	0.002	1.176	0.042
More	0.054	0.025	0.136	0.272	0.002	0.405	1.719
na Cuige rua		0.004	0.045	0.106	0.001	0.105	0.963
na hAille		0.003	0.000	0.044	0.000	0.057	0.018
Nabrucka		0.004	0.041	0.098	0.001	0.098	0.893
Nafullanrany	0.006	0.041	0.037	0.053	0.004	0.144	0.096
Nageltia	0.074	0.039	0.124	0.342	0.002	0.647	2.844
Nahanagan	0.004	0.008	0.052	0.070	0.000	0.026	0.966
Nahillion	0.000	0.002	0.045	0.144	0.000	0.041	1.022
Nalughnaman	0.013	0.006	0.103	0.705	0.002	0.091	2.813
Namafin	0.009	0.048	0.222	0.286	0.001	0.235	1.210
Nambrack	0.008	0.090	0.103	0.144	0.003	0.433	1.284
Nambrackkeagh	0.005	0.017	0.177	0.163	0.001	0.236	0.715
Nancaneen	0.007	0.071	0.081	0.113	0.003	0.338	1.008
Nasnahida		0.001	0.007	0.196	0.000	0.009	0.386
North		0.026	0.163	0.310	0.002	0.437	1.037
Nucorralea	0.060	0.033	0.122	0.268	0.002	0.525	2.742
Numeeltoge							
O'Mulligan							

Table 4.4 (continued).

Lake	Silage (pr.)	Permanent meadow (pr.)	Sum of rotation under 5 years (pr.)	Rough grazing (pr.)	All crops (pr.)	Cattle (ha^{-1})	Sheep (ha^{-1})
Oorid	0.001	0.006	0.036	0.091	0.001	0.102	0.685
Ouler	0.003	0.005	0.036	0.048	0.000	0.011	0.673
Parlsee	0.186	0.113	0.540	0.002		1.416	1.129
Pollacappul	0.001	0.004	0.023	0.261	0.000	0.064	1.263
Pond	0.011	0.078	0.042	0.754	0.003	0.668	1.049
Ree	0.038	0.066	0.338	0.024	0.029	0.781	0.820
Rinn	0.081	0.163	0.459	0.038	0.001	1.018	0.253
Ross	0.009	0.028	0.149	0.168	0.001	0.376	0.449
Shanakeever	0.003	0.013	0.148	0.114	0.001	0.169	0.544
Sheelin	0.139	0.095	0.495	0.025	0.005	1.393	1.648
Shliabh	0.001	0.018	0.102	0.192	0.002	0.189	0.051
Shreelane	0.167	0.024	0.352	0.142	0.009	1.392	0.199
Sillan	0.151	0.067	0.384	0.076	0.001	1.373	0.562
Slat	0.039	0.015	0.128	0.122	0.001	0.350	1.534
Sraheens		0.008	0.006	0.032		0.035	0.461
St Peter's	0.055	0.127	0.066	0.486	0.006	0.756	0.806
Summy	0.007	0.053	0.029	0.508	0.002	0.449	0.722
Swan	0.234	0.132	0.472	0.096		1.636	0.439
Tawnagh	0.000	0.006	0.033	0.082	0.001	0.095	0.778
Tawny							
Tay	0.018	0.033	0.127	0.053	0.006	0.209	2.497
Tullybrcan	0.191	0.069	0.397	0.047	0.001	1.487	0.170
Unna	0.004	0.018	0.026	0.185	0.001	0.063	1.863
Upper	0.027	0.013	0.088	0.439	0.001	0.251	1.339
Vartry	0.051	0.071	0.285	0.133	0.053	0.540	3.973
Waskel		0.005		0.141		0.209	0.030
White	0.220	0.053	0.427	0.041	0.001	1.716	0.553

APPENDIX 5 CHEMICAL CHARACTERISTICS FOR 158 LAKES

Table 5.1 Values of pH, alkalinity, conductivity, turbidity, colour, chlorophyll *a* (Chl. *a*), total phosphorus and total nitrogen in 158 lakes.

Lake	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µs cm^{-1}	Turbidity NTU	Colour mg l^{-1} PtCo	Chl. *a* µg l^{-1}	TP µg l^{-1}	TN mg l^{-1}
Abisdealy	7.20	44	259	0.65	29	14.8	20	1.02
Achryane	6.72	7	106	3.38	70	7.1	9	0.64
Acoose	6.75	5	47	0.62	41	3.5	4	0.15
Agaddy	6.66	5	144	0.41	31	1.1	11	0.42
Anelteen	8.33	147	308	1.77	12	5.6	22	0.53
Annagh	7.48	83	266	2.75	39	16.7	35	0.78
Anscaul	6.66	5	73	0.35	30	3.1	3	0.31
Anure	7.03	11	105	1.70	61	3.4	20	0.53
Ardra	9.06	49	159	1.90	52	4.9	78	1.00
Atarriff	6.99	30	152	1.55	32	12.0	34	0.69
Atedaun	7.85	102	279	1.00	31	15.5	19	0.55
Atooreen	6.23	3	77	0.47	31	2.8	8	0.19
Auva	6.61	3	114	8.06	57	37.0	41	0.71
Aweelamore	6.34	3	132	1.16	20	21.5	14	0.67
Ballin L	6.72	26	146	2.84	63	33.8	40	0.87
Ballygawley	7.52	38	181	1.84	49	15.6	16	0.76
Ballynacarriga	7.33	51	195	4.37	48	37.6	44	2.31
Barfinnihy	6.82	4	54	0.60	5	4.3	3	0.13
Barley	6.23	2	46	0.22	10	2.1	1	0.18
Barra	6.41	2	53	0.52	68	1.3	13	0.21
Beagh	6.20	2	62	0.46	46	2.4	14	0.51
Beg	5.84	2	105	0.71	99	2.5	25	0.51
Belhavel	7.54	14	94	16.50	115	2.6	48	0.65
Beltra	7.47	26	132	2.06	162	4.0	21	0.71
Black	7.00	8	49	0.58	57	2.2	6	0.21
Black	6.86	28	149	1.57	20	18.9	27	0.64
Bofin	6.68	5	93	0.71	36	2.9	8	0.36
Bofinna	6.81	12	102	0.67	15	2.6	6	0.33
Bracklagh	7.54	87	282	0.67	32	2.8	31	0.95
Bray Upper	4.59	-1	43	1.27	28	4.0	0	0.40
Brin	6.83	9	66	0.64	12	7.1	7	0.33
Bunaveela	7.10	11	83	0.74	49	1.6	6	0.27
Burke	7.59	50	183	1.72	53	8.3	11	0.69

Table 5.1 (continued).

Lake	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µs cm^{-1}	Turbidity NTU	Colour mg l^{-1} PtCo	Chl. *a* µg l^{-1}	TP µg l^{-1}	TN mg l^{-1}
Cam	5.34	0	63	1.69	74	26.3	21	0.86
Cappnaboul	6.88	22	142	1.27	22	8.4	13	0.53
Carigeencor	7.58	37	132	1.80	23	5.2	9	0.47
Castlenalact	7.02	54	187	6.87	42	74.4	279	2.10
Cloon	6.67	3	44	0.29	21	3.2	1	0.17
Cloonee	6.34	2	59	0.46	12	1.7	4	0.12
Cloonties	6.99	32	190	3.83	32	52.5	101	1.27
Colgagh	8.41	143	323	1.58	13	3.5	8	0.42
Columbkille	8.41	144	332	0.72	13	7.3	8	0.74
Commeenadillure	5.93	1	45	1.44	13	4.2	2	0.15
Corraneary	7.10	36	156	4.06	31	32.6	52	1.02
Coumeenoughter	6.28	2	85	0.21	13	2.3	4	0.22
Craveys	8.47	214	15670	3.62	38	12.6	58	1.05
Croagh	6.75	6	81	0.46	50	1.6	6	0.45
Croaghcrom	6.09	1	75	0.61	26	2.5	18	0.25
Cullaunyheeda	8.37	152	398	1.27	35	21.1	9	0.82
Cummeenduff	6.74	5	39	0.40	26	3.4	10	0.17
Curraghalicky	6.96	26	137	1.15	18	22.2	21	1.03
Dambaduff	9.06	68	246	1.91	51	3.5	17	0.67
Dargan	7.71	47	157	1.66	86	12.1	16	0.62
Derg	7.95	177	436	3.86	26	20.9	17	1.33
Derravaragh	7.97	157	391	0.52	19	6.3	15	1.04
Derrintaggart	6.89	21	162	2.92	64	5.9	18	0.65
Derrybrick	7.94	128	329	0.76	13	10.7	19	0.60
Doo	8.19	77	327	2.61	63	14.0	43	0.96
Doon	8.20	114	253	0.73	28	5.0	14	0.42
Doon	6.28	2	73	0.37	10	3.7	4	0.49
Drumleen	6.24	2	78	0.97	38	7.4	10	0.25
Dubh	6.50	4	77	0.26	12	2.3	3	0.12
Durlough	6.21	2	82	1.06	104	1.9	14	0.34
Ennell	7.84	119	351	1.32	12	6.7	15	0.62
Erril	9.19	57	179	0.90	40	3.4	15	1.18
Fadda	6.72	3	102	0.82	12	2.1	2	0.20

Table 5.1 (continued).

Lake	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µs cm^{-1}	Turbidity NTU	Colour mg l^{-1} PtCo	Chl. *a* µg l^{-1}	TP µg l^{-1}	TN mg l^{-1}
Fadda	6.22	7	134	0.35	11	15.4	9	0.31
Farrantoreen	8.27	195	496	1.73	27	9.7	8	0.62
Fin	8.44	68	244	0.61	21	6.4	20	0.94
Fin	7.90	128	301	2.67	30	19.5	92	0.95
Finn	7.42	14	94	0.52	38	2.3	14	0.47
Formoyle	6.02	2	92	0.71	61	2.6	16	0.44
Gall	7.22	10	179	1.45	75	4.9	28	0.69
Gartan	7.12	13	79	0.99	80	2.0	18	0.57
Garty	7.05	32	136	4.30	-	34.8	45	1.04
Geal	6.60	5	77	0.36	13	2.2	7	0.12
Ghearrain Bhain	7.20	21	168	0.76	42	2.0	4	0.39
Gill	8.55	89	2490	3.63	26	11.8	43	0.73
Glan	6.44	4	108	1.23	33	2.5	9	0.23
Glanmore	6.19	2	67	0.37	22	3.8	4	0.33
Glenbeg	6.76	6	72	0.43	11	5.5	3	0.17
Glendalough Lwr.	6.19	1	40	0.51	34	1.1	2	0.44
Glendalough Upr.	6.19	1	39	0.40	32	0.9	2	0.44
Gouganebarra	6.33	4	49	0.50	28	2.6	4	0.27
Guinikin	7.02	45	157	3.26	54	37.5	74	1.42
Guitane	6.94	5	59	0.45	19	1.2	0	0.37
Holy	7.61	124	317	5.06	68	12.5	72	1.35
Illion	7.16	14	193	0.70	56	1.8	14	0.70
Inchiquin	6.41	3	59	0.44	14	2.3	4	0.44
Inniscarra	7.23	34	139	0.55	20	4.4	12	1.20
Islandeady	8.25	95	305	0.74	33	3.4	5	0.52
Keagh	6.12	3	123	1.04	136	7.5	28	0.77
Keel	7.60	25	206	3.31	141	3.3	15	0.54
Kilbrean	6.47	7	90	3.63	37	69.9	61	1.47
Kilconny	7.40	148	364	4.47	50	44.5	190	1.22
Kiltyfanned	7.08	13	139	0.64	61	3.3	11	0.42
Kinlooey	8.12	131	358	2.81	32	9.2	0	0.57
Knocka	7.26	23	159	0.90	50	3.4	11	0.74

Table 5.1 (continued).

Lake	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µs cm^{-1}	Turbidity NTU	Colour mg l^{-1} PtCo	Chl. *a* µg l^{-1}	TP µg l^{-1}	TN mg l^{-1}
Leacrach	5.16	0	103	0.69	42	1.6	435	0.41
Levally	7.61	40	157	2.23	28	6.2	8	0.67
Lockagh	7.11	26	134	2.57	66	12.2	113	0.92
Loosescavanagh	6.75	4	59	0.43	31	4.3	3	0.23
Loughaunalyer	6.26	2	145	0.29	36	1.6	11	0.42
Loughaunore	5.69	1	137	1.03	81	14.3	8	0.63
Loughavaul	6.86	10	113	0.34	20	3.3	8	0.14
Loughavaul Little	6.82	10	109	0.85	20	4.3	9	0.18
Lougheraherk	7.10	31	166	17.30	91	6.4	35	0.56
Lower	6.97	35	144	2.87	47	30.1	94	1.22
Lurgan	6.44	3	77	0.32	46	2.1	12	0.47
Meela	7.23	13	1479	0.71	79	2.2	14	0.81
Meenaviller	6.42	3	203	0.50	38	3.4	10	0.31
Moanmore	6.52	11	204	2.07	244	10.1	52	1.12
More	8.03	89	239	0.65	48	1.7	2	0.46
na Cuige rua	7.21	24	116	0.38	-	4.2	10	0.36
na hAille	5.80	1	102	0.62	80	2.0	7	0.56
Nabrucka	6.97	9	108	0.59	40	2.5	23	0.31
Nafullanrany	6.32	3	143	0.57	135	2.5	18	0.68
Nageltia	7.57	30	146	1.29	37	7.3	13	0.48
Nahanagan	7.15	3	49	2.16	28	5.7	0	0.33
Nahillion	6.58	4	106	0.44	47	2.1	6	0.45
Nalughnaman	6.45	3	72	0.37	30	1.3	0	0.24
Namafin	7.13	13	86	0.70	45	2.3	3	0.24
Nambrack	8.53	92	342	2.17	50	11.0	34	0.65
Nambrackkeagh	6.31	3	109	0.41	45	2.3	9	0.45
Nancaneen	6.09	3	118	1.74	258	15.4	24	0.77
Nasnahida	5.74	1	85	0.42	86	1.6	7	0.49
North	6.41	4	203	0.27	39	1.3	6	0.56
Nucorralea	7.20	17	116	1.91	85	-	18	0.61
Numeeltoge	5.95	2	99	0.71	112	9.8	17	0.56
O'Mulligan	6.77	7	337	0.76	27	1.3	15	0.47

Table 5.1 (continued).

Lake	pH	Alkalinity mg l^{-1} $CaCO_3$	Conductivity µs cm^{-1}	Turbidity NTU	Colour mg l^{-1} PtCo	Chl. *a* µg l^{-1}	TP µg l^{-1}	TN mg l^{-1}
Oorid	6.69	5	84	0.53	35	3.5	7	0.31
Ouler	4.86	-1	34	0.45	13	0.4	1	0.44
Parlsee	7.58	91	276	0.83	21	6.7	19	0.71
Pollacappul	6.99	8	78	0.35	25	0.8	6	0.22
Pond	6.97	10	192	0.31	35	2.2	1	0.44
Ree	8.08	143	362	2.59	29	13.1	27	1.04
Rinn	7.60	103	276	5.19	110	27.1	90	1.24
Ross	7.89	89	250	0.59	33	3.0	3	0.71
Shanakeever	7.07	20	151	1.46	97	3.6	13	0.53
Sheelin	7.99	120	325	1.45	13	8.3	17	0.69
Shliabh	6.66	8	107	1.18	95	3.0	11	0.51
Shreelane	7.25	35	191	0.74	12	6.6	7	1.08
Sillan	6.98	38	170	5.78	36	9.3	141	1.24
Slat	5.62	1	66	0.46	58	2.6	6	0.42
Sraheens	6.72	4	160	0.41	58	1.8	0	0.23
St Peter's	7.16	21	129	2.54	60	5.3	20	0.60
Summy	7.18	18	193	0.44	41	1.6	2	0.54
Swan	7.13	31	137	2.87	17	25.5	53	0.82
Tawnagh	6.61	5	84	0.44	26	2.7	4	0.28
Tawny	6.88	10	86	0.33	36	1.9	2	0.27
Tay	5.29	0	43	0.80	144	2.1	13	0.49
Tullybrcan	7.01	42	157	7.43	47	35.6	72	1.06
Unna	6.03	1	93	0.53	79	2.3	6	0.32
Upper	6.41	4	49	0.59	32	3.2	9	0.31
Vartry	7.32	12	104	1.30	20	4.1	10	2.14
Waskel	6.55	3	171	0.43	76	2.6	16	0.55
White	6.98	72	228	4.01	60	19.2	127	1.46
White	6.27	3	136	0.35	25	1.7	7	0.44

APPENDIX 6 PHYTOPLANKTON FOUND IN ELEVEN LAKES IN 1996

Table 6.1 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Ballyquirke between April and October 1996.

	12 Apr	08 May	02 Jun	11 Jul	14 Aug	12 Sep	16 Oct
CYANOPHYTA							
Anabaena flos-aquae			12	10209	6391	3196	47
*Anabaena flos-aquae**		9					
Anabaena spiroides					206		
Aphanizomenon sp.			77	119	29	6	
*Aphanothece sp.**	177	48	149	219	235	90	6
Chroococcus sp.							27
*Coelosphaerium sp.**					4		
*Gomphosphaeria sp.**						2	1
Microcystis sp.				2	2	5	< 0.5
*Oscillatoria sp.**			42	3	7		
*Oscillatoria limnetica**	369	157	33			32	
CHLOROPHYTA							
Actinastrum sp.					7		
Ankistrodesmus spiralis						3	
Ankistrodesmus sp.							3
Ankyra judayi							2
*Botryococcus braunii**				4			
Chlamydocapsa planctonica							23
Chlamydomonas sp.		15	211	48	40	44	
Chlorella sp.		172	42	4	4		
Closterium sp.				4			
Dictyosphaerium sp.				44		531	77
Elakatothrix biplex							3
Eudorina sp.					59	26	
Gonium sp.				152			
Kirchneriella obesa	3						3
Koliella longiseta	70	15	3	48	4		
Micractinium sp.		3		63			
Monoraphidium contortum	296	2305	256	59	15	2	30
Oocystis solitaria					4		
Oocystis sp.					11		
Scenedesmus sp.		12		44	29	15	8
Tetrastrum triangulare						12	

Table 6.1 (continued)

	12 Apr	08 May	02 Jun	11 Jul	14 Aug	12 Sep	16 Oct
CHRYSOPHYTA							
Dinobryon sp.		12	80	15		71	
BACILLARIOPHYTA							
Asterionella formosa			143	26	26	23	
Cyclotella sp.	9		9	4		2	2
Fragilaria crotonensis					40	33	
*Fragilaria crotonensis**					3		
Melosira sp.	455	555	357	723	250	370	374
Navicula sp.	49	9		4			5
Nitzschia sp.				11	15	8	12
Rhizosolenia sp.					59		3
Synedra acus	15						2
Synedra sp.	3	6	45			3	2
Tabellaria fenestrata			18				
Tabellaria flocculosa							9
CRYPTOPHYTA							
Cryptomonas sp.	12	36	42	41	52	21	20
Rhodomonas minuta	171	110	74	59	70	84	53
PYRRHOPHYTA							
Ceratium hirundinella				9	1		
Gymnodinium sp.				7	75		3
Peridinium sp.		6				3	
OTHERS							
Flagellates 10 µm							9
Flagellates 5 µm							12
Unicells 15 µm	12	9	131	26	18	9	12
Unicells 10 µm	18	27	48	126	52	30	80
Unicells 5 µm	449	134	241	304	872	436	409
Unknown filaments							11

Table 6.2 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Lene between April and October 1996.

	24 Apr	23 May	27 Jun	24 Jul	28 Aug	26 Sep	24 Oct
CYANOPHYTA							
Anabaena flos-aquae		6	120	447	132	204	308
*Anabaena flos-aquae**	2						< 0.5
*Aphanizomenon sp.**	5						1
*Aphanocapsa sp.**							2
*Aphanothece sp.**	5	4	770	39	94	18	13
*Gomphosphaeria sp.**				2	2	< 0.5	< 0.5
Merismopedia sp.							2
*Microcystis sp.**							< 0.5
*Microcystis flos-aquae**					< 0.5	2	
*Oscillatoria sp.**		3		22			< 0.5
*Oscillatoria limnetica**			21	45		< 0.5	< 0.5
CHLOROPHYTA							
Ankistrodesmus spiralis				11	33		
*Botryococcus braunii**			3			< 0.5	< 0.5
*Cosmarium sp.**						< 0.5	
Elakatothrix biplex var. conglutinata				6		< 0.5	4
Kirchneriella sp.			2	32	21	9	< 0.5
Koliella elongata					3		
Monoraphidium arcuatum				2			
Monoraphidium contortum				6	5	2	
Spondylosium papilosum							< 0.5
Sphaerocystis schroeteri						3	< 0.5
Staurastrum sp.					< 0.5		< 0.5
Scenedesmus acuminatus			6				
Scenedesmus sp.	21	7	24	19	42		< 0.5
CHRYSOPHYTA							
Dinobryon sp.	670	21	35	181	11		
Dinobryon sp. (out of lorica)				112			

Table 6.2 (continued)

	24 Apr	23 May	27 Jun	24 Jul	28 Aug	26 Sep	24 Oct
BACILLARIOPHYTA							
Asterionella formosa	16					< 0.5	< 0.5
Cymbella sp.							< 0.5
Cyclotella sp.	90	6			3	< 0.5	< 0.5
Fragilaria crotonensis	232	3	11	22	24		4
Melosira sp.			17	9	29	2	16
Meridion sp.			3				
Navicula sp.	11		3			< 0.5	
Nitzschia sp.				6			< 0.5
Synedra actinastroides		38	60				
Synedra acus		2		2			
Synedra ulna						< 0.5	
CRYPTOPHYTA							
Cryptomonas sp.	11	4	27	6	3	3	19
Rhodomonas minuta	438	46	35	19	123	284	319
EUGLENOPHYTA							
Colacium sp.					2		
PYRRHOPHYTA							
Ceratium hirundinella				1	15	1	< 0.5
Gymnodinium sp.	11	3	12	4	2		
Peridinium sp.			11		2	< 0.5	< 0.5
OTHERS							
Flagellates 10 µm	5	8		32			3
Flagellates 5 µm				34		8	19
Unicells 15 µm	58		11	9	5	< 0.5	
Unicells 10 µm	237	31	44	82	36	3	10
Unicells 5 µm	7244	8121	3709	2478	677	324	359
Unicells 2 µm	522	1845	544	1186	4446	762	1287

Table 6.3 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Owel between March and October 1996.

	28 Mar	24 Apr	23 May	27 Jun	24 Jul	28 Aug	28 Sep	24 Oct
CYANOPHYTA								
*Anabaena flos-aquae**	2			4	1	1		
*Aphanocapsa sp.**				2	5			2
*Aphanothece sp.**	15	8	3	8	44	16	10	12
*Gomphosphaeria sp.**			8	37	90	43	20	19
*Merismopedia sp.**			1				1	
*Oscillatoria limnetica**					10	3		3
CHLOROPHYTA								
*Botryococcus braunii**				3	2	2		
Cosmarium sp.			1					
Crucigenia sp.		14						
Elakatothrix sp.		2			7	2		
Eudorina sp.	14							
*Eudorina sp.**			1					
*Micractinium sp.**						10		
Monoraphidium sp.						3		3
Oocystis sp.				3				
Pediastrum sp.	1							
*Scenedesmus sp.**	8		1			5		3
*Sphaerocystis schroeteri**			3	1	1			
CHRYSOPHYTA								
Dinobryon sp.	335	486	14	20	433	57	101	169
Bitrichia sp.		2			3	1		1
BACILLARIOPHYTA								
Asterionella formosa	425	138	3	1		124		
Cyclotella sp.	4	2	17	4	14	30		1
Fragilaria crotonensis	49	72	8	8	59	7	4	101
Synedra acus	9	6						
CRYPTOPHYTA								
Cryptomonas sp.	13	12	31	31	7	5	9	23
Rhodomonas minuta	15	7	31	19	13	8	12	4
PYRRHOPHYTA								
Ceratium hirundinella			1	3				
Gymnodinium sp.						4		8
Peridinium sp.			1				3	

Table 6.4 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Inchiquin between April and October 1996.

	10 Apr	07 May	10 Jun	10 Jul	12 Aug	11 Sep	14 Oct
CYANOPHYTA							
Anabaena flos-aquae		4	179		2	68	4
*Anabaena flos-aquae**				7			
Anabaena circinalis						2	1
Anabaena solitaria				2		1	2
*Aphanizomenon sp.**		< 0.5	24	8	12	39	4
*Aphanocapsa sp.**					< 0.5	< 0.5	
*Aphanothece sp.**			1	1	26	70	56
*Aphanothece clathrata**					3	1	2
Chroococcus limneticus			10		22	1	
*Coelosphaerium sp.**					< 0.5	2	
Gloeocapsa sp.						< 0.5	
*Gomphosphaeria sp.**					< 0.5		
*Microcystis aeruginosa**						< 0.5	
*Microcystis flos-aquae**					< 0.5	1	< 0.5
*Oscillatoria sp.**	< 0.5	< 0.5	1	< 0.5	< 0.5	< 0.5	1
*Oscillatoria limnetica**	< 0.5	< 0.5		< 0.5		3	

Table 6.4 (continued)

	10 Apr	07 May	10 Jun	10 Jul	12 Aug	11 Sep	14 Oct
CHLOROPHYTA							
*Botryococcus braunii**					< 0.5	< 0.5	
Chlamydomonas sp.	6	15			3	2	
Closterium sp.		4			< 0.5	< 0.5	
Coelastrum sp.			1		1		
Cosmarium sp.						< 0.5	< 0.5
Elakatothrix biplex var. conglutinata				< 0.5			
Elakatothrix sp.		< 0.5				< 0.5	< 0.5
Eudorina elegans				13			
Eudorina sp.	1	19	39		4	3	5
Golenkinia radiata						14	
Gonium sociale		1					
Kirchneriella lunaris					1		
Kirchneriella obesa							6
Koliella longiseta			4		23	3	
Micractinium sp.		11					
Monoraphidium contortum			4			2	
Monoraphidium sp.		19					2
Mougeotia sp.			< 0.5				< 0.5
Netrium digitus	< 0.5						
Oocystis lacustris				4			
Oocystis solitaria				< 0.5			
Oocystis sp.		< 0.5	1	3	1	2	< 0.5
Pandorina sp.			12				
Pediastrum sp.					2		
Schroederia setigera		4	1				
Sphaerocystis schroeteri			4	77	1		
Staurastrum sp.		< 0.5	< 0.5	< 0.5	2	3	2
Scenedesmus sp.	< 0.5	33	1			12	1
Volvox sp.			< 0.5	4	< 0.5	2	2
Volvox sp. (oospores)						< 0.5	
CHRYSOPHYTA							
Dinobryon sp.			159			15	
Mallomonas sp.			< 0.5		3	2	
Dinobryon sp. (out of lorica)			7				

Table 6.4 (continued)

	10 Apr	07 May	10 Jun	10 Jul	12 Aug	11 Sep	14 Oct
BACILLARIOPHYCEAE							
Asterionella formosa	< 0.5	52	64		12	505	3
Cyclotella sp.	< 0.5	22	1	1	2	2	< 0.5
Fragilaria crotonensis		3	27		138	6	39
Fragilaria sp.		9	11				5
Melosira sp.	< 0.5	1					
Meridion sp.	< 0.5						
Navicula sp.	< 0.5						
Stephanodiscus sp.	< 0.5	93	1			< 0.5	2
Synedra actinastroides					49		8
Synedra acus	1						
Synedra ulna	1						
Synedra sp.	< 0.5	22	< 0.5			197	
Tabellaria fenestrata var. asterionelloides	2	30				< 0.5	
CRYPTOPHYTA							
Cryptomonas sp.	94	100	41	44	50	32	6
Rhodomonas minuta	1542	2268	475	431	271	111	177
PYRRHOPHYTA							
Ceratium hirundinella	< 0.5	< 0.5	1	< 0.5	1	< 0.5	< 0.5
Gymnodinium sp.				< 0.5			
Peridinium sp.	1	< 0.5	< 0.5		1	1	< 0.5
OTHERS							
Flagellates 15 µm		19	4				
Flagellates 10 µm		7	11	8			2
Flagellates 5 µm	173	1143	126	44	332	111	52
Unicells 20 µm					8	2	
Unicells 15 µm	2				2		
Unicells 10 µm	26	462	44	12	18	45	24
Unicells 5 µm	428	1862	234	442	850	982	490
Unicells 2 µm	286	4738	3107		734	615	1296
Unidentified filaments	< 0.5					21	< 0.5
Unidentified colony < 20 µm		7			38	6	4
Unidentified colony 40-50 µm						< 0.5	
Unidentified diatoms	23	750	5		2	12	< 0.5

Table 6.5 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Feeagh between March and October 1996.

	12 Mar	13 Apr	09 May	13 Jun	12 Jul	15 Aug	13 Sep	17 Oct
CYANOPHYTA								
Anabaena flos-aquae				6		30	13	14
*Aphanothece sp.**			1					
*Coelosphaerium sp.**					< 0.5			
*Gomphosphaeria**				< 0.5		6	4	3
Gomphosphaeria sp.	1		< 0.5				57	45
*Oscillatoria sp.**	< 0.5			< 0.5			< 0.5	< 0.5
*Oscillatoria agardhii**					< 0.5	< 0.5		
*Oscillatoria limnetica**	2	< 0.5	< 0.5	1				< 0.5
CHLOROPHYTA								
Actinastrum sp.							< 0.5	
Ankistrodesmus sp.								3
*Botryococcus braunii**						< 0.5	< 0.5	< 0.5
Chlorogonium sp.						68	22	
Closterium acerosum					< 0.5			
Closterium acutum var. variabile	36	20	8	< 0.5	3	1	9	8
Closterium kuetzingii				< 0.5		< 0.5		< 0.5
Closterium sp.		< 0.5		< 0.5		1	1	< 0.5
Cosmocladium sp.				1		2		
Dictyosphaerium sp.							1	
Kirchneriella lunaris							2	2
Kirchneriella obesa			1					
Koliella longiseta				4		2	7	
Monoraphidium arcuatum					1			
Monoraphidium contortum				16	17	74	19	
Oocystis sp.							2	1
*Sphaerocystis schroeteri**					1			
Sphaerocystis schroeteri				8		1	23	
Scenedesmus sp.						< 0.5		
CHRYSOPHYTA								
Dinobryon sp.							1	< 0.5

Table 6.5 (continued)

	12 Mar	13 Apr	09 May	13 Jun	12 Jul	15 Aug	13 Sep	17 Oct
BACILLARIOPHYCEAE								
Asterionella formosa	10	12	160	6		9	2	1
*Asterionella formosa**					11			
Cyclotella sp.			< 0.5			< 0.5	1	1
Fragilaria crotonensis			< 0.5					< 0.5
Melosira sp.	20	6	27	48		22	39	21
*Melosira sp.**					1			
Navicula sp.	< 0.5							
Rhizosolenia sp.							< 0.5	1
Synedra actinastroides						2		
Synedra acus			< 0.5					
Synedra ulna			1	< 0.5			< 0.5	< 0.5
Tabellaria fenestrata var. asterionelloides	3	1	12	1		< 0.5	< 0.5	< 0.5
Tabellaria flocculosa	1			< 0.5	1			< 0.5
Unidentified diatom sp.		1		9		2	3	< 0.5
CRYPTOPHYTA								
Cryptomonas sp.				1	5	8	17	5
Rhodomonas minuta			4	316	40	730	100	6
EUGLENOPHYTA								
Colacium sp.								1
PYRRHOPHYTA								
Peridinium sp.								< 0.5
OTHERS								
Flagellates 10 µm	2	1	1		2	2	1	2
Flagellates 5 µm	15		13	15		20	3	8
Unicells 20 µm						< 0.5		
Unicells 15 µm				3		2	1	
Unicells 10 µm	8	2		12	1	17	13	7
Unicells 5 µm	171	50	41	94		573	156	63
Unicells 2 µm	203	129	135	346		287	428	128
Unidentified filaments	< 0.5							
Unidentified Cyanobacteria*					1			

Table 6.6 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Dan between March and October 1996.

	26 Mar	25 Apr	22 May	25 Jun	25 Jul	27 Aug	21 Sep	25 Oct
CYANOPHYTA								
*Oscillatoria sp.**	< 0.5	< 0.5						
*Oscillatoria limnetica**		< 0.5						
*Spirulina sp.**						< 0.5		
CHLOROPHYTA								
Actinastrum sp.						2		
*Botryococcus braunii**						< 0.5		
Chlamydomonas sp.		< 0.5						
Closterium sp.	< 0.5	< 0.5	< 0.5	< 0.5		19	118	100
Cosmarium sp.						< 0.5		
Elakatothrix sp.		2						
Golenkinia radiata		2	2	2		1		
Monoraphidium sp.				< 0.5		1		18
Scenedesmus sp.						< 0.5		
Stigeoclonium sp.	2							
Stigeoclonium (germinating zoospores)		2	2					
CHRYSOPHYTA								
Bitrichia sp.								1
Mallomonas sp.			< 0.5			3	1	< 0.5
XANTHOPHYTA								
Tribonema sp.		1						< 0.5
BACILLARIOPHYTA								
Asterionella formosa		< 0.5						
Cyclotella sp.	< 0.5				2			
Melosira sp.	< 0.5	1	< 0.5				2	
Navicula sp.	1	1	1	< 0.5		< 0.5		< 0.5
Nitzschia sp.						< 0.5		
Tabellaria flocculosa			1	1	3	< 0.5	< 0.5	< 0.5

Table 6.6 (continued)

	26 Mar	25 Apr	22 May	25 Jun	25 Jul	27 Aug	21 Sep	25 Oct
CRYPTOPHYTA								
Cryptomonas sp.	< 0.5	< 0.5	2	83	8	33	7	1
Rhodomonas minuta					9			
OTHERS								
Flagellates 10 µm								4
Flagellates 5 µm	29	5	14	62	8	113	34	156
Unicells 20 µm					2			< 0.5
Unicells 15 µm		5	< 0.5			1	2	7
Unicells 10 µm	33	21	3	3	3	14	9	25
Unicells 5 µm	297	144	319	171	544	116	277	245
Unicells 2 µm	391	136	353	156		456	774	828
Unidentified filament	< 0.5	< 0.5	1	< 0.5		< 0.5	< 0.5	3
Unidentified colony		2						
Unidentified diatoms	1	1	2	< 0.5		2	< 0.5	2

Table 6.7 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Moher between March and October 1996.

	12 Mar	13 Apr	08 May	13 Jun	12 Jul	14 Aug	12 Sep	16 Oct
CYANOPHYTA								
Anabaena flos-aquae	34	10	189	84	2	36		10
*Aphanocapsa sp.**							11	< 0.5
*Aphanocapsa delicatissima**					< 0.5	9		
*Aphanothece sp.**				6	54	51	12	32
*Aphanothece clathrata**								< 0.5
*Coelosphaerium sp.**				1		< 0.5		2
*Gomphosphaeria sp.**				< 0.5		1	< 0.5	< 0.5
Gomphosphaeria sp.						5		
Merismopedia sp.						2		
*Oscillatoria sp.**		< 0.5		2		< 0.5	< 0.5	2
*Oscillatoria agardhii**						< 0.5	< 0.5	1
*Oscillatoria limnetica**	< 0.5	2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
*Oscillatoria rubescens**								2
*Snowella sp.**		< 0.5						
*Spirulina sp.**				< 0.5				

Table 6.7 (continued)

	12 Mar	13 Apr	08 May	13 Jun	12 Jul	14 Aug	12 Sep	16 Oct
CHLOROPHYTA								
Actinastrum sp.				2				
Ankistrodesmus spiralis				1	1			
Ankistrodesmus sp.	< 0.5	< 0.5				< 0.5		< 0.5
Ankyra judayi						2	< 0.5	
*Botryococcus braunii**				< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carteria sp.	3							
Chlamydocapsa planctonica						< 0.5	9	2
Chlamydomonas sp.	26	3						
Chlorella sp.	21							
Chlorogonium sp.				3	12	8	6	42
Closterium acutum var. variabile						< 0.5		
Closterium sp.		< 0.5		1	< 0.5			
Cosmarium sp.			< 0.5	< 0.5			< 0.5	
Crucigenia rectangularis					6	2		
Dictyosphaerium sp.		35		3		1		1
Elakatothrix biplex var. conglutinata					1			2
Elakatothrix gelatinosa							6	
Elakatothrix sp.	9			2		< 0.5		1
Euastrum sp.				< 0.5				
*Gloeotila sp.**		2						
Gonium sociale		8	7					
Kirchneriella lunaris				< 0.5				< 0.5
Koliella longiseta	52	26					2	
Lobomonas sp.								2
Monoraphidium contortum	14	29	20		2			
Monoraphidium sp.		3		2	< 0.5			
Oocystis sp.		< 0.5	< 0.5	< 0.5	24	8	8	1
Pediastrum sp.	1			1				1
Quadrigula sp.					present		5	1
Sphaerocystis schroeteri	1			120	97	9	1	2
Staurastrum sp.				< 0.5				< 0.5
Staurodesmus sp.		< 0.5		< 0.5	< 0.5			
Scenedesmus sp.	6	24	2	< 0.5	1	6		
Tetraëdron sp.		2						
Tetraëdron minimum			5					
Xanthidium sp.						< 0.5		

Table 6.7 (continued)

	12 Mar	13 Apr	08 May	13 Jun	12 Jul	14 Aug	12 Sep	16 Oct
CHRYSOPHYTA								
Bitrichia sp.				2				
Dinobryon sp.		9	49	126	present	18		4
Dinobryon sp. (out of lorica)			6	17		2		
Mallomonas sp.	< 0.5		< 0.5			4	12	< 0.5
BACILLARIOPHYTA								
Asterionella formosa	10	268	4	1	present	134	1	2
Cymbella sp.		< 0.5	< 0.5					
Cyclotella sp.	144	5	3	2	9	1	5	3
Fragilaria crotonensis			< 0.5	2			< 0.5	
Melosira sp.	252	172	8	< 0.5	1	2	1	4
Nitzschia sp.							12	9
Pinnularia sp.								< 0.5
Rhizosolenia sp.		20	11	3				
Stephanodiscus sp.		3	2	48		1	2	
Synedra sp.	11	39	26	20		< 0.5		
Synedra ulna	< 0.5	1						
Tabellaria fenestrata var. asterionelloides				< 0.5				
Tabellaria flocculosa	2	32	4	2				< 0.5

Table 6.7 (continued)

	12 Mar	13 Apr	08 May	13 Jun	12 Jul	14 Aug	12 Sep	16 Oct
CRYPTOPHYTA								
Cryptomonas sp.	35	24	8	5	9		34	7
Rhodomonas minuta	438	130	114	149	365	101	73	103
EUGLENOPHYTA								
Colacium sp.				< 0.5	1			< 0.5
PYRRHOPHYTA								
Ceratium hirundinella		< 0.5		< 0.5	< 0.5	1	< 0.5	
Peridinium sp.	20	8	< 0.5	1	1		< 0.5	< 0.5
OTHERS								
Flagellates 15 µm							2	
Flagellates 10 µm	32	8	6	11		2		8
Flagellates 5 µm	125	42	1535	1319	72	80	35	57
Unicells 20 µm	3	5						
Unicells 15 µm	2	3	5		2		6	
Unicells 10 µm	249	41	21	26	36	9	11	15
Unicells 5 µm	426	854	382	212	163	115	43	263
Unicells 2 µm	240	650	515	580		358	110	449
Unidentified filaments		< 0.5						< 0.5
Unidentified colony < 20 µm		72	59					
Unidentified diatoms			< 0.5			< 0.5	< 0.5	2

Table 6.8 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Doolough between March and October 1996.

Date	11 Mar	11 Apr	07 May	19 Jun	09 Jul	13 Aug	10 Sep	15 Oct
CYANOPHYTA								
*Anabaena flos-aquae**						1	9	
*Aphanizomenon sp.**	7	4	13	25	35	145	220	16
*Microcystis flos-aquae**							10	2
*Oscillatoria agardhii**						4	4	1
CHLOROPHYTA								
Ankistrodesmus sp.		2						
Closterium sp.	2					12	265	4
*Dictyosphaerium sp.**						1	10	
Eudorina sp.				1	1	1		
Monoraphidium contortum	330	60	237	25	16	32	4	
Schroederia setigera	1	2						
Spondylosium planum							5	
*Sphaerocystis schroeteri**							1	3
Staurastrum sp.						1		
*Scenedesmus sp.**				1		1	2	
CHRYSOPHYTA								
Dinobryon sp.	3			1	3	4	17	
Mallomonas sp.				17	13	1		
BACILLARIOPHYTA								
Asterionella formosa	7	64	18	21	7	44	105	
Fragilaria crotonensis							2	14
*Melosira sp.**	96	47	5	2	3	3	1	8
Rhizosolenia longiseta	1	4	30				6	13
*Synura sp.**		1						
Tabellaria fenestrata var. asterionelloides	2	11	4	5	22	15	8	
Tabellaria flocculosa	4	2	2		4		2	
CRYPTOPHYTA								
Cryptomonas sp.	2	3	7	6	3	4	3	3
Rhodomonas minuta	11	10	309	12	17	5	21	11

Table 6.9 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Lickeen between March and October 1996.

Date	11 Mar	11 Apr	07 May	19 Jun	09 Jul	13 Aug	10 Sep	15 Oct
CYANOPHYTA								
*Anabaena flos-aquae**						2	5	1
*Anabaena solitaria**					1	3	8	
*Anabaena spiroides**					2			
*Aphanizomenon sp.**								
*Aphanizomenon flos-aquae**	4	12	95	4	29	45	15	8
*Aphanothece sp.**								
*Gomphosphaeria sp.**	9	7	11	26	34	21	62	17
Gomphosphaeria sp.				1546	1546	3092	3092	
CHLOROPHYTA								
Ankistrodesmus sp.								
Closterium acutum var. variabile	27	6	10	29	6	2	2	3
Cosmarium sp.			1		53		7	4
*Dictyosphaerium sp.**			1					
*Eudorina sp.**							4	
Monoraphidium contortum	11	8	109	5	1	11	3	
*Sphaerocystis schroeteri**				1				
Staurastrum sp.				1	3	8	22	9
BACILLARIOPHYTA								
Asterionella formosa	5	128	9	5	3		5	1
Cyclotella sp.	7	42	2	4	3		9	
*Melosira sp.**	4	20	17	5				10
Tabellaria fenestrata var. asterionelloides	7	17	3	23	44	20	60	39
CRYPTOPHYTA								
Cryptomonas sp.	7	17	19	44	25	31	5	2
Rhodomonas minuta	32	23	20	23	4	6	11	11
PYRRHOPHYTA								
Ceratium hirundinella						1	2	

Table 6.10 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Gowna between March and October 1996.

	13 Mar	15 Apr	09 May	15 Jun	14 Jul	15 Aug	15 Sep	17 Oct
CYANOPHYTA								
Anabaena flos-aquae		5	66	103	525	3939	6136	614
*Anabaena flos-aquae**					8			
Anabaena circinalis						1637		
Anabaena solitaria						2740	1170	10
Anabaena spiroides		24						
*Aphanizomenon sp.**			2	1	16	616	27	15
*Aphanocapsa sp.**						1	1	
*Aphanocapsa delicatissima**						< 0.5		
*Aphanothece sp.**				< 0.5		49	5	
*Aphanothece clathrata**						4		
Chroococcus sp.							2	
*Coelosphaerium sp.**					8	< 0.5		
*Gloeothece sp.**							2	
*Gomphosphaeria sp.**				1	31	9	36	46
Gomphosphaeria sp.		4	162	26				894
Merismopedia sp.			259			6		
*Microcystis aeruginosa**							3	2
*Microcystis flos-aquae**						2	4	2
*Oscillatoria sp.**		< 0.5				16	5	
*Oscillatoria agardhii**			1				4	
*Oscillatoria limnetica**	8	1	4	< 0.5	94	16	3	

Table 6.10 (continued)

	13 Mar	15 Apr	09 May	15 Jun	14 Jul	15 Aug	15 Sep	17 Oct
CHLOROPHYTA								
Actinastrum sp.						81		
Ankyra judayi					70			
*Botryococcus braunii**				< 0.5		< 0.5		1
Chlamydocapsa planctonica				34		64	101	
Chlamydomonas sp.					8			
Chlorella sp.							48	
Chlorogonium sp.				176		16		
Closterium acutum var. variabile		< 0.5						
Closterium sp.	8	1	2	6		3	14	6
*Coelastrum sp.**				21	78	23	29	
Crucigenia sp.				< 0.5	31			
Crucigenia rectangularis						6	13	
Dictyosphaerium sp.		3	14	4	305	24	72	23
Elakatothrix biplex var. conglutinata					16			
Elakatothrix sp.				< 0.5				1
Kirchneriella lunaris	8							
Koliella longiseta	8	16			39			
Lagerheimia sp.					8			
Micractinium sp.					407	65		
Micrasterias sp.							1	
Monoraphidium contortum	89	288	178	22	587	32	32	207
Oocystis lacustris					204			
Oocystis solitaria					47			
Oocystis sp.			7	2		65	16	4
Pediastrum sp.				44		50	44	25
Schroederia setigera						1		2
Sphaerocystis schroeteri			3	18		59	10	18
Staurastrum sp.				< 0.5		3	2	16
Scenedesmus acuminatus					31			
Scenedesmus sp.	32	304	65	11	188	373	64	22
Tetraëdron sp.				< 0.5		1	16	1
Tetraëdron caudatum					16	32		
CHRYSOPHYTA								
Mallomonas sp.						1	16	

Table 6.10 (continued)

	13 Mar	15 Apr	09 May	15 Jun	14 Jul	15 Aug	15 Sep	17 Oct
BACILLARIOPHYTA								
Asterionella formosa	45	24	3		736	136	25	
Cymbella sp.						< 0.5		
Cyclotella sp.	8	< 0.5	2	< 0.5	70	65	64	2
Fragilaria crotonensis					8			
Melosira sp.	4887	6473	324	7	2569	3712	526	416
Nitzschia acicularis				246	8	130		
Nitzschia sp.			65				16	
Rhizosolenia sp.						< 0.5		
Stephanodiscus sp.	40	2	6	< 0.5		81	112	95
Synedra sp.	8	160	< 0.5			227	16	
Synedra acus			< 0.5			2	3	
Synedra ulna						1		
CRYPTOPHYTA								
Cryptomonas sp.	40	208	107	202	196	195	176	48
Rhodomonas minuta	129	369	2233	451	274	113	208	192
PYRRHOPHYTA								
Ceratium hirundinella				< 0.5		10	8	1
Gymnodinium sp.					8			
Peridinium sp.	16	< 0.5	< 0.5			2	4	
OTHERS								
Flagellates 15 µm				4	8			16
Flagellates 10 µm		16	16	29	23			32
Flagellates 5 µm	48	352	146	37	86	227	144	160
Unicells 20 µm				4				
Unicells 15 µm			32	18	31	49	64	
Unicells 10 µm	185	176	129	95	180	357	128	
Unicells 5 µm	974	1154	3786	510	4362	6192	10158	9607
Unicells 2 µm	620	1602	4287	675	1911	3469	433	575
Unidentified filaments							16	
Unidentified diatoms	16	1	16	11			16	
Unidentified colonies 20-50 µm					102	8	9	7

Table 6.11 Numbers of cells or colonies (asterisk) ml^{-1} found in Lough Ramor between March and October 1996.

	28 Mar	23 Apr	23 May	26 Jun	23 Jul	28 Aug	25 Sep	24 Oct
CYANOPHYTA								
Anabaena flos-aquae	232	472	2611	4637	796	367	4823	1777
Anabaena circinalis		20			1784	3351	279	34
Anabaena solitaria		6				4900	9614	73
Anabaena spiroides	24	17			1019			
*Aphanizomenon sp.**		< 0.5	8	4653	32	6	175	19
*Gomphosphaeria sp.**	< 0.5	< 0.5	< 0.5	< 0.5	1	1	7	9
Gomphosphaeria sp.							231	635
*Microcystis aeruginosa**				2	6	6	22	6
*Microcystis flos-aquae**	1	2	6	9	6	49	25	6
*Oscillatoria sp.**			< 0.5	1	1			15
*Oscillatoria agardhii**		2						1
*Oscillatoria limnetica**					1			4

Table 6.11 (continued)

	28 Mar	23 Apr	23 May	26 Jun	23 Jul	28 Aug	25 Sep	24 Oct
CHLOROPHYTA								
Actinastrum sp.					96	463		
Ankistrodesmus sp.		< 0.5				2		34
Ankyra judayi			16					
*Botryococcus braunii**				< 0.5			2	1
Chlamydomonas sp.	368	7	125					
Chlorella sp.	16	45	94		16	16		
Chlorogonium sp.	16							4
Closterium sp.		3	2	1			3	5
*Coelastrum sp.**			8	8				2
Crucigenia rectangularis			3				27	
Dictyosphaerium sp.	48	70	28	56		123	80	12
Elakatothrix sp.			266	16		4	1	15
Eudorina sp.		25	214	76		35		
Kirchneriella obesa						271	16	7
Koliella longiseta	320	7						
Micractinium sp.		119			2596	28152	367	11
Monoraphidium contortum	176	7			175	782	136	7
Monoraphidium sp.		15	438	16	48	48	8	4
Oocystis sp.		1	56	4	6	48	6	1
Pediastrum sp.		12	167	91	114	153	36	9
Sphaerocystis schroeteri	3	21	704	49		21	32	8
Staurastrum sp.				1				< 0.5
Scenedesmus sp.	64	89		6	319	942	19	75
Tetraëdron sp.					48			
Tetrastrum triangulare	2					16		
Ulothrix sp.						798		
CHRYSOPHYTA								
Dinobryon sp.	48							
Mallomonas sp.					127	16		
Synura sp.		13					231	

Table 6.11 (continued)

	28 Mar	23 Apr	23 May	26 Jun	23 Jul	28 Aug	25 Sep	24 Oct
BACILLARIOPHYTA								
Asterionella formosa	352	2607	2		4	24	22	724
Cyclotella sp.	16	2	18	3	3	64	16	1
Cyclotella glomerata	1663	365			557			
Cyclotella sp.						2474		
Fragilaria crotonensis	16	21			48	16		3
Melosira sp.	4653	1184	141	9658	3409	463	1084	205
Rhizosolenia sp.		7						
Stephanodiscus sp.				< 0.5	16			
Synedra sp.		74			1		8	
Synedra actinastroides					43	495		
Synedra acus	4	32	< 0.5		38	7	2	
Synedra ulna	16	14			1	1		
Tabellaria fenestrata var. asterionelloides		< 0.5				17	2	
Tabellaria flocculosa		< 0.5			7	16		
CRYPTOPHYTA								
Cryptomonas sp.	112	238	1549	48	16	176	88	123
Rhodomonas minuta	64	395	94		16	622	64	134
Trachelomonas sp.					16			
PYRRHOPHYTA								
Gymnodinium sp.	16						1	
Peridinium sp.	48	< 0.5			16	2	2	
Glenodinium sp.				1				
OTHERS								
Flagellates 15 µm					80	16		
Flagellates 10 µm		7	63					4
Flagellates 5 µm	528	171	31	560	350	782	167	45
Unicells 15 µm	64	37	47	32		96	16	
Unicells 10 µm	144	216	188	128	414	702	88	26
Unicells 5 µm	2734	1505	923	3054	2835	6799	3090	3634
Unicells 2 µm	9482	2458	657	2511	2118	3192	1784	875
Unidentified filaments					16	9		
Unidentified chlorophytes				32				
Gyrosigma / Pleurosigma					16			
Unidentified diatoms	< 0.5	2		1	1		8	

APPENDIX 7 COLOUR AND RAINFALL IN LOUGH POLLAPHUCA BETWEEN 1988 AND 1999

Table 7.1 Colour (mg l^{-1} PtCo) and monthly total rainfall (mm) in Lough Pollaphuca between 1988 and 1999.

Date	Colour	Rain	Date	Colour	Rain	Date	Colour	Rain
06/01/88	75		31/07/88		106.6	22/02/89	90	
13/01/88	75		03/08/88	45		28/02/89		67.95
20/01/88	80		10/08/88	47		01/03/89	90	
27/01/88	90		17/08/88	47		08/03/89	85	
31/01/88		152.3	24/08/88	47		15/03/89	100	
03/02/88	95		31/08/88	45	80.6	22/03/89	90	
10/02/88	100		07/09/88	45		29/03/89	80	
17/02/88	105		14/09/88	42		31/03/89		95.6
24/02/88	90		21/09/88	42		05/04/89	85	
28/02/88		77.6	28/09/88	47		12/04/89	85	
02/03/88	90		30/09/88		68.2	19/04/89	80	
09/03/88	95		05/10/88	52		26/04/89		
16/03/88	95		12/10/88	52		27/04/89	75	
23/03/88	65		19/10/88	52		30/04/89		62.4
30/03/88	75		26/10/88	62		03/05/89	80	
31/03/88		105.9	31/10/88		100.55	10/05/89	80	
06/04/88	70		02/11/88	70		17/05/89	80	
13/04/88	65		09/11/88	72		24/05/89	80	
20/04/88	70		16/11/88	85		31/05/89	65	9.2
27/04/88	65		23/11/88	90		07/06/89	65	
30/04/88		35.4	30/11/88	90	39.9	14/06/89	65	
04/05/88	65		07/12/88	90		21/06/89	57	
11/05/88	60		14/12/88	90		28/06/89	55	
18/05/88	65		21/12/88	80		30/06/89		79.9
25/05/88	60		28/12/88	82		05/07/89	55	
31/05/88		62.3	31/12/88		64.9	12/07/89	50	
01/06/88	55		04/01/89	90		19/07/89	47.5	
08/06/88	52		11/01/89	87		26/07/89	47.5	
15/06/88	52		18/01/89	85		31/07/89		8
22/06/88	50		24/01/89	85		02/08/89	45	
29/06/88	50		25/01/89			09/08/89	45	
30/06/88		44.8	26/01/89	80		16/08/89	40	
06/07/88	55		31/01/89		61.1	23/08/89	40	
13/07/88	55		01/02/89	85		30/08/89	40	
20/07/88	45		08/02/89	92		31/08/89		111.3
27/07/88	45		15/02/89	95		06/09/89	40	

Table 7.1 (continued)

Date	Colour	Rain	Date	Colour	Rain	Date	Colour	Rain
13/09/89	42		11/04/90	80		07/11/90	42	
20/09/89	45		18/04/90	65		14/11/90	50	
27/09/89	45		25/04/90	67		21/11/90	52	
30/09/89		59.9	30/04/90		27.2	28/11/90	55	
04/10/89	42		02/05/90	60		30/11/90		70.6
11/10/89	40		09/05/90	60		05/12/90	80	
18/10/89	45		16/05/90	55		12/12/90	95	
25/10/89	45		23/05/90	50		19/12/90	95	
31/10/89		98.9	30/05/90	50		26/12/90	95	
01/11/89	47		31/05/90		47.8	31/12/90		129.7
08/11/89	52		06/06/90	50		02/01/91	95	
15/11/89	65		13/06/90	50		09/01/91	100	
22/11/89	85		20/06/90	50		16/01/91	97	
29/11/89	89		27/06/90	52		23/01/91	95	
30/11/89		74.25	30/06/90		71.75	30/01/91	95	
06/12/89	85		04/07/90	45		31/01/91		80.5
13/12/89	85		11/07/90	45		06/02/91	90	
20/12/89	85		18/07/90	42		13/02/91	90	
27/12/89			25/07/90	42		20/02/91	90	
28/12/89	85		31/07/90		34.6	27/02/91	80	
31/12/89		76.3	01/08/90	45		28/02/91		70.2
03/01/90	85		08/08/90	47		06/03/91	80	
10/01/90	85		15/08/90	47		13/03/91	77	
17/01/90	85		22/08/90	45		20/03/91	75	
24/01/90	90		29/08/90	42		27/03/91	70	
31/01/90	90	111.7	31/08/90		62.9	31/03/91		78.5
07/02/90	95		05/09/90	37.5		03/04/91	70	
14/02/90	100		12/09/90	37.5		10/04/91	75	
21/02/90	95		19/09/90	40		17/04/91	75	
28/02/90	90	151.8	26/09/90	37.5		24/04/91	70	
07/03/90	90		30/09/90		44.8	30/04/91		125.7
14/03/90	85		03/10/90	37.5		01/05/91	67	
21/03/90	85		10/10/90	30		08/05/91	70	
28/03/90	85		17/10/90	35		15/05/91	70	
31/03/90		17.65	24/10/90	32		22/05/91	65	
04/04/90	85		31/10/90	42	184.8	29/05/91	65	

Table 7.1 (continued)

Date	Colour	Rain	Date	Colour	Rain	Date	Colour	Rain
31/05/91		8.2	24/11/91	72		20/05/92	72	
05/06/91	62		25/11/91	80		27/05/92	63	
11/06/91	62		26/11/91	80		31/05/92		29.5
12/06/91			27/11/91	85		03/06/92	67	
13/06/91	65		28/11/91	90		10/06/92	65	
19/06/91	55		29/11/91	90		17/06/92	67	
25/06/91	52		30/11/91	90	93	24/06/92	67	
26/06/91			04/12/91	85		30/06/92		19.65
30/06/91		86.2	11/12/91	85		01/07/92	65	
03/07/91	52		18/12/91	90		08/07/92	65	
10/07/91	52		25/12/91	90		15/07/92	57	
17/07/91	52		31/12/91		49.8	22/07/92	55	
24/07/91	52		01/01/92	80		29/07/92	55	
31/07/91	30	58.5	08/01/92	85		31/07/92		60.1
07/08/91	50		15/01/92	80		05/08/92	52	
14/08/91	50		22/01/92	80		12/08/92	52	
21/08/91	50		29/01/92	80		19/08/92	50	
28/08/91	47		31/01/92		51.8	26/08/92	52	
31/08/91		27.1	05/02/92	82		31/08/92		115.85
04/09/91	52		12/02/92	82		02/09/92	55	
11/09/91	45		19/02/92	82		09/09/92	38	
18/09/91	52		26/02/92	85		16/09/92	40	
25/09/91	52		28/02/92		63.8	23/09/92	42	
30/09/91		59.1	04/03/92	82		30/09/92	45	83.4
02/10/91	55		11/03/92	82		07/10/92	47	
09/10/91	52		18/03/92	82		14/10/92	47	
16/10/91	55		25/03/92	75		21/10/92	50	
23/10/91	52		31/03/92		96.8	28/10/92	52	
30/10/91	65		01/04/92	75		31/10/92		42.7
31/10/91		110.3	08/04/92	75		04/11/92	52	
06/11/91	60		15/04/92	75		11/11/92	55	
13/11/91	62		22/04/92	75		18/11/92	57	
20/11/91	62		29/04/92	63		25/11/92	60	
21/11/91	65		30/04/92		98.6	30/11/92		82.05
22/11/91	65		06/05/92	65		02/12/92	62	
23/11/91	67		13/05/92	67		09/12/92	65	

Table 7.1 (continued)

Date	Colour	Rain	Date	Colour	Rain	Date	Colour	Rain
16/12/92	65		21/07/93	75		31/01/94		138.2
23/12/92	70		25/07/93	80		02/02/94	95	
30/12/92	80		28/07/93			09/02/94	95	
31/12/92		76.3	31/07/93		59.9	16/02/94	95	
06/01/93	85		04/08/93	80		23/02/94	95	
13/01/93	85		11/08/93	77		28/02/94		105.5
20/01/93	85		18/08/93	77		02/03/94	90	
27/01/93	85		25/08/93	75		09/03/94	80	
31/01/93		115.5	31/08/93		42.85	16/03/94	85	
03/02/93	85		01/09/93	75		23/03/94	75	
10/02/93	87		08/09/93	80		30/03/94	75	
17/02/93	85		15/09/93	85		31/03/94		123.2
24/02/93	85		22/09/93	97		06/04/94	75	
28/02/93		26.9	29/09/93	95		13/04/94	72	
03/03/93	85		30/09/93		122.9	20/04/94	70	
10/03/93	85		06/10/93	90		27/04/94	67	
17/03/93	85		13/10/93	85		30/04/94		106.7
24/03/93	82		20/10/93	85		04/05/94	67	
31/03/93	85	63.1	27/10/93	85		11/05/94	65	
07/04/93	85		31/10/93		53.6	18/05/94	62	
14/04/93	80		03/11/93	95		25/05/94	62	
21/04/93	80		10/11/93	97		31/05/94		47
28/04/93	70		17/11/93	100		01/06/94	60	
30/04/93		82.5	24/11/93	100		08/06/94	60	
05/05/93	65		30/11/93		62.8	15/06/94	60	
12/05/93	72		01/12/93	95		22/06/94	60	
19/05/93	75		07/12/93	95		29/06/94	60	
26/05/93	70		08/12/93			30/06/94		31.95
31/05/93		118.7	15/12/93	95		06/07/94	60	
02/06/93	70		22/12/93	95		13/07/94	60	
09/06/93	75		29/12/93	100		20/07/94	57	
16/06/93	87		31/12/93		154.5	27/07/94	52	
23/06/93	95		05/01/94	105		31/07/94		50.5
30/06/93	95	169.9	12/01/94	95		03/08/94	52	
07/07/93	85		19/01/94	95		10/08/94	47	
14/07/93	85		26/01/94	95		17/08/94	47	

Table 7.1 (continued)

Date	Colour	Rain	Date	Colour	Rain	Date	Colour	Rain
24/08/94	50		24/08/94	50		29/03/95	85	
31/08/94	40	69.3	31/08/94	40	69.3	31/03/95		93.15
07/09/94	37.5		07/09/94	37.5		05/04/95	85	
14/09/94	42		14/09/94	42		12/04/95	85	
21/09/94	42		21/09/94	42		19/04/95	80	
28/09/94	45		28/09/94	45		26/04/95	80	
30/09/94		116.2	30/09/94		116.2	30/04/95		43.2
05/10/94	45		05/10/94	45		03/05/95	80	
12/10/94	45		12/10/94	45		10/05/95	80	
19/10/94	45		19/10/94	45		17/05/95	80	
26/10/94	52		26/10/94	52		24/05/95	62	
31/10/94		64.1	31/10/94		64.1	31/05/95	57	46.1
02/11/94	52		02/11/94	52		07/06/95	57	
09/11/94	52		09/11/94	52		14/06/95	55	
16/11/94	52		16/11/94	52		21/06/95	55	
23/11/94	55		23/11/94	55		28/06/95	55	
30/11/94	55	54.6	30/11/94	55	54.6	30/06/95		21.9
07/12/94	65		07/12/94	65		05/07/95	55	
14/12/94	67		14/12/94	67		12/07/95	52	
21/12/94	67		21/12/94	67		19/07/95	55	
28/12/94	85		28/12/94	85		26/07/95	52	
31/12/94		122.05	31/12/94		122.05	31/07/95		67.8
04/01/95	85		04/01/95	85		02/08/95	50	
11/01/95	90		11/01/95	90		09/08/95	47	
18/01/95	90		18/01/95	90		16/08/95	47	
25/01/95	95		25/01/95	95		23/08/95	40	
31/01/95		154.4	31/01/95		154.4	30/08/95	42.5	
01/02/95	95		01/02/95	95		21/08/95		5.8
08/02/95	95		08/02/95	95		06/09/95	42	
15/02/95	95		15/02/95	95		13/09/95	45	
22/02/95	85		22/02/95	85		20/09/95	45	
28/02/95		105	28/02/95		105	27/09/95	47	
01/03/95	85		01/03/95	85		30/09/95		43.2
08/03/95	90		08/03/95	90		04/10/95	47	
15/03/95	87		15/03/95	87		11/10/95	50	
22/03/95	85		22/03/95	85		18/10/95	50	

Table 7.1 (continued)

Date	Colour	Rain	Date	Colour	Rain	Date	Colour	Rain
25/10/95	50		29/05/96	60		25/12/96	75	
31/10/95		91.4	31/05/96		88.6	31/12/96		30.55
01/11/95	50		05/06/96	57		01/01/97	80	
08/11/95	50		12/06/96	55		08/01/97	95	
15/11/95	50		19/06/96	50		15/01/97	95	
22/11/95	42		26/06/96	50		22/01/97	95	
29/11/95	50		30/06/96		23.7	29/01/97	90	
30/11/95		118.19	03/07/96	50		31/01/97		16.2
06/12/95	55		10/07/96	47		05/02/97	90	
13/12/95	60		17/07/96	45		12/02/97	87	
20/12/95	60		24/07/96	45		19/02/97	80	
27/12/95	75		31/07/96	45	63.9	26/02/97	80	
31/12/95		62.6	07/08/96	45		28/02/97		104.3
03/01/96	85		14/08/96	42.5		05/03/97	80	
10/01/96	90		21/08/96	45		12/03/97	80	
17/01/96	95		28/08/96	50		19/03/97	80	
24/01/96	95		31/08/96		96.1	26/03/97	77	
31/01/96	95	125.85	04/09/96	50		31/03/97		14.6
07/02/96	95		11/09/96	50		02/04/97	95	
14/02/96	95		18/09/96	47		09/04/97	90	
21/02/96	90		25/09/96	50		16/04/97	85	
28/02/96	95	70	30/09/96		31.5	23/04/97	85	
06/03/96	90		02/10/96	50		30/04/97	85	30.4
13/03/96	87		09/10/96	50		07/05/97	70	
20/03/96	87		16/10/96	52		14/05/97	70	
27/03/96	85		23/10/96	52		21/05/97	70	
31/03/96		92.13	30/10/96	57		28/05/97	65	
03/04/96	85		31/10/96		146.5	31/05/97		67.2
10/04/96	85		06/11/96	60		04/06/97	62	
17/04/96	85		13/11/96	60		11/06/97	60	
24/04/96	80		20/11/96	65		18/06/97	60	
30/04/96		86.9	27/11/96	65		25/06/97	62	
01/05/96	80		30/11/96		146.2	30/06/97		95.9
08/05/96	70		04/12/96	70		02/07/97	65	
15/05/96	70		11/12/96	72		08/07/97	60	
22/05/96	70		18/12/96	75		15/07/97	70	

Table 7.1 (continued)

Date	Colour	Rain	Date	Colour	Rain	Date	Colour	Rain
22/07/97	75		18/02/98	85		11/09/98	55	
29/07/97	75		24/02/98	90		18/09/98	70	
31/07/97		44.2	28/02/98		21.1	25/09/98	70	
05/08/97	75		03/03/98	90		30/09/98		69.7
12/08/97	75		10/03/98	87		02/10/98	70	
19/08/97	62.5		17/03/98	85		09/10/98	75	
26/08/97	55		24/03/98	85		16/10/98	105	
31/08/97		122.6	31/03/98	80	97.75	23/10/98	95	
02/09/97	55		06/04/98	80		30/10/98	95	
09/09/97	57		12/04/98	85		31/10/98		124.5
16/09/97	60		19/04/98	80		06/11/98	105	
23/09/97	60		26/04/98	80		13/11/98	105	
30/09/97	60	37.1	30/04/98		139.15	20/11/98	100	
07/10/97	60		03/05/98	90		27/11/98	100	
13/10/97	60		08/05/98	87		30/11/98		107.2
19/10/97	65		15/05/98	80		04/12/98	100	
26/10/97	67		22/05/98	70		11/12/98	100	
31/10/97		120	29/05/98	75		18/12/98	100	
02/11/97	70		31/05/98		52.3	25/12/98	95	
09/11/97	72		04/06/98	70		31/12/98		124.2
16/11/97	70		05/06/98			01/01/99	90	
23/11/97	80		12/06/98	55		08/01/99	90	
30/11/97	80	134.6	19/06/98	55		15/01/99	90	
07/12/97	80		26/06/98	55		22/01/99	95	
14/12/97	80		30/06/98		140.7	29/01/99	100	
21/12/97	85		03/07/98	55		31/01/99		109.1
28/12/97	80		10/07/98	60		05/02/99	95	
31/12/97		108.9	17/07/98	60		12/02/99	95	
03/01/98	87		24/07/98	45		19/02/99	85	
09/01/98	90		31/07/98	55	52.1	26/02/99	85	
16/01/98	110		07/08/98	55		28/02/99		46.4
23/01/98	105		14/08/98	55		05/03/99	85	
29/01/98	95		21/08/98	55		12/03/99	87	
31/01/98		114.9	28/08/98	55		19/03/99	85	
04/02/98	95		31/08/98		53.4	26/03/99	75	
11/02/98	90		04/09/98	55		31/03/99		53.5

Table 7.1 (continued)

Date	Colour	Rain
02/04/99	75	
09/04/99	75	
16/04/99	85	
23/04/99	85	
30/04/99	80	64.2
07/05/99	75	
14/05/99	70	
21/05/99	70	
28/05/99	65	
31/05/99		65.5
04/06/99	65	
11/06/99	75	
18/06/99	70	
25/06/99	70	
30/06/99		66.6
02/07/99	65	
09/07/99	65	
16/07/99	60	
23/07/99	65	
29/07/99	60	

APPENDIX 8 RESULTS OF ANOVA AND SCHEFFE POST HOC TESTS FOR TP AND TN

Table 8.1 Data Desk output of ANOVA and Scheffe post hoc tests for TP ($\mu g\ l^{-1}$) in Lough Ballycullinan for 1981, 1982, 1996 and 1997.

DESIGN

Dependent variables

Name	Code
TP ug l-1	T-1

Type of analysis: OLS ANOVA

Factors

Name	Code	Nested in	F/R	Kind
Year	Yr	()	Fix	Disc
Month no	Mn	()	Fix	Disc

Partial (Type 3) Sums of Squares

Interactions up to 1 - way

Modifications

cases selected according to Ballycullinan

No variance variable

RESULTS

General Results

215 total cases of which 188 are missing

ANOVA

Analysis of Variance For **TP ug l-1**
cases selected according to **Ballycullinan**
215 total cases of which 188 are missing

Source	df	Sums of Squares	Mean Square	F-ratio	Prob
Const	1	17521.1	17521.1	236.14	≤ 0.0001
Yr	3	893.793	297.931	4.0154	0.0342
Mn	11	692.741	62.9765	0.84877	0.6036
Error	12	890.369	74.1974		
Total	26	2603.95			

Results for factor Yr

Coefficients

Expected Cell Means

Scheffe Post Hoc Tests

	Difference	std. err.	Prob
1982 - 1981	3.13227	4.755	0.931131
1996 - 1981	19.5504	5.773	0.0392045
1996 - 1982	16.4181	5.982	0.108176
1997 - 1981	5.35949	5.516	0.814545
1997 - 1982	2.22722	5.487	0.982247
1997 - 1996	-14.1909	5.937	0.182763

Table 8.2 Data Desk output of ANOVA and Scheffe post hoc tests for TP ($\mu g\ l^{-1}$) in Lough Cullaun for 1981, 1982, 1996 and 1997.

DESIGN

Dependent variables

Name	Code
TP ug l-1	T-1

Type of analysis: OLS ANOVA

Factors

Name	Code	Nested in	F/R	Kind
Year	Yr	()	Fix	Disc
Month no	Mn	()	Fix	Disc

Partial (Type 3) Sums of Squares

Interactions up to 1 - way

Modifications

cases selected according to Cullaun

No variance variable

RESULTS

General Results

215 total cases of which 190 are missing

ANOVA

Analysis of Variance For **TP ug l-1**
cases selected according to **Cullaun**
215 total cases of which 190 are missing

Source	df	Sums of Squares	Mean Square	F-ratio	Prob
Const	1	683.3	683.3	358.86	≤ 0.0001
Yr	3	41.2094	13.7365	7.2143	0.0073
Mn	11	14.3866	1.30787	0.68688	0.7269
Error	10	19.0406	1.90406		
Total	24	79.5704			

Results for factor Yr

Coefficients

Expected Cell Means

Scheffe Post Hoc Tests

	Difference	std. err.	Prob
1982 - 1981	-2.21564	0.8555	0.146724
1996 - 1981	-3.89153	1.027	0.0255579
1996 - 1982	-1.6759	0.9962	0.455855
1997 - 1981	-4.27199	0.9836	0.0113925
1997 - 1982	-2.05635	0.9116	0.230487
1997 - 1996	-0.380456	0.9516	0.982853

Table 8.3 Data Desk output of ANOVA and Scheffe post hoc tests for TP ($\mu g\ l^{-1}$) in Lough Dromore for 1981, 1982, 1985, 1996 and 1997.

DESIGN

Dependent variables

Name	Code
TP ug l-1	T-1

Type of analysis: OLS ANOVA

Factors

Name	Code	Nested in	F/R	Kind
Year	Yr	()	Fix	Disc
Month no	Mn	()	Fix	Disc

Partial (Type 3) Sums of Squares

Interactions up to 1 - way

Modifications

cases selected according to Dromore

No variance variable

RESULTS

General Results

215 total cases of which 181 are missing

ANOVA

Analysis of Variance For **TP ug l-1**
cases selected according to **Dromore**
215 total cases of which 181 are missing

Source	df	Sums of Squares	Mean Square	F-ratio	Prob
Const	1	12392.1	12392.1	361.9	≤ 0.0001
Yr	4	160.094	40.0235	1.1688	0.3574
Mn	11	1299.95	118.178	3.4512	0.0098
Error	18	616.359	34.2422		
Total	33	2090.07			

Results for factor Yr

Coefficients

Expected Cell Means

Scheffe Post Hoc Tests

	Difference	std. err.	Prob
1982 - 1981	-4.05351	3.118	0.790279
1985 - 1981	-5.20833	3.378	0.671363
1985 - 1982	-1.15483	3.118	0.997527
1996 - 1981	-7.23147	3.877	0.501003
1996 - 1982	-3.17796	3.881	0.952079
1996 - 1985	-2.02314	3.877	0.990769
1997 - 1981	-6.2117	3.715	0.602554
1997 - 1982	-2.15819	3.57	0.983977
1997 - 1985	-1.00336	3.715	0.999282
1997 - 1996	1.01977	4.031	0.999446

Table 8.4 Data Desk output of ANOVA and Scheffe post hoc tests for TP ($\mu g\ l^{-1}$) in Lough Inchiquin for 1981, 1982, 1985, 1996 and 1997.

DESIGN

Dependent variables

Name	Code
TP ug l-1	T-1

Type of analysis: OLS ANOVA

Factors

Name	Code	Nested in	F/R	Kind
Year	Yr	()	Fix	Disc
Month no	Mn	()	Fix	Disc

Partial (Type 3) Sums of Squares

Interactions up to 1 - way

Modifications

cases selected according to Inchiquin

No variance variable

RESULTS

General Results

215 total cases of which 174 are missing

ANOVA

Analysis of Variance For **TP ug l-1**
cases selected according to **Inchiquin**
215 total cases of which 174 are missing

Source	df	Sums of Squares	Mean Square	F-ratio	Prob
Const	1	19993.9	19993.9	364.89	≤ 0.0001
Yr	4	347.515	86.8788	1.5855	0.2091
Mn	11	2173.39	197.581	3.6059	0.0038
Error	25	1369.85	54.7942		
Total	40	4076.86			

Results for factor Yr

Coefficients

Expected Cell Means

Scheffe Post Hoc Tests

	Difference	std. err.	Prob
1982 - 1981	-4.52421	3.881	0.848545
1985 - 1981	1.80941	4.17	0.995548
1985 - 1982	6.33361	3.92	0.63052
1996 - 1981	-4.87631	4.17	0.847095
1996 - 1982	-0.3521	3.92	0.999991
1996 - 1985	-6.68571	3.957	0.590342
1997 - 1981	1.89743	3.922	0.993242
1997 - 1982	6.42164	3.568	0.530779
1997 - 1985	0.0880226	3.826	1
1997 - 1996	6.77374	3.826	0.546624

Table 8.5 Data Desk output of ANOVA and Scheffe post hoc tests for TN (mg l^{-1}) in Lough Ballycullinan for 1981, 1982, 1996 and 1997.

DESIGN

Dependent variables

Name	Code
TN mg l-1	T-1

Type of analysis: OLS ANOVA

Factors

Name	Code	Nested in	F/R	Kind
Year	Yr	( )	Fix	Disc
Month no	Mn	( )	Fix	Disc

Partial (Type 3) Sums of Squares

Interactions up to 1 - way

Modifications

cases selected according to Ballycullinan

No variance variable

RESULTS

General Results

215 total cases of which 188 are missing

ANOVA

Analysis of Variance For **TN mg l-1**
cases selected according to **Ballycullinan**
215 total cases of which 188 are missing

Source	df	Sums of Squares	Mean Square	F-ratio	Prob
Const	1	17.3473	17.3473	416.83	≤ 0.0001
Yr	3	1.3737	0.457901	11.003	0.0009
Mn	11	2.57414	0.234013	5.623	0.0030
Error	12	0.499405	0.0416171		
Total	26	5.22807			

Results for factor Yr

Coefficients

Expected Cell Means

Scheffe Post Hoc Tests

	Difference	std. err.	Prob
1982 - 1981	0.196742	0.1126	0.419063
1996 - 1981	0.773847	0.1367	0.00105045
1996 - 1982	0.577105	0.1417	0.0128135
1997 - 1981	0.418613	0.1306	0.0525994
1997 - 1982	0.221871	0.13	0.438072
1997 - 1996	-0.355234	0.1406	0.15004

Table 8.6 Data Desk output of ANOVA and Scheffe post hoc tests for TN (mg l^{-1}) in Lough Cullaun for 1981, 1982, 1996 and 1997.

DESIGN

Dependent variables

Name	Code
TN mg l-1	T-1

Type of analysis: OLS ANOVA

Factors

Name	Code	Nested in	F/R	Kind
Year	Yr	()	Fix	Disc
Month no	Mn	()	Fix	Disc

Partial (Type 3) Sums of Squares

Interactions up to 1 - way

Modifications

cases selected according to Cullaun

No variance variable

RESULTS

General Results

215 total cases of which 190 are missing

ANOVA

Analysis of Variance For **TN mg l-1**
cases selected according to **Cullaun**
215 total cases of which 190 are missing

Source	df	Sums of Squares	Mean Square	F-ratio	Prob
Const	1	12.3398	12.3398	2176.3	≤ 0.0001
Yr	3	0.767225	0.255742	45.103	≤ 0.0001
Mn	11	0.57691	0.0524464	9.2496	0.0007
Error	10	0.0567012	0.00567012		
Total	24	2.17199			

Results for factor Yr

Coefficients

Expected Cell Means

Scheffe Post Hoc Tests

	Difference	std. err.	Prob
1982 - 1981	0.0326808	0.04668	0.918604
1996 - 1981	0.54459	0.05603	0.000020881
1996 - 1982	0.511909	0.05436	0.0000275847
1997 - 1981	0.425489	0.05368	0.00012428
1997 - 1982	0.392808	0.04975	0.000128484
1997 - 1996	-0.119101	0.05193	0.219319

Table 8.7 Data Desk output of ANOVA and Scheffe post hoc tests for TN (mg l^{-1}) in Lough Dromore for 1981, 1982, 1985, 1996 and 1997.

DESIGN

Dependent variables

Name	Code
TN mg l-1	T-1

Type of analysis: OLS ANOVA

Factors

Name	Code	Nested in	F/R	Kind
Year	Yr	()	Fix	Disc
Month no	Mn	()	Fix	Disc

Partial (Type 3) Sums of Squares

Interactions up to 1 - way

Modifications

cases selected according to Dromore

No variance variable

RESULTS

General Results

215 total cases of which 181 are missing

ANOVA

Analysis of Variance For **TN mg l-1**
cases selected according to **Dromore**
215 total cases of which 181 are missing

Source	df	Sums of Squares	Mean Square	F-ratio	Prob
Const	1	25.1223	25.1223	944.21	≤ 0.0001
Yr	4	1.41427	0.353568	13.289	≤ 0.0001
Mn	11	1.74538	0.158671	5.9635	0.0005
Error	18	0.478923	0.0266068		
Total	33	4.07709			

Results for factor Yr

Coefficients

Expected Cell Means

Scheffe Post Hoc Tests

	Difference	std. err.	Prob
1982 - 1981	0.0547847	0.08691	0.98129
1985 - 1981	0.337833	0.0918	0.0370396
1985 - 1982	0.283049	0.08691	0.0670359
1996 - 1981	0.649419	0.1081	0.000349411
1996 - 1982	0.594634	0.1082	0.00093534
1996 - 1985	0.311586	0.1081	0.126081
1997 - 1981	0.49646	0.1035	0.00367376
1997 - 1982	0.441675	0.09952	0.00735616
1997 - 1985	0.158626	0.1035	0.676391
1997 - 1996	-0.152959	0.1124	0.761809

Table 8.8 Data Desk output of ANOVA and Scheffe post hoc tests for TN (mg l^{-1}) in Lough Inchiquin for 1981, 1982, 1985, 1996 and 1997.

DESIGN

Dependent variables

Name	Code
TN mg l-1	T-1

Type of analysis: OLS ANOVA

Factors

Name	Code	Nested in	F/R	Kind
Year	Yr	()	Fix	Disc
Month no	Mn	()	Fix	Disc

Partial (Type 3) Sums of Squares

Interactions up to 1 - way

Modifications

cases selected according to Inchiquin

No variance variable

RESULTS

General Results

215 total cases of which 174 are missing

ANOVA

Analysis of Variance For **TN mg l-1**
cases selected according to **Inchiquin**
215 total cases of which 174 are missing

Source	df	Sums of Squares	Mean Square	F-ratio	Prob
Const	1	51.1821	51.1821	1952.2	≤ 0.0001
Yr	4	3.30301	0.825752	31.496	≤ 0.0001
Mn	11	1.36358	0.123962	4.7281	0.0006
Error	25	0.655451	0.026218		
Total	40	5.62299			

Results for factor Yr

Coefficients

Expected Cell Means

Scheffe Post Hoc Tests

	Difference	std. err.	Prob
1982 - 1981	-0.0225724	0.0849	0.999343
1985 - 1981	0.354679	0.09122	0.0154564
1985 - 1982	0.377251	0.08576	0.00498435
1996 - 1981	0.71525	0.09122	0.00000180986
1996 - 1982	0.737823	0.08576	0.00000034843
1996 - 1985	0.360571	0.08655	0.00840828
1997 - 1981	0.620585	0.0858	0.00000702751
1997 - 1982	0.643157	0.07805	0.000000758267
1997 - 1985	0.265906	0.0837	0.0662549
1997 - 1996	-0.0946656	0.0837	0.861989

APPENDIX 9 PROBLEMS WITH DETERMINATION OF TOTAL PHOSPHORUS

Contamination was found in solutions that were digested for total phosphorus analysis. This was noticed because blank absorbance readings (4 cm cell) for total phosphorus were high (average of 0.017 ABS) compared to those for MRP (average of 0.002 ABS). The contamination was eventually attributed to leaching of phosphorus from polypropylene digestion flasks. Unfortunately the digestion flasks had been used for determination of total phosphorus and total dissolved phosphorus throughout the study. To estimate the extent of distortion this had on the results two simultaneous digestions in plastic and glass digestion flasks were carried out on samples collected in December 1997. The results of this experiment are presented in Table 9.1 and summary statistics of the differences in Table 9.2. The median difference between glass and plastic digestion was zero - the distribution was slightly skewed as eutrophic lakes tended to have higher differences. The effect of using plastic digestion flasks was to increase the variability from the truth as determined by glass digestion. Plastic did not in all cases lead to an increase in recorded total phosphorus concentration. Plastic appeared to underestimate (16 negative differences) and overestimate (18 zero or positive differences) the glass digestion determined total phosphorus with equal frequency. This is due to the fact that standards were also digested in the plastic flasks - this had the effect of accounting for the phosphorus leached from the polypropylene. The inconsistency of the concentration of phosphorus leached from the flasks is the most likely cause of the differences presented in Table 9.1. This inconsistency is small enough to allow the concentrations to be useful.

Table 9.1 Results for total phosphorus (December 1997) digested in polypropylene and glass flasks. An asterisk denotes that polypropylene digestion was separate to main batch.

Lake	TP $\mu g\ l^{-1}$ polypropylene digestion	TP $\mu g\ l^{-1}$ glass digestion	Difference
Ballycullinan	37	37	0
Ballyquirke	21	23	-2
Bray	13	13	0
Bunny	1	5	-4
Caragh*	9	11	2
Cullaun	5	6	-1
Dan	24	21	3
Doolough	25	23	2
Dromore	22	24	-2
Easky	4	6	-2
Egish 1	412	392	20
Egish 2	432	417	15
Feeagh	12	11	1
Gara N	43	44	-1
Gara S	48	50	-2
Gowna	54	60	-6
Graney	21	21	0
Inchiquin	37	40	-3
Leane*	17	22	5
Lene	12	12	0
Lettercraffroe	10	10	0
Lickeen	20	21	-1
Maumwee	3	5	-2
Moher	16	19	-3
Muckno	57	60	-3
Muckross*	1	6	5
Mullagh	61	63	-2
Oughter	114	104	10
Owel	10	8	2
Pollaphuca	19	19	0
Ramor	81	75	6
Rea	3	7	-4
Talt	4	5	-1
Upper*	3	6	3
Quality control	20	19	1

Table 9.2 Summary statistics of difference between plastic and glass digestion.

Statistic	TP $\mu g\ l^{-1}$
n	34
Mean	1.03
Median	0
Variance	28.15
SD	5.31
Min	-6
Max	20
75 percentile	2
25 percentile	-2
Skewness	1.96

APPENDIX 10 QUALITY ASSURANCE INFORMATION

Table 10.1 Quality assurance using ION-92.

	n	Result	Certified Mean	Certified 2 SD	Comment
pH	1	5.75	5.48	0.61	Within 95% confidence
Alkalinity mg l^{-1} $CaCO_3$	1	0	<1	-	Agrees with cert. mean
Conductivity µS cm^{-1}	1	461	448	30.1	Within 95% confidence
Turbidity NTU	1	0.09	0.15	0.17	Within 95% confidence
Colour mg l^{-1}PtCo	1	1	2.5	4.5	Within 95% confidence
TP µg l^{-1}	24	< 7	<2	-	Below detection
NO_3^--N mg l^{-1}	1	<.05	0.024	0.016	Below detection
TN mg l^{-1}	3	<.06	-	-	Mean not supplied
SiO_2-Si mg l^{-1}	3	<.003	<.02	-	Agrees with cert. mean
TSi mg l^{-1}	2	<.05	-	-	Mean not supplied
Cl^- mg l^{-1}	1	>50	105.6	7.2	Above highest standard
SO_4^{2-} mg l^{-1}	1	39.1	37.1	4.36	Within 95% confidence

Table 10.2 Quality assurance using ION-95.

	n	Result	Certified Mean	Certified 2 SD	Comment
pH	1	8.09	7.9	0.41	Within 95% confidence
Alkalinity mg l^{-1} $CaCO_3$	1	79.18	76.3	4.37	Within 95% confidence
Conductivity µS cm^{-1}	1	310	293.4	21.4	Within 95% confidence
Turbidity NTU	1	0.11	0.16	0.13	Within 95% confidence
Colour mg l^{-1} PtCo	1	3	3.2	4.3	Within 95% confidence
TP µg l^{-1}	24	< 7	5	-	Below detection
NO_3^--N mg l^{-1}	1	0.333	0.334	0.052	Within 95% confidence
TN mg l^{-1}	6	0.36	-	-	Mean not supplied
SiO_2-Si mg l^{-1}	3	1.10	1.01	0.137	Within 95% confidence
TSi mg l^{-1}	3	1.08	-	-	Mean not supplied
Cl^- mg l^{-1}	1	25.3	23.9	2.64	Within 95% confidence
SO_4^{2-} mg l^{-1}	1	32.0	29.8	4.14	Within 95% confidence