Supplemental material

Appendix 1. Catchment data available from 1988-2002 for the BOD regression model (n=104).

Year	Basin	River	Country	Area (km^2)	Lake-%	Cropland (km^2)	Livestock (lsu)	Temperature (˚C)	Runoff (m^3/s)	BOD type	BOD concentr. (mg/l O^2)	BOD flux (t/a)	Scattered BOD_5 (t/a)	Tot. Point BOD_5 (t/a)
2000	Barta	Barta	LV	2273	0.3	1010	21740	8.1	15.2	BOD_7	1.9	911	281	57
1990	Bodrog_90	Bodrog	HU	8649	0.6	2887	237037	9.0	80.1	BOD_5	4.4	11115	2801	3281
1992	Danube1	Bodrog	SK	8535	0.6	2837	232730	8.7	105.0	BOD_5	3.8	12583	2759	3281
1995	Danube1	Bodrog	SK	8535	0.6	2837	146078	8.4	112.8	BOD_5	3.7	13162	2123	2269
2000	Danube1	Bodrog	SK	8535	0.6	2837	126546	9.2	136.8	BOD_5	2.0	8627	1410	1660
1994	Danube2	Inn	AT/GE	26444	0.7	3587	912246	6.5	708.0	BOD_5	2.6	58051	2213	7981
1999	Danube2	Inn	AT/GE	26444	0.7	3587	1126427	5.5	875.0	BOD_5	1.8	49669	1917	8427
1990	Danube3	Sebes-Körös	HU	3431	0.5	1066	141666	9.5	10.1	BOD_5	3.9	1242	1509	2938
1995	Danube3	Sebes-Körös	HU	3431	0.5	1066	90580	9.1	27.0	BOD_5	3.0	2554	1448	2633
2000	Danube3	Sebes-Körös	HU	3431	0.5	1066	77068	10.0	28.2	BOD_5	2.7	2401	1578	1964
1995	Danube4	Danube4	HU	135111	0.7	47859	6733927	7.7	2180.0	BOD_5	2.2	151247	20206	73933
2001	Danube4	Danube4	HU	135111	0.7	47859	6713490	7.6	2140.0	BOD_5	1.8	121477	17058	66269
1995	Danube5	Danube5	SK	133971	0.7	47088	6687310	7.7	2329.0	BOD_5	1.6	117516	19639	73151
2000	Danube5	Danube5	SK	133971	0.7	47088	6695003	8.5	2338.0	BOD_5	2.0	147462	16724	65701
1995	Danube6	Danube6	SK	25847	0.5	13346	853597	8.4	107.4	BOD_5	3.1	10500	6824	16371
2002	Danube6	Danube6	SK	25847	0.5	13346	845774	9.1	122.5	BOD_5	2.3	8888	6913	10334
2000	Daugava	Daugava	LV	70953	3.1	7305	791640	6.8	552.0	BOD_7	1.9	33075	5910	7223
1991	Drava_90	Drava	SI	13363	0.8	1049	289470	4.6	282.0	BOD_5	1.6	14229	1188	1819
1991	Drava3	Drava3	SI	16667	0.7	1992	429942	5.6	323.0	BOD_5	2.5	25465	3750	2858
1995	Drava3	Drava3	SI	16667	0.7	1992	385853	6.0	262.0	BOD_5	2.0	16525	3756	4377
2001	Drava3	Drava3	SI	16667	0.7	1992	501220	6.8	296.0	BOD_5	2.2	20536	3748	5431
1995	Drava4	Drava4	HU	39850	0.5	9340	932249	7.8	503.4	BOD_5	3.5	55567	13408	15968
2000	Drava4	Drava4	HU	39850	0.5	9340	1003260	8.4	540.7	BOD_5	2.9	49447	11839	17079
2000	Ebro	Ebro	ES	84265	0.4	34328	2764315	12.2	243.3	BOD_5	5.0	38368	18	15750

2001	Escaut	Escaut	BE	4213	0.4	2971	403338	10.6	48.0	BOD_5	4.3	6509	938	6775
1991	Foyle4	Mourne river	GB	1036	0.1	0	154769	8.4	55.9	BOD_5	2.2	3879	58	207
2000	Foyle4	Mourne River	GB	1036	0.1	0	144668	8.4	65.4	BOD_5	2.1	4331	30	213
2000	Guadalquivir	Guadalquivir	ES	47799	0.5	16387	676720	16.2	33.3	BOD_5	5.4	5664	0	13343
2000	Guadiana	Guadiana	ES	46742	0.9	24130	998908	15.8	36.8	BOD_5	3.6	4173	55	6751
2001	GulfOfFinland	Keila	EE	1012	0.3	274	18671	6.1	6.9	BOD_7	2.2	477	37	197
2001	GulfOfRiga	Pärnu	EE	5486	0.1	1182	28191	6.1	51.5	BOD_7	2.3	3735	140	75
2001	GulfOfRiga4	Pärnu	EE	2204	0.0	544	13784	6.1	23.5	BOD_7	2.3	1705	61	31
2001	GulfRiga2	Kasari	EE	2913	0.1	680	19779	6.3	27.2	BOD_7	2.2	1887	75	27
1990	Gyongyos	Balaton	HU	13049	0.1	2269	431319	7.7	156.0	BOD_5	4.6	22630	2798	3394
1995	Gyongyos	Balaton	HU	13049	0.1	2269	389753	7.4	171.0	BOD_5	2.2	11864	2725	3630
2001	Gyongyos	Balaton	HU	13049	0.1	2269	498611	7.6	126.0	BOD_5	3.2	12715	2595	4489
1990	Hornad3	Hornad	SK	4152	0.3	1156	241865	8.5	20.6	BOD_5	5.2	3378	1690	3366
2002	Hornad3	Hornad	SK	4152	0.3	1156	127356	8.2	18.0	BOD_5	3.6	2046	740	1716
1991	Kolpa	Kolpa	SI	3120	0.1	231	52103	8.6	69.3	BOD_5	2.2	4808	1060	213
1995	Kolpa	Kolpa	SI	3120	0.1	231	40122	9.0	82.3	BOD_5	2.1	5450	1059	298
1999	Kolpa	Kolpa	SI	3120	0.1	231	56437	9.5	84.4	BOD_5	1.8	4791	1013	329
1994	Labe	Labe	CZ	51714	0.9	22095	1654439	9.0	278.0	BOD_5	5.1	44712	13569	33696
2001	Labe	Labe	CZ	51714	0.9	22095	1666796	8.0	315.0	BOD_5	3.1	30795	13960	21065
1991	Lagan	Lagan	UK-IRL	899	0.6	71	181699	8.9	7.4	BOD_5	3.1	723	62	1093
1995	Lagan	Lagan	UK-IRL	899	0.6	71	178001	9.4	8.4	BOD_5	2.9	765	41	1042
2000	Lagan	Lagan	UK-IRL	899	0.6	71	169721	9.1	10.9	BOD_5	3.1	1066	32	1035
1995	Merkys	Merkys	LT	3300	1.6	832	51755	6.7	34.9	BOD_5	4.1	4512	829	94
2000	Merkys	Merkys	LT	3300	1.6	832	42564	7.5	30.1	BOD_7	3.7	3512	625	100
2000	Meuse1	Sambre	FR/BE	1485	0.1	443	176769	10.7	16.7	BOD_5	4.8	2535	319	1174
1995	Meuse2	Semois	FR/BE	1320	0.1	238	29023	9.5	37.8	BOD_5	2.8	3340	1219	643
1990	Moselle_90	Moselle	FR	11928	0.6	4141	679700	10.2	123.0	BOD_5	3.6	13964	3193	5988
1990	Mura_1990	Mura	SI	10099	0.1	835	338573	6.6	130.9	BOD_5	5.2	21468	610	2913
1990	Mures	Maros	HU	30144	0.1	7502	1164554	9.0	95.0	BOD_5	9.4	28162	13571	13263
1995	Mures	Mures	HU	30144	0.1	7502	748766	8.5	182.0	BOD_5	3.7	21236	13087	12032
2002	Mures	Mures	HU	30144	0.1	7502	637956	9.0	181.9	BOD_5	5.4	30977	14121	8976

2001	narva1	Narva	EE	46329	9.6	6068	279017	5.8	303.0	BOD_7	2.0	19111	1975	2868
2001	narva4	Väike-Emajõgi	EE	906	1.2	185	6689	6.0	8.4	BOD_7	2.0	527	36	119
2001	narva5	Võhandu	EE	1221	1.2	260	9173	5.7	8.0	BOD_7	1.7	429	44	42
1994	Nemunas10	Jura	LT	1832	0.6	814	23694	7.0	26.3	BOD_5	3.7	3069	506	98
1999	Nemunas10	Jura	LT	1832	0.6	814	22091	7.5	21.1	BOD_7	2.5	1664	388	110
1995	Nemunas11	Sventoji	LT	3600	4.7	1360	39414	6.5	32.2	BOD_5	1.6	1625	927	377
2002	Nemunas11	Sventoji	LT	3600	4.7	1360	36101	7.2	29.2	BOD_7	1.5	1381	710	401
1994	Nemunas6	Sesuvis	LT	1171	1.0	636	15712	7.2	20.3	BOD_5	3.2	2049	361	48
2001	Nemunas6	Sesuvis	LT	1171	1.0	636	14546	7.3	18.2	BOD_7	2.3	1320	277	56
2001	Nemunas8	Susve	LT	1299	2.0	778	20241	7.3	1.4	BOD_7	1.8	77	272	509
1995	Nemunas9	Streva	LT	296	5.3	114	5377	6.6	1.9	BOD_5	1.3	77	105	23
1999	Nemunas9	Streva	LT	296	5.3	114	7432	7.4	1.7	BOD_7	2.1	110	81	26
1995	Neris	Neris	LT	10840	2.1	1919	279257	6.7	59.6	BOD_5	2.2	4135	2271	2247
2000	Neris	Neris	LT	10840	2.1	1919	245340	7.5	51.3	BOD_7	5.1	8251	1549	1697
1994	Nordjylland2	Uggerby Å	DK	460	0.0	316	36223	8.4	5.0	BOD_5	2.6	411	27	30
1999	Nordjylland2	Uggerby Å	DK	460	0.0	316	42075	8.1	5.8	BOD_5	2.8	508	35	32
1995	Nordjylland3	Ry Å	DK	368	0.0	342	28724	8.0	3.2	BOD_5	2.8	283	21	57
1999	Nordjylland3	Ry Å	DK	368	0.0	342	36745	8.0	4.5	BOD_5	2.9	408	28	57
1992	Raba_1990	Raba	HU	1403	0.4	648	40037	11.4	3.7	BOD_5	5.4	623	1007	770
1991	Reka_1990	Reka	SI	540	0.2	51	6402	8.4	8.4	BOD_5	3.4	903	206	8
1992	Rhein_1990	Lustenauer	AT	6315	0.3	726	152665	4.9	217.4	BOD_5	1.8	12343	173	1052
1995	Rhine2	Mosel	FR/GE	11928	0.6	4141	660108	10.1	202.0	BOD_5	3.3	21022	1208	4435
1991	Ringkob_90	Skern Å	DK	1872	0.3	1170	77856	8.2	21.7	BOD_5	2.3	1572	130	169
1999	Ringkobing	Storå	DK	1137	0.2	813	84322	8.7	21.8	BOD_5	1.3	894	87	272
1990	Sava	Sava	SI	8642	0.1	1712	364059	9.7	258.0	BOD_5	4.2	34172	6180	2781
1995	Sava	Sava	SI	8642	0.1	1712	302322	9.4	299.0	BOD_5	2.5	23573	6246	7456
2001	Sava	Sava	SI	8642	0.1	1712	369069	9.5	274.0	BOD_5	2.8	24194	6025	9023
1991	Sava2	Sava2	SI	531	0.4	28	10829	5.8	53.1	BOD_5	1.6	2679	229	107
1995	Sava2	Sava2	SI	531	0.4	28	8978	6.3	35.2	BOD_5	1.6	1776	233	338
1999	Sava2	Sava2	SI	531	0.4	28	36511	7.0	38.4	BOD_5	1.6	1938	225	414
1999	Savinja2	Savinja2	SI	1239	0.3	161	89641	8.5	44.3	BOD_5	2.4	3353	771	794

1991	Soca	Soca	SI	2124	0.2	60	33693	7.7	89.5	BOD_5	1.6	4516	818	389
1995	Soca	Soca	SI	2124	0.2	60	27951	8.1	84.5	BOD_5	1.2	3198	808	418
2001	Soca	Soca	SI	2124	0.2	60	49046	7.1	93.7	BOD_5	1.1	3250	783	446
1995	Soenderjylland	Groenå	DK	1078	0.4	810	57523	8.6	7.8	BOD_5	1.4	346	78	142
1998	Soenderjylland	Groenå	DK	1078	0.4	810	56671	8.5	8.4	BOD_5	1.6	423	78	141
2002	Thames1	Thames	GB	10197	0.7	6000	482694	10.8	100.3	BOD_5	2.4	7591	367	29358
2002	Thames2	Lee (R.Ash)	GB	689	0.2	607	11149	11.1	7.5	BOD_5	1.2	284	25	1383
1995	Vestsjaelland	Tude Å	DK	673	3.1	487	56960	8.6	2.1	BOD_5	1.8	120	39	107
1998	Vestsjaelland	Tude Å	DK	673	3.1	487	56849	8.7	2.3	BOD_5	1.8	132	51	109
1991	Vipava	Vipava	SI	717	0.1	105	21010	10.6	18.4	BOD_5	1.9	1102	536	93
1995	Vipava	Vipava	SI	717	0.1	105	17442	10.9	22.2	BOD_5	2.6	1820	538	268
1999	Vipava	Vipava	SI	717	0.1	105	29692	10.7	14.2	BOD_5	1.7	761	519	340
1990	Zala	Zala	HU	986	0.0	356	25557	10.1	1.2	BOD_5	8.3	311	204	57
1995	Zala	Zala	HU	986	0.0	356	22788	9.4	2.4	BOD_5	3.1	237	191	72
1998	Zala	Zala	HU	986	0.0	356	32522	10.1	2.4	BOD_5	2.9	219	161	104
1991	Århus Amt	Guden Å	DK	2519	2.3	1553	204465	8.1	28.2	BOD_5	3.2	2843	176	799
1994	Århus Amt	Guden Å	DK	2519	2.3	1553	215007	8.5	41.1	BOD_5	2.2	2852	144	582
1999	Århus Amt	Guden Å	DK	2519	2.3	1553	214558	8.3	37.4	BOD_5	2.2	2591	189	582

Appendix 2. Catchment data available from 1988-2002 for the phosphorus regression model (n=106).

Year	**Basin**	**River**	**Country**	**Area (km^2)**	**Lake-%**	**slope (%)**	**Cropland (km^2)**	**Livestock (lsu)**	**Temperature (˚C)**	**Runoff (m^3/s)**	**P concentr. (mg/l O^2)**	**P flux (t/a)**	**Scattered P (t/a)**	**Tot. Point P (t/a)**
2000	Aller	Aller	DE	3545	0.2	0.005	1854	508814	9.7	35.3	0.12	133.6	31	91
2000	Aller2	Leine2	DE	6105	0.9	0.004	3404	1039812	9.9	51.1	0.16	257.8	54	297
2000	Barta	Barta	LV	2273	0.3	0.002	1010	21740	8.1	15.2	0.05	23.0	21	4
1990	Bodrog_90	Bodrog	HU	8649	0.6	0.006	2887	237037	9.0	80.1	0.14	349.4	532	546
1992	Danube1	Bodrog	SK	8535	0.6	0.006	2837	232730	8.7	105.0	0.17	568.5	524	546
1995	Danube1	Bodrog	SK	8535	0.6	0.006	2837	146078	8.4	112.8	0.13	460.0	406	385
1994	Danube2	Inn	AT/GE	26444	0.7	0.019	3587	912246	6.5	708.0	0.07	1562.9	431	776
1995	Danube3	Sebes-Körös	HU	3431	0.5	0.006	1066	90580	9.1	27.0	0.19	158.8	151	280
2000	Danube3	Sebes-Körös	HU	3431	0.5	0.006	1066	77068	10.0	28.2	0.17	148.3	110	140

1995	Danube4	Danube4	HU	135111	0.7	0.008	47859	6733927	7.7	2180.0	0.10	6764.9	3151	7509
2001	Danube4	Danube4	HU	135111	0.7	0.008	47859	6713490	7.6	2140.0	0.11	7153.6	1656	4045
1995	Danube5	Danube5	SK	133971	0.7	0.008	47088	6687310	7.7	2329.0	0.11	8174.7	3075	7388
2000	Danube5	Danube5	SK	133971	0.7	0.008	47088	6695003	8.5	2338.0	0.10	7358.4	1613	3961
1995	Danube6	Danube6	SK	25847	0.5	0.005	13346	853597	8.4	107.4	0.25	851.1	1057	2340
2002	Danube6	Danube6	SK	25847	0.5	0.005	13346	845774	9.1	122.5	0.17	657.0	589	678
2000	Daugava	Daugava	LV	70953	3.1	0.001	7305	791640	6.8	552.0	0.06	1114.1	543	646
1991	Drava_90	Drava	SI	13363	0.8	0.020	1049	289470	4.6	282.0	0.02	216.1	395	504
1991	Drava3	Drava3	SI	16667	0.7	0.018	1992	429942	5.6	323.0	0.02	195.6	806	605
1995	Drava3	Drava3	SI	16667	0.7	0.018	1992	385853	6.0	262.0	0.03	238.0	495	482
2001	Drava3	Drava3	SI	16667	0.7	0.018	1992	501220	6.8	296.0	0.02	215.6	253	328
1995	Drava4	Drava4	HU	39850	0.5	0.013	9340	932249	7.8	503.4	0.13	2051.2	1341	1379
2000	Drava4	Drava4	HU	39850	0.5	0.013	9340	1003260	8.4	540.7	0.12	2032.4	749	984
2000	Elbe	Elbe	DE	1441	0.0	0.001	816	74377	10.3	7.7	0.13	31.6	10	13
2000	Elbe2	Elbe2	DE	61207	1.0	0.005	26803	1975228	9.1	348.0	0.24	2633.9	1187	1589
2000	Elbe3	Saale	DE	17599	0.8	0.005	10321	974896	9.4	89.2	0.25	700.4	154	565
2000	Elbe4	Bile	DE	255	0.9	0.001	115	34775	10.2	2.4	0.14	10.8	2	9
2000	Ems	Hase	DE	3380	0.1	0.001	2498	355221	10.7	27.9	0.17	149.6	30	96
2000	Ems2	Ems2	DE	2952	0.3	0.001	2263	214715	10.8	35.5	0.20	219.4	28	176
2000	Enningdalsälven	Enningdalsälven	SE	353	8.7	0.005	33	1470	7.6	18.9	0.01	7.5	0	0
2000	Erft	Saale	DE	432	0.7	0.005	250	21662	11.0	0.7	0.25	5.9	4	29
2001	Escaut	Escaut	BE	4213	0.4	0.001	2971	403338	10.6	48.0	0.44	672.2	89	711
2000	Foyle4	Mourne River	GB	1036	0.1	0.003	0	144668	8.4	65.4	0.10	212.0	4	24
2001	GulfOfFinland	Keila	EE	1012	0.3	0.001	274	18671	6.1	6.9	0.09	20.4	8	25
2001	GulfOfRiga	Pärnu	EE	5486	0.1	0.001	1182	28191	6.1	51.5	0.09	146.0	29	9
2001	GulfOfRiga4	Pärnu	EE	2204	0.0	0.001	544	13784	6.1	23.5	0.05	35.4	13	4
2001	GulfRiga2	Kasari	EE	2913	0.1	0.001	680	19779	6.3	27.2	0.05	43.9	16	3
1990	Gyongyos	Balaton	HU	13049	0.1	0.013	2269	431319	7.7	156.0	0.38	1890.1	646	875
1995	Gyongyos	Balaton	HU	13049	0.1	0.013	2269	389753	7.4	171.0	0.46	2454.2	403	451
2001	Gyongyos	Balaton	HU	13049	0.1	0.013	2269	498611	7.6	126.0	0.13	496.7	196	285
2002	Hornad3	Hornad	SK	4152	0.3	0.007	1156	127356	8.2	18.0	0.35	199.4	141	317
1991	Kolpa	Kolpa	SI	3120	0.1	0.008	231	52103	8.6	69.3	0.02	54.0	129	13
1995	Kolpa	Kolpa	SI	3120	0.1	0.008	231	40122	9.0	82.3	0.03	74.5	81	21
1999	Kolpa	Kolpa	SI	3120	0.1	0.008	231	56437	9.5	84.4	0.02	61.2	52	17
1994	Labe	Labe	CZ	51714	0.9	0.005	22095	1654439	9.0	278.0	0.18	1578.1	1961	4741
2001	Labe	Labe	CZ	51714	0.9	0.005	22095	1666796	8.0	315.0	0.19	1887.4	1108	1332

2000	Maas	Niers	DE	798	0.8	0.001	521	62144	11.4	8.1	0.19	48.7	8	82
2000	Merkys	Merkys	LT	3300	1.6	0.001	832	42564	7.5	30.1	0.10	91.8	41	7
1995	Meuse2	Semois	FR/BE	1320	0.1	0.004	238	29023	9.5	37.8	0.07	84.1	92	48
2000	Meuse2	Semois	FR/BE	1320	0.0	0.004	238	29001	10.0	36.5	0.10	115.9	59	32
2000	Mosel1	Sar	DE	6886	0.4	0.003	2409	360111	10.7	90.5	0.32	913.3	82	404
1990	Moselle_90	Moselle	FR	11928	0.6	0.003	4141	679700	10.2	123.0	0.49	1915.0	1075	1778
2000	Moälven	Moälven	SE	2318	2.0	0.005	34	3267	2.9	28.9	0.05	43.7	2	1
2000	Mulde	Vereinig. Mulde	DE	7375	0.4	0.006	4000	418407	9.2	66.8	0.24	497.2	69	264
1990	Mura_1990	Mura	SI	10099	0.1	0.015	835	338573	6.6	130.9	0.07	298.5	308	827
1995	Mures	Mures	HU	30144	0.1	0.008	7502	748766	8.5	182.0	0.18	1009.0	1361	1273
2002	Mures	Mures	HU	30144	0.1	0.008	7502	637956	9.0	181.9	0.23	1307.9	983	641
2001	narva1	Narva	EE	46329	9.6	0.001	6068	279017	5.8	303.0	0.05	513.1	250	302
2001	narva4	Väike-Emajõgi	EE	906	1.2	0.002	185	6689	6.0	8.4	0.09	22.4	7	13
2001	narva5	Võhandu	EE	1221	1.2	0.001	260	9173	5.7	8.0	0.08	19.9	9	5
1994	Nemunas10	Jura	LT	1832	0.6	0.002	814	23694	7.0	26.3	0.08	63.9	48	9
1999	Nemunas10	Jura	LT	1832	0.6	0.002	814	22091	7.5	21.1	0.06	42.9	24	7
2002	Nemunas11	Sventoji	LT	3600	4.7	0.001	1360	36101	7.2	29.2	0.05	43.0	44	24
1994	Nemunas6	Sesuvis	LT	1171	1.0	0.002	636	15712	7.2	20.3	0.17	109.5	34	5
2001	Nemunas6	Sesuvis	LT	1171	1.0	0.002	636	14546	7.3	18.2	0.10	59.1	17	3
2001	Nemunas8	Susve	LT	1299	2.0	0.001	778	20241	7.3	1.4	0.05	2.2	17	31
1999	Nemunas9	Streva	LT	296	5.3	0.002	114	7432	7.4	1.7	0.05	2.8	5	2
2000	Neris	Neris	LT	10840	2.1	0.001	1919	245340	7.5	51.3	0.09	138.0	133	150
1994	Nordjylland2	Uggerby Å	DK	460	0.0	0.001	316	36223	8.4	5.0	0.23	36.3	11	5
1999	Nordjylland2	Uggerby Å	DK	460	0.0	0.001	316	42075	8.1	5.8	0.20	36.3	4	2
1995	Nordjylland3	Ry Å	DK	368	0.0	0.001	342	28724	8.0	3.2	0.22	22.3	8	10
1999	Nordjylland3	Ry Å	DK	368	0.0	0.001	342	36745	8.0	4.5	0.23	32.3	3	3
2000	Oder	Oder	DE	110628	1.3	0.002	56573	3780156	9.9	494.0	0.14	2149.9	3870	4163
1991	Reka_1990	Reka	SI	540	0.2	0.011	51	6402	8.4	8.4	0.03	8.9	35	1
2000	Rhine	Rhine	DE	94780	1.6	0.009	38285	5546431	9.3	1770.0	0.08	4465.5	779	4961
2000	Rhine1	Saar	GE	3756	0.6	0.003	1242	234409	10.6	53.6	0.26	436.1	44	131
1995	Rhine2	Mosel	FR/GE	11928	0.6	0.004	4141	660108	10.1	202.0	0.35	2234.7	417	1219
2000	Rhine2	Mosel	FR/GE	11928	0.6	0.004	4141	708576	10.8	92.6	0.16	467.2	175	645
2000	Rhine3	Ruhr	DE	1806	0.8	0.004	517	67465	9.7	27.5	0.12	102.3	16	83
2000	Rhine4	Nahe	DE	3637	0.1	0.004	1401	103370	10.3	43.3	0.17	232.1	33	90
1991	Ringkob_90	Skern Å	DK	1872	0.3	0.001	1170	77856	8.2	21.7	0.08	55.4	69	74
1999	Ringkobing	Storå	DK	1137	0.2	0.001	813	84322	8.7	21.8	0.08	55.0	10	13

1990	Sava	Sava	SI	8642	0.1	0.009	1712	364059	9.7	258.0	0.19	1543.5	1046	294
1995	Sava	Sava	SI	8642	0.1	0.009	1712	302322	9.4	299.0	0.08	743.0	601	709
2001	Sava	Sava	SI	8642	0.1	0.009	1712	369069	9.5	274.0	0.07	638.6	336	509
1991	Sava2	Sava2	SI	531	0.4	0.017	28	10829	5.8	53.1	0.02	31.5	40	13
1995	Sava2	Sava2	SI	531	0.4	0.017	28	8978	6.3	35.2	0.03	28.6	23	33
1999	Sava2	Sava2	SI	531	0.4	0.017	28	36511	7.0	38.4	0.01	15.6	13	24
1999	Savinja2	Savinja2	SI	1239	0.3	0.011	161	89641	8.5	44.3	0.06	86.2	43	45
1991	Soca	Soca	SI	2124	0.2	0.015	60	33693	7.7	89.5	0.02	48.0	137	35
1995	Soca	Soca	SI	2124	0.2	0.015	60	27951	8.1	84.5	0.01	35.4	82	51
2001	Soca	Soca	SI	2124	0.2	0.015	60	49046	7.1	93.7	0.01	28.7	46	37
1995	Soenderjylland	Groenå	DK	1078	0.4	0.001	810	57523	8.6	7.8	0.09	22.2	20	21
1998	Soenderjylland	Groenå	DK	1078	0.4	0.001	810	56671	8.5	8.4	0.11	29.1	8	7
2000	Weser	Werra	DE	6040	0.1	0.005	2203	306407	9.2	48.4	0.18	280.8	50	110
2000	Weser2	Aller	DE	4644	0.4	0.003	2600	601011	10.0	22.0	0.15	104.1	37	151
1995	Vestsjaelland	Tude Å	DK	673	3.1	0.001	487	56960	8.6	2.1	0.21	14.0	16	19
1998	Vestsjaelland	Tude Å	DK	673	3.1	0.001	487	56849	8.7	2.3	0.17	12.5	6	5
1991	Vipava	Vipava	SI	717	0.1	0.009	105	21010	10.6	18.4	0.05	27.0	93	11
1995	Vipava	Vipava	SI	717	0.1	0.009	105	17442	10.9	22.2	0.07	47.5	53	27
1999	Vipava	Vipava	SI	717	0.1	0.009	105	29692	10.7	14.2	0.04	18.4	29	19
1990	Zala	Zala	HU	986	0.0	0.005	356	25557	10.1	1.2	0.24	9.2	56	14
1995	Zala	Zala	HU	986	0.0	0.005	356	22788	9.4	2.4	0.18	13.7	37	10
1998	Zala	Zala	HU	986	0.0	0.005	356	32522	10.1	2.4	0.15	11.2	16	8
1991	Århus Amt	Guden Å	DK	2519	2.3	0.001	1553	204465	8.1	28.2	0.16	142.1	94	349
1994	Århus Amt	Guden Å	DK	2519	2.3	0.001	1553	215007	8.5	41.1	0.11	142.6	57	104
1999	Århus Amt	Guden Å	DK	2519	2.3	0.001	1553	214558	8.3	37.4	0.10	117.8	22	28

Appendix 3. Catchment data available from 1988-2002 for the nitrogen regression model (n=79).

Year	Basin	River	Country	Area (km^2)	Lake-%	Cropland (km^2)	Livestock (lsu)	Temperature (˚C)	Runoff (m^3/s)	N concentr. (mg/l)	N flux (t/a)	Scattered N (t/a)	Tot. Point N (t/a)
2000	Aller	Aller	DE	3545	0.2	1854	508814	9.7	35.3	5.1	5677	154	1287
2000	Aller2	Leine2	DE	6105	0.9	3404	1039812	9.9	51.1	5.8	9347	272	4242
2000	Barta	Barta	LV	2273	0.3	1010	21740	8.1	15.2	1.6	781	110	27
1990	Bodrog_90	Bodrog	HU	8649	0.6	2887	237037	9.0	80.1	3.4	8487	1359	2247
1995	Danube3	Sebes-Körös	HU	3431	0.5	1066	90580	9.1	27.0	2.2	1882	508	1010

2000	Danube3	Sebes-Körös	HU	3431	0.5	1066	77068	10.0	28.2	2.4	2152	581	756
1995	Danube4	Danube4	HU	135111	0.7	47859	6733927	7.7	2180.0	3.4	233057	11683	48377
2001	Danube4	Danube4	HU	135111	0.7	47859	6713490	7.6	2140.0	3.6	242278	8382	45512
1995	Danube5	Danube5	SK	133971	0.7	47088	6687310	7.7	2329.0	3.4	248252	11462	47976
2000	Danube5	Danube5	SK	133971	0.7	47088	6695003	8.5	2338.0	2.9	213083	8189	45111
1995	Danube6	Danube6	SK	25847	0.5	13346	853597	8.4	107.4	3.7	12532	3378	8041
2002	Danube6	Danube6	SK	25847	0.5	13346	845774	9.1	122.5	2.4	9313	2808	5665
2000	Daugava	Daugava	LV	70953	3.1	7305	791640	6.8	552.0	1.6	26982	2507	3232
2001	Drava3	Drava3	SI	16667	0.7	1992	501220	6.8	296.0	1.0	9615	1383	2743
1995	Drava4	Drava4	HU	39850	0.5	9340	932249	7.8	503.4	2.7	42707	4512	6820
2000	Drava4	Drava4	HU	39850	0.5	9340	1003260	8.4	540.7	1.7	29156	3751	7290
2000	Elbe	Elbe	DE	1441	0.0	816	74377	10.3	7.7	3.0	730	49	173
2000	Elbe2	Elbe2	DE	61207	1.0	26803	1975228	9.1	348.0	5.2	57068	5688	15042
2000	Elbe3	Saale	DE	17599	0.8	10321	974896	9.4	89.2	7.2	20254	773	8016
2000	Elbe4	Bile	DE	255	0.9	115	34775	10.2	2.4	3.6	272	12	121
2000	Ems	Hase	DE	3380	0.1	2498	355221	10.7	27.9	4.5	3959	152	1355
2000	Ems2	Ems2	DE	2952	0.3	2263	214715	10.8	35.5	6.0	6695	141	2513
2000	Enningdalsälven	Enningdalsälven	SE	353	8.7	33	1470	7.6	18.9	0.7	405	2	0
2000	Erft	Saale	DE	432	0.7	250	21662	11.0	0.7	7.7	180	21	413
2000	Foyle4	Mourne River	GB	1036	0.1	0	144668	8.4	65.4	1.9	3857	19	135
2001	GulfOfFinland	Keila	EE	1012	0.3	274	18671	6.1	6.9	3.5	758	36	173
2001	GulfOfRiga	Pärnu	EE	5486	0.1	1182	28191	6.1	51.5	2.3	3784	136	65
2001	GulfOfRiga4	Pärnu	EE	2204	0.0	544	13784	6.1	23.5	3.2	2364	59	28
2001	GulfRiga2	Kasari	EE	2913	0.1	680	19779	6.3	27.2	2.4	2076	73	24
1990	Gyongyos	Balaton	HU	13049	0.1	2269	431319	7.7	156.0	2.6	12791	1550	3139
1995	Gyongyos	Balaton	HU	13049	0.1	2269	389753	7.4	171.0	2.2	11972	1350	2731
2001	Gyongyos	Balaton	HU	13049	0.1	2269	498611	7.6	126.0	1.3	5245	1058	2924
2002	Hornad3	Hornad	SK	4152	0.3	1156	127356	8.2	18.0	3.7	2086	603	1476
1999	Kolpa	Kolpa	SI	3120	0.1	231	56437	9.5	84.4	1.0	2529	256	91
2001	Labe	Labe	CZ	51714	0.9	22095	1666796	8.0	315.0	4.8	47384	5293	11399
2000	Maas	Niers	DE	798	0.8	521	62144	11.4	8.1	8.6	2178	39	1182
2000	Merkys	Merkys	LT	3300	1.6	832	42564	7.5	30.1	1.5	1386	219	39
2000	Mosel1	Sar	DE	6886	0.4	2409	360111	10.7	90.5	4.0	11387	460	4355
2000	Moälven	Moälven	SE	2318	2.0	34	3267	2.9	28.9	0.6	583	8	22
2000	Mulde	Vereinig. Mulde	DE	7375	0.4	4000	418407	9.2	66.8	7.5	15800	347	3740
2002	Mures	Mures	HU	30144	0.1	7502	637956	9.0	181.9	1.8	10440	5201	3460

2001	narva1	Narva	EE	46329	9.6	6068	279017	5.8	303.0	0.6	5829	1152	1643
2001	narva4	Väike-Emajõgi	EE	906	1.2	185	6689	6.0	8.4	1.5	384	34	83
2001	narva5	Võhandu	EE	1221	1.2	260	9173	5.7	8.0	1.0	255	43	37
1999	Nemunas10	Jura	LT	1832	0.6	814	22091	7.5	21.1	2.1	1384	133	42
2002	Nemunas11	Sventoji	LT	3600	4.7	1360	36101	7.2	29.2	1.3	1160	245	152
2001	Nemunas6	Sesuvis	LT	1171	1.0	636	14546	7.3	18.2	1.7	987	95	21
2001	Nemunas8	Susve	LT	1299	2.0	778	20241	7.3	1.4	4.9	210	93	193
1999	Nemunas9	Streva	LT	296	5.3	114	7432	7.4	1.7	1.0	53	28	10
2000	Neris	Neris	LT	10840	2.1	1919	245340	7.5	51.3	1.5	2491	618	721
1994	Nordjylland2	Uggerby Å	DK	460	0.0	316	36223	8.4	5.0	6.8	1076	25	26
1999	Nordjylland2	Uggerby Å	DK	460	0.0	316	42075	8.1	5.8	5.2	947	23	26
1995	Nordjylland3	Ry Å	DK	368	0.0	342	28724	8.0	3.2	5.6	564	20	50
1999	Nordjylland3	Ry Å	DK	368	0.0	342	36745	8.0	4.5	5.2	724	18	48
2000	Oder	Oder	DE	110628	1.3	56573	3780156	9.9	494.0	2.7	41284	19976	27621
2000	Rhine	Rhine	DE	94780	1.6	38285	5546431	9.3	1770.0	2.8	156292	4013	60081
2000	Rhine1	Saar	GE	3756	0.6	1242	234409	10.6	53.6	3.5	5950	244	1501
2000	Rhine2	Mosel	FR/GE	11928	0.6	4141	708576	10.8	92.6	3.6	10513	1025	4617
2000	Rhine3	Ruhr	DE	1806	0.8	517	67465	9.7	27.5	4.6	3981	80	1190
2000	Rhine4	Nahe	DE	3637	0.1	1401	103370	10.3	43.3	4.9	6691	167	1275
1991	Ringkob_90	Skern Å	DK	1872	0.3	1170	77856	8.2	21.7	3.5	2365	94	126
1999	Ringkobing	Storå	DK	1137	0.2	813	84322	8.7	21.8	3.5	2414	55	226
2001	Sava	Sava	SI	8642	0.1	1712	369069	9.5	274.0	1.5	13307	1826	3112
1999	Sava2	Sava2	SI	531	0.4	28	36511	7.0	38.4	0.9	1090	69	147
1999	Savinja2	Savinja2	SI	1239	0.3	161	89641	8.5	44.3	2.1	2962	237	281
2001	Soca	Soca	SI	2124	0.2	60	49046	7.1	93.7	0.7	2128	256	263
1995	Soenderjylland	Groenå	DK	1078	0.4	810	57523	8.6	7.8	2.7	664	56	116
1998	Soenderjylland	Groenå	DK	1078	0.4	810	56671	8.5	8.4	3.1	814	46	113
2000	Weser	Werra	DE	6040	0.1	2203	306407	9.2	48.4	4.7	7189	252	1543
2000	Weser2	Aller	DE	4644	0.4	2600	601011	10.0	22.0	4.1	2845	187	2142
1995	Vestsjaelland	Tude Å	DK	673	3.1	487	56960	8.6	2.1	8.1	539	36	95
1998	Vestsjaelland	Tude Å	DK	673	3.1	487	56849	8.7	2.3	12.0	879	33	90
1999	Vipava	Vipava	SI	717	0.1	105	29692	10.7	14.2	1.8	797	159	120
1990	Zala	Zala	HU	986	0.0	356	25557	10.1	1.2	3.0	111	134	40
1995	Zala	Zala	HU	986	0.0	356	22788	9.4	2.4	2.7	209	122	47
1998	Zala	Zala	HU	986	0.0	356	32522	10.1	2.4	2.2	170	88	72
1991	Århus Amt	Guden Å	DK	2519	2.3	1553	204465	8.1	28.2	4.3	3838	128	593
1994	Århus Amt	Guden Å	DK	2519	2.3	1553	215007	8.5	41.1	3.9	5004	135	516

1999	Århus Amt	Guden Å	DK	2519	2.3	1553	214558	8.3	37.4	3.2	3816	121	484