Supplementary 1

Evaluation of water quality in Ialomita River Basin in relationship with land cover patterns

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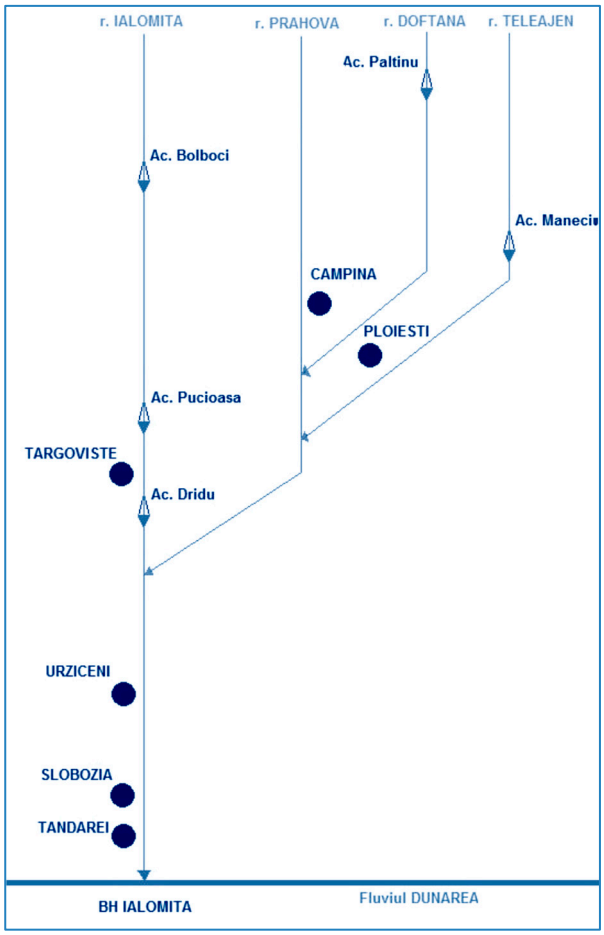

Figure S1. Water management scheme of Ialomita River Basin
(National Administration of Romanian Waters http://www.rowater.ro)

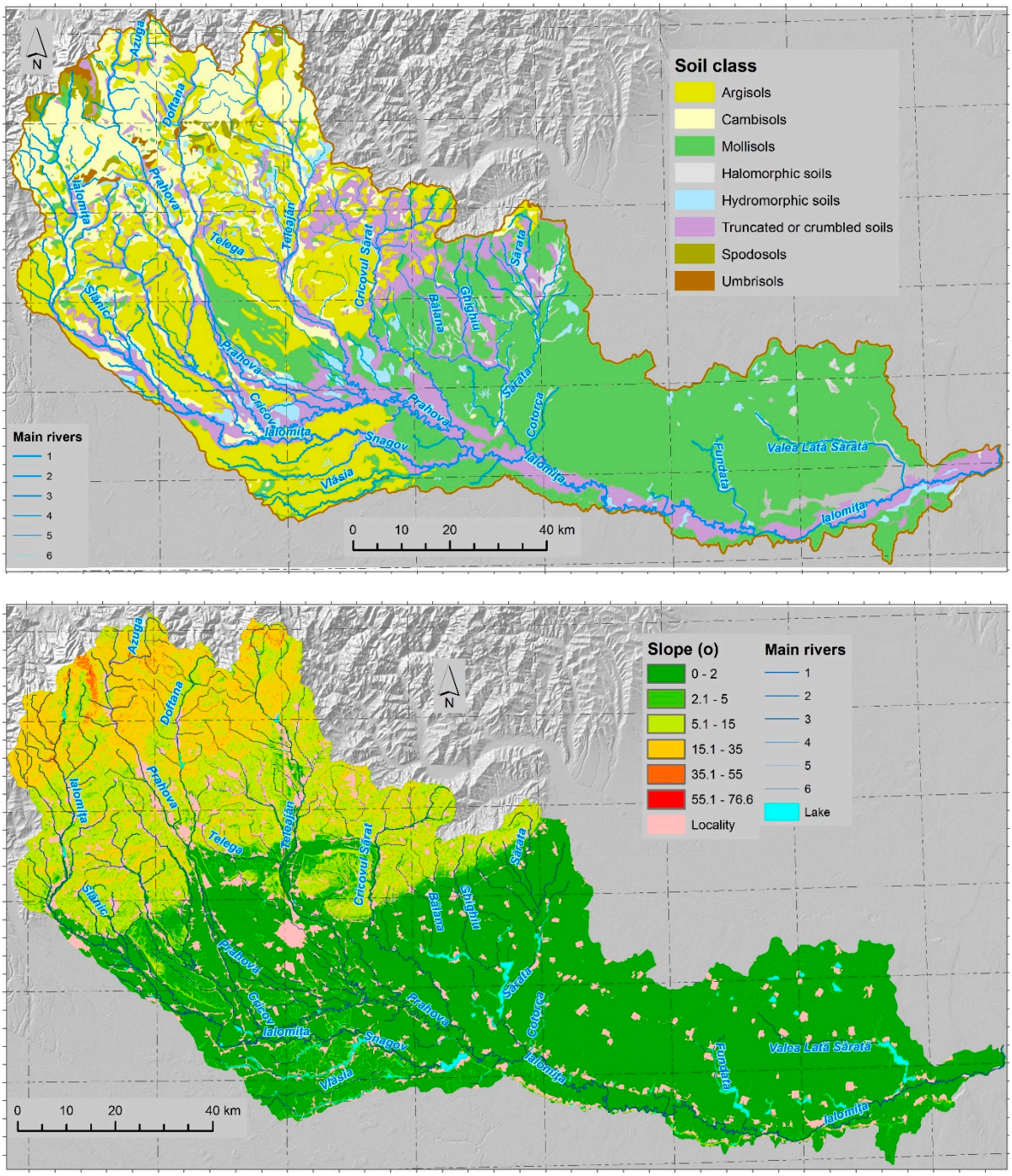

Figure S2. Soil and slope maps of Ialomita River Basin
(Source of soil data: https://esdac.jrc.ec.europa.eu/content/soil-atlas-europe)

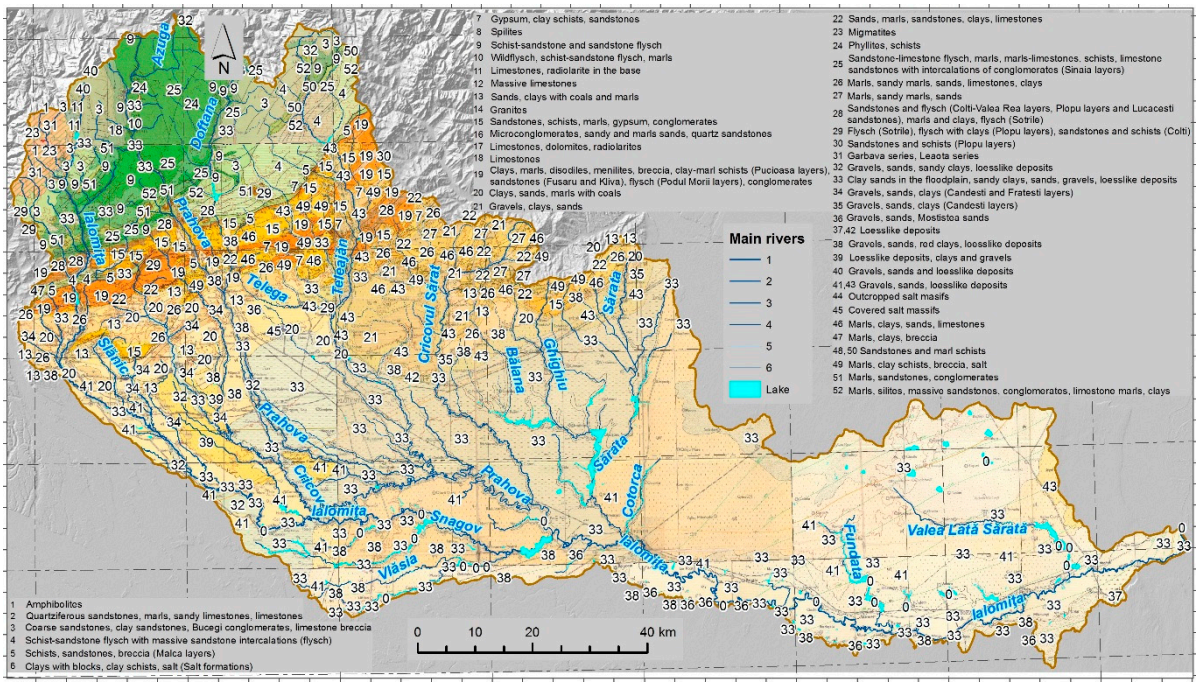

Figure S3. Geological map of Ialomita River Basin

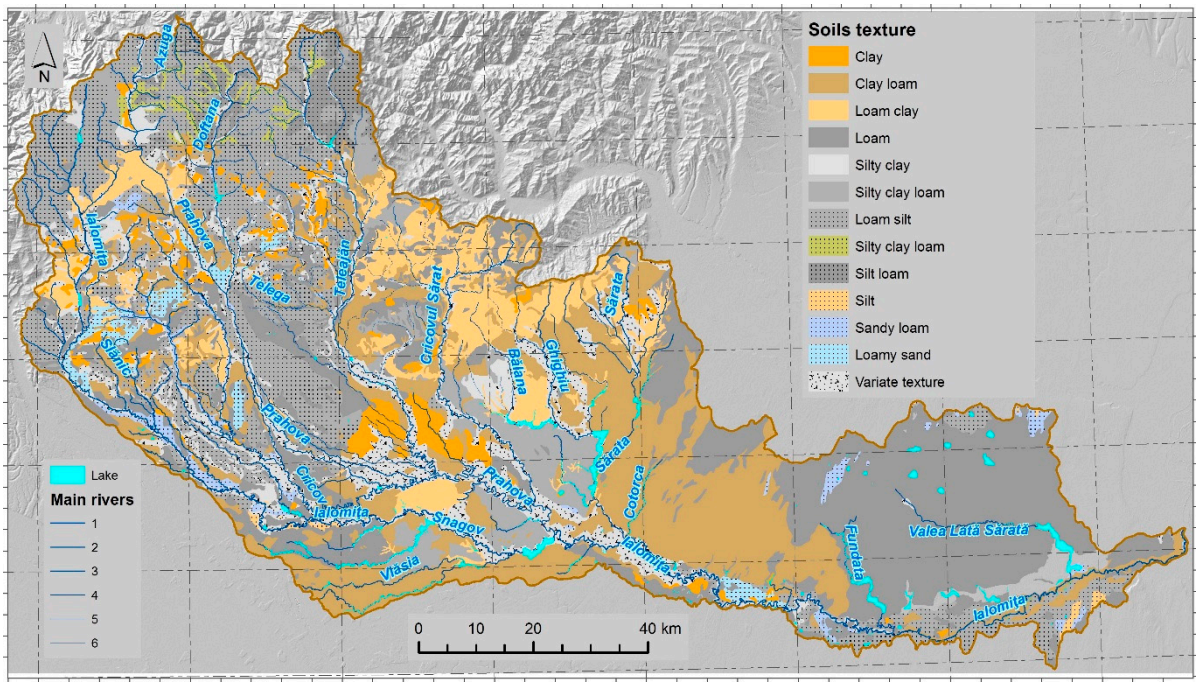

Figure S4. Soil texture map of Ialomita River Basin

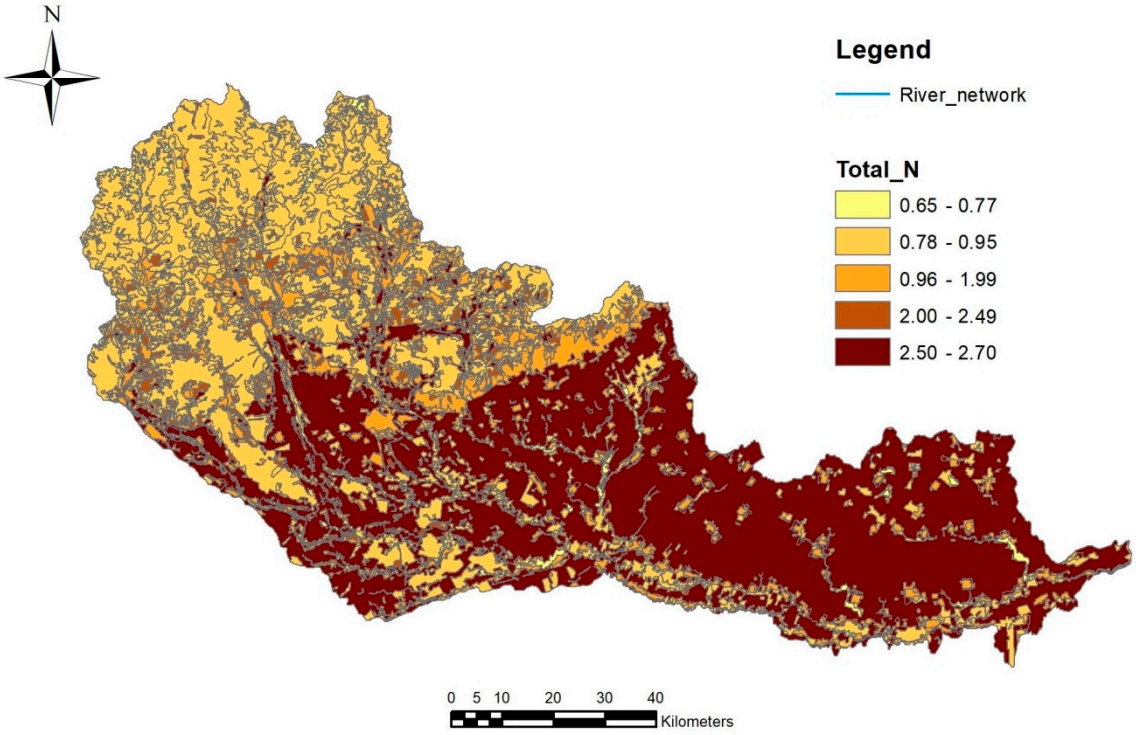

Figure S5. Reclassification of total nitrogen (mg/L) based on land cover

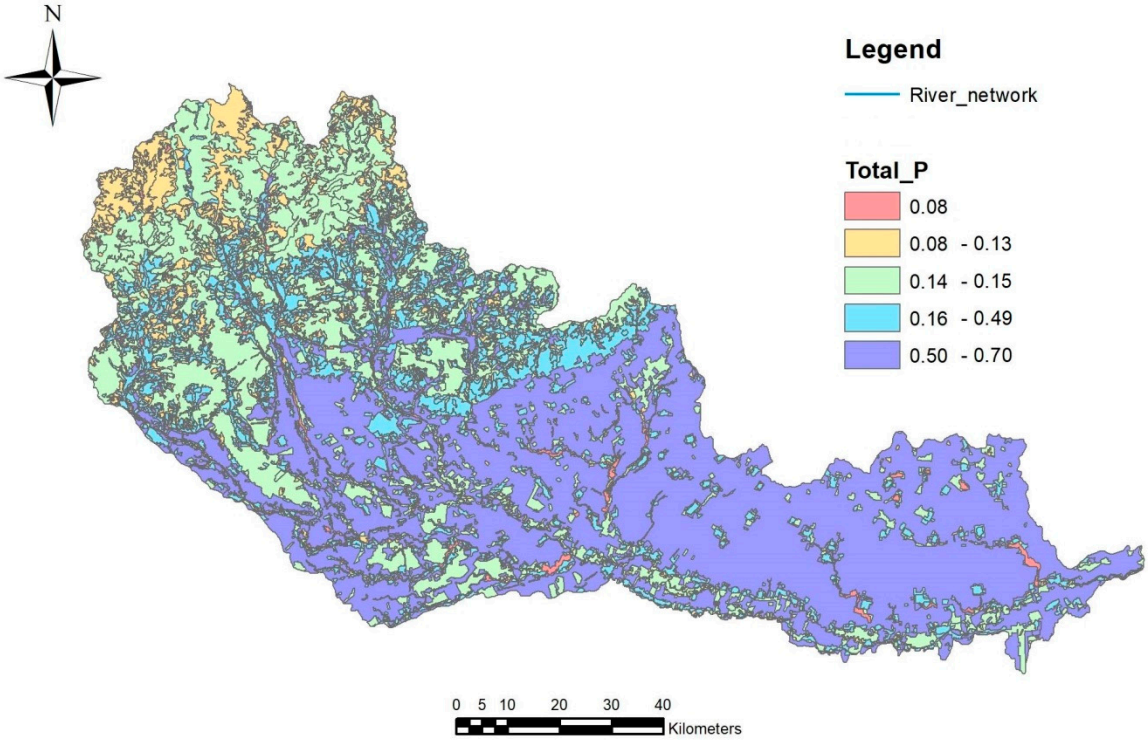

Figure S6. Reclassification of total phosphorous (mg/L) based on land cover

Table S1. Correlation matrix (n=107) of the variables recorded downstream Tandarei control section on Ialomita River between 2007 and 2016 (** - correlations are significant at 0.01 level)

	pH	**NH4N**	**Alkalinity**	**NO3-N**	**BOD5**	**TSS**	**DO**	**PO4-P**
pH	1	**-0.507****	0.009	-0.153	-0.094	0.133	-0.010	**-0.321****
p	-	*0.000*	*0.925*	*0.115*	*0.336*	*0.171*	*0.920*	*0.001*
NH_4-N	-	1	0.090	**0.494****	0.182	-0.108	0.169	**0.278****
p	-	-	*0.354*	*0.000*	*0.061*	*0.267*	*0.082*	*0.004*
Alkalinity	-	-	1	**0.323****	-0.141	-0.055	**0.417****	0.029
p	-	-	-	*0.001*	*0.147*	*0.577*	*0.000*	*0.769*
NO_3-N	-	-	-	1	0.140	-0.031	0.055	0.088
p	-	-	-	-	*0.151*	*0.754*	*0.575*	*0.367*
BOD_5	-	-	-	-	1	-0.039	0.069	0.031
p	-	-	-	-	-	*0.689*	*0.482*	*0.754*
TSS	-	-	-	-	-	1	-0.118	-0.066
p	-	-	-	-	-	-	*0.224*	*0.499*
DO	-	-	-	-	-	-	1	-0.081
p	-	-	-	-	-	-	-	*.408*
PO_4-P	-	-	-	-	-	-	-	1

Table S2. Meteorological data recorded at Targoviste used for SWAT modeling (Source of data: http://worldweather.wmo.int/en/home.html)

Precipitations (mm)			
Period	Precipitation sum	Maximum daily value	Days with precipitation
01.01.2016 - 31.12.2016	797	20	129
01.01.2017 - 31.12.2017	920	29	123
01.01.2018 - 31.12.2018	1103	33	154
01.06.2016 -30.09.2016	*263*	*20*	*34*
01.06.2017 - 30.09.2017	*305*	*28*	*32*
01.06.2018 - 30.09.2018	*547*	*33*	*45*

	Average	Minimum	Maximum
		(date)	(date)
Air temperature at 2-m (°C)			
01.01.2016 - 31.12.2016	9.4	-15.7	34.3
		(01.01.2016)	(18.06.2016)
01.01.2017 - 31.12.2017	10.9	-23	37.3
		(09.01.2017)	(05.08.2017)
01.01.2018 - 31.12.2018	11.3	-19.1	33.2
		(01.03.2018)	(02.09.2018)
Relative humidity (%)			

01.01.2016 - 31.12.2016	77	23	-
		(01.08.2016)	-
01.01.2017 - 31.12.2017	77	14	-
		(02.04.2017)	-
01.01.2018 - 31.12.2018	78	21	-
		(14.10.2018; 25.10.2018)	-

Snow cover (cm)				
Period	Average	Maximum (date)	Earliest day with snow cover	Latest day with snow cover
01.01.2016 - 31.12.2016	6.1	22 (18.01.2016)	13.12.2016	06.02.2016
01.01.2017 - 31.12.2017	9	21 (09.02.2017)	17.12.2017	21.04.2017
01.01.2018 - 31.12.2018	5.1	21 (28.02.2018)	17.11.2018	26.03.2018

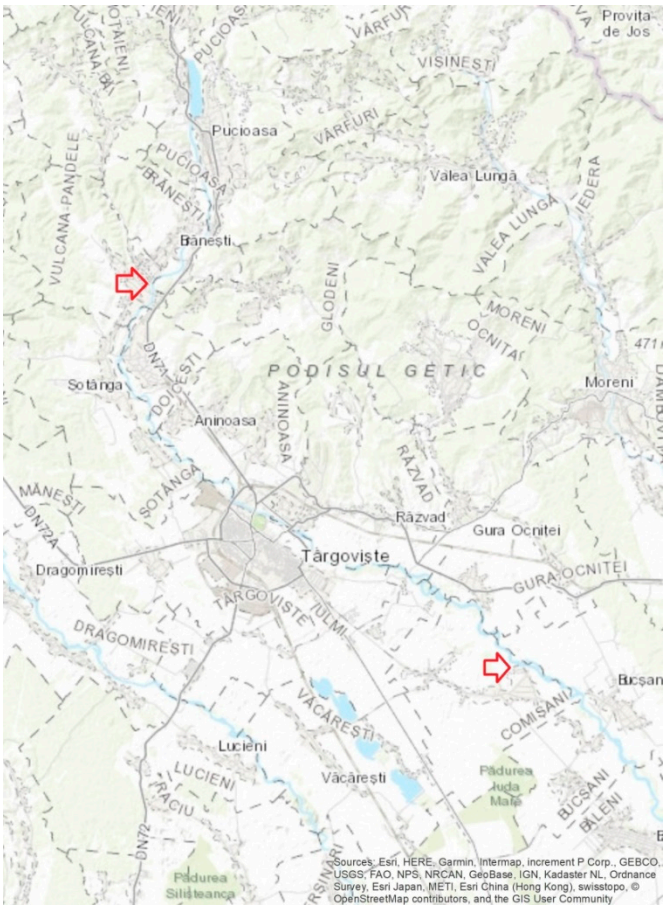

Figure S7. Position of the two monitoring points selected to characterize the impact of urban wastewaters on the Ialomita River quality

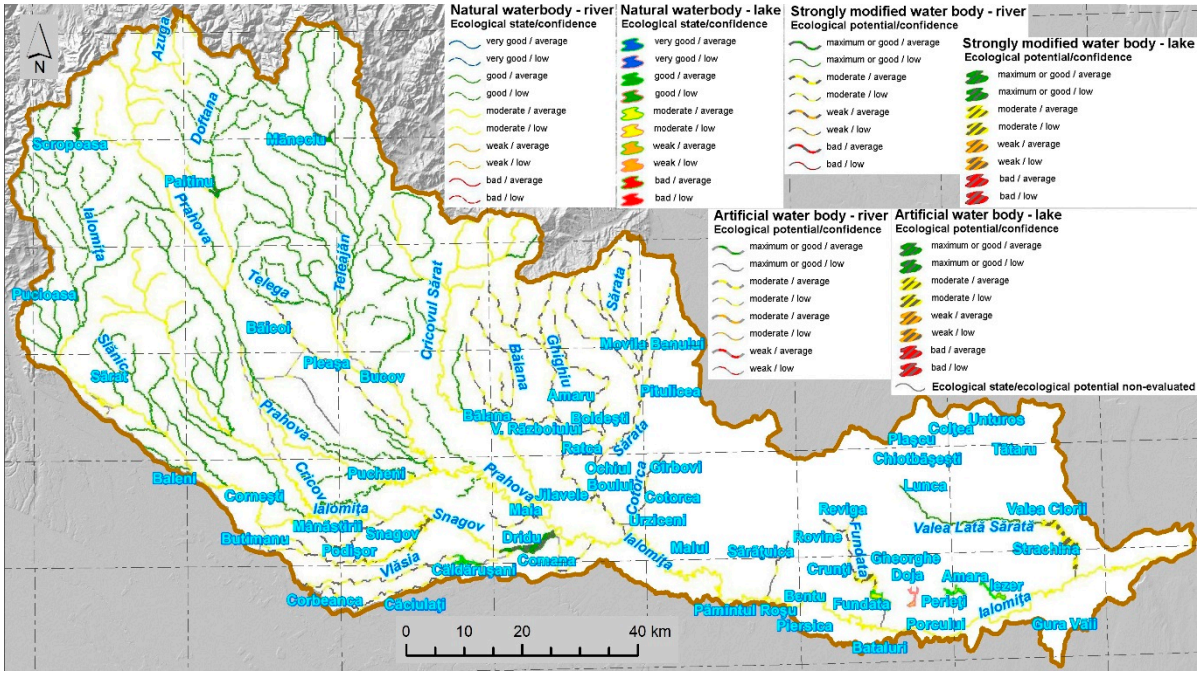

Figure S8. Ecological status assessment of the water bodies on the Ialomita River Basin and its tributaries (prepared based on ANAR Buzau-Ialomita datasets – http://www.rowater.ro/dabuzau/default.aspx)