

JOURNAL OF LIMNOLOGY

DOI: 10.4081/jlimnol.2026.2273

SUPPLEMENTARY MATERIAL

Environmental drivers and seasonal distribution of endemic macroinvertebrates in the Upper Loukkos Watershed (Northwestern Morocco)

Achraf Guellaf,* Myriam Slimani, Sanae Errochdi, Sara El Yaagoubi, Brahim Chergui Hemiani, Ahmed Taheri, Nard Bennas

Laboratory of Ecology, Systematics and Conservation of the Biodiversity (LESCB, URL-CNRST N°18), Faculty of Science, Abdelmalek Essaadi University, Tetouan, Morocco

***Corresponding Author:** achraf1949@gmail.com ; aguellaf@uae.ac.ma

Key words: endemic macroinvertebrates; Mediterranean rivers; intermittent streams; hydroclimatic fluctuations; Loukkos Watershed; Morocco.

Supplementary Tab. S1. List of localities and stream characteristics of the sampled sites in the Upper Loukkos River basin.

Code	Station	Altitude	Agricultural impacts	Waste water discharges	Infrastructure impacts	Other pressures
S1	O.S.B.Saada	220		+		
S2	O.Mlilah	198	+	+		
S3	O.Quob	110	+	+		
S4	O.Loukous	140	+	+		+
S5	O.Loukous 2	110			+	
S6	O.Malah	107		+		+
S7	O.Zendoula	108		+		+
S8	O.Bouhassan	31	+	+	+	
S9	O.Harakate	740			+	+
S10	O.Yema Souna	684			+	+
S11	O.Boukrouch	124			+	+
S12	O.Melah	147		+	+	+
S13	O.Sgher	200	+			+
S14	O.Azoumagh	202	+			+
S15	O.S.Mchich	208		+		
S16	O.Stah	766		+		
S17	O.Khandeq louastiya	804			+	
S18	O.Khandeq Lihoudi	792				