

**Pastor *et al.*, 2017. Local and regional drivers of headwater stream metabolism: insights from the first AIL collaborative project. *Limnetica* 36(1):67–86 (2017).**

## **CORRIGENDUM**

Pastor, A., A. Lupon, L. Gómez-Gener, T. Rodríguez-Castillo, M. Abril, M. I. Arce, I. Aristi, M. Arroita, A. G. Bravo, R. del C. Núria de Castro-Català, J. P. Casas-Ruiz, E. Estévez, M. Fillol, L. Flores, A. Freixa, P. Giménez-Grau, A. M. González-Ferreras, E. H. Amo, E. J. Martín, A. Martínez, S. Monroy, J. Mora-Gómez, C. Palacin-Lizarbe, O. Pereda, S. Poblador, R. Rasines-Ladero, M. Reyes, P. Rodríguez-Lozano, C. Ruiz, I. Sanpera-Calbet, L. Solagaistua, I. Tornero, and N. Catalán.

The authors would like to correct an error in Table 2 and Table S1 of Pastor *et al.* (2017). The authors inadvertently provided uncorrected data for discharge. The corrected version is appended in this document (Corrigendum Table 1). Results of the partial least square regressions were slightly affected, and thus, we provide also the correct version of Table 4 and Figure 4 and the amended text in the results section. Because the results of the PLS analyses are minimal, the discussion and conclusions of the article are not modified. The authors apologize for any inconvenience caused by this error.

## **RESULTS TEXT**

*Previous version:*

“Finally, stream discharge was higher for the EBF (3.8-5.5 L/s) than for ICF (9.1-24.9 L/s) and PCMF (14.1-30.8 L/s) regions.”

“The PLS model for GPP explained 79% of the variance (Fig. 4a; Table 4). Except for T30d and ADP, regional variables had low influence on GPP rates ( $VIP < 0.8$ ). Conversely, for sediment, Tw and DOC were positively related to GPP, while canopy cover and the mean reach depth had a negative effect on GPP (in all cases:  $VIP > 0.8$ ; Fig. 4a; Table 4; Fig. 5). The PLS model for ER explained 79% of the variance (Fig. 4b; Table 4). Three regional variables highly influenced the variance of ER in the studied reaches ( $VIP > 1.0$ ). Increases in MAP enhanced ER rates, while ER decreased as catchment area and the Impacted:Reference ratio increased. Local factors that highly contributed to explain the variance in ER ( $VIP > 0.8$ ) were slope and pH, and canopy cover, which were positively related (Fig. 4b; Table 4). EC which was negatively related, as pointed in Fig. 5.”

*Corrected version:*

“Finally, stream discharge was lower for the EBF (2.9-3.8 L/s) than for ICF (7.1-14.7 L/s) and PCMF (11.4-31.5 L/s) regions.”

“The PLS model for GPP explained 82% of the variance (Fig. 4a; Table 4). Except for T30d and ADP, regional variables had low influence on GPP rates ( $VIP < 0.8$ ). Conversely, for sediment, Tw and DOC were positively related to GPP, while mean reach depth had a negative effect on GPP (in all cases:  $VIP > 0.8$ ; Fig. 4a; Table 4; Fig. 5). The PLS model for ER explained 88% of the variance (Fig. 4b; Table 4). Three regional variables highly influenced the variance of ER in the studied reaches ( $VIP > 1.0$ ). Increases in MAP enhanced ER rates, while ER decreased as catchment area and the Impacted:Reference ratio increased. Local factors that highly or moderately contributed to explain

the variance in ER (VIP > 0.8) were slope and pH, which were positively related (Fig. 4b; Table 4), and EC and sediment, which were negatively related to ER (Fig. 5)”

*Corrigendum Table 1. Published (Tables 2 and S1 in Pastor et al. 2017) vs corrected discharge data of the studied stream reaches for summer and fall.*

Stream code	Published discharge (L/s)		Corrected discharge (L/s)	
	Summer	Fall	Summer	Fall
BIS	14.4	25.8	14.4	25.8
TAJ	23.9	24.9	14.7	13.4
BLA	9.1	n.a.	7.1	n.a.
CAR	7.5	9.7	7.6	8.6
CAS	14.2	7.4	12.1	11.4
REI	18.3	5.5	15.8	5.5
LLEM	19.3	11.2	16.7	12.6
PAU	30.8	14.1	31.5	11.4
MAU	3.8	n.a.	3.8	n.a.
GER	5.5	n.a.	2.9	n.a.

Table 4. (Published version) Summary of partial least square models (PLS) models produced for gross primary productivity (GPP) and ecosystem respiration (ER). Note that VIP values are similar to the older PLS version, and thus, the discussion and conclusions of the article are not affected.

Regional factors		Local factors		R <sup>2</sup> Y	Q <sup>2</sup> Y
GPP					
<i>T30d</i>	<b>0.226*</b>	<b>Coarse:fine</b>	<b>0.285**</b>		
<i>ADP</i>	<b>0.114*</b>	<b>DOC</b>	<b>0.196**</b>		
<i>MAP</i>	-0.143	<b>Tw</b>	<b>0.120**</b>		
<i>Area</i>	0.017	<b>Canopy cover</b>	<b>-0.095*</b>		
<i>MAT</i>	0.035	<b>D</b>	<b>-0.070*</b>		
		Q	-0.078		
		pH	0.007		
		EC	0.107	<b>0.79</b>	<b>0.32</b>
ER					
<b>Area</b>	<b>-0.140**</b>	<b>EC</b>	<b>-0.278**</b>		
<b>Impacted: Reference</b>	<b>-0.149**</b>	<b>Slope</b>	<b>0.073**</b>		
<b>MAP</b>	<b>0.162**</b>	<b>pH</b>	<b>0.087*</b>		
ADP	0.188	<b>Canopy cover</b>	<b>0.160*</b>		
MAT	0.075	Coarse:Fine	-0.084		
P30d	0.009	D	0.042		
		DIN	-0.134	<b>0.81</b>	<b>0.68</b>

Values are the coefficients from PLS models which describe the relationship (direction and relative strength) between X- and Y-variables. X-variables included in the PLS models are sorted according to their variable influence on projection value (VIP). Bold font is used to identify the top ones based on their VIP value (VIP > 0.8). Among them, variables with two asterisks in the coefficients are highly influential (VIP > 1) and variables with one asterisk in the coefficients are the moderately influential ones (VIP between 1 and 0.8). See Table 2 for the explanation of the abbreviations.

Table 4. (corrected version) Summary of partial least square models (PLS) models produced for gross primary productivity (GPP) and ecosystem respiration (ER). Note that VIP values are similar to the older PLS version, and thus, the discussion and conclusions of the article are not affected.

Regional factors		Local factors		R <sup>2</sup> Y	Q <sup>2</sup> Y
<b>GPP</b>					
T30d	<b>0.313**</b>	<b>Coarse: fine</b>	<b>0.327**</b>		
ADP	<b>0.147*</b>	<b>DOC</b>	<b>0.262**</b>		
MAP	-0.169	<b>Tw</b>	<b>0.188**</b>		
Area	0.014	<b>D</b>	<b>-0.122*</b>		
		DIN	0.136		
		pH	0.042		
		Q	-0.088		
		Canopy cover	-0.107	<b>0.82</b>	<b>0.31</b>
<b>ER</b>					
Area	<b>-0.161**</b>	<b>EC</b>	<b>-0.326**</b>		
MAP	<b>0.152**</b>	<b>Slope</b>	<b>0.073**</b>		
Impacted: Reference	<b>-0.163**</b>	<b>pH</b>	<b>0.099**</b>		
ADP	<b>0.323*</b>	<b>Coarse: Fine</b>	<b>-0.114*</b>		
MAT	-0.079	D	0.008		
P30d	0.004	Canopy cover	0.148		
		Q	0.126	<b>0.88</b>	<b>0.59</b>

Values are the coefficients from PLS models which describe the relationship (direction and relative strength) between X- and Y-variables. X-variables included in the PLS models are sorted according to their variable influence on projection value (VIP). Bold font is used to identify the top ones based on their VIP value (VIP > 0.8). Among them, variables with two asterisks in the coefficients are highly influential (VIP > 1) and variables with ones asterisk in the coefficients are the moderately influential ones (VIP between 1 and 0.8). See Table 2 for the explanation of the abbreviations.

Figure 4. Published vs corrected version of Figure 4. The figure shows the loadings plot of the PLS regression analysis for (a) gross primary production (GPP; top panels) and (b) ecosystem respiration (ER, bottom panels). The graph shows how the Y-variable (squares) correlates with X-variables (circles) and the correlation structure of the X's. X-variables are classified according to their variable influence on projection value (VIP): highly influential (black circles), moderately influential (grey circles) and less influential (white circles). The X-variables situated near Y-variables are positively correlated to them and those situated on the opposite side are negatively correlated. Red arrows in left panels indicate the factors that significantly change their VIP values after correcting discharge data.

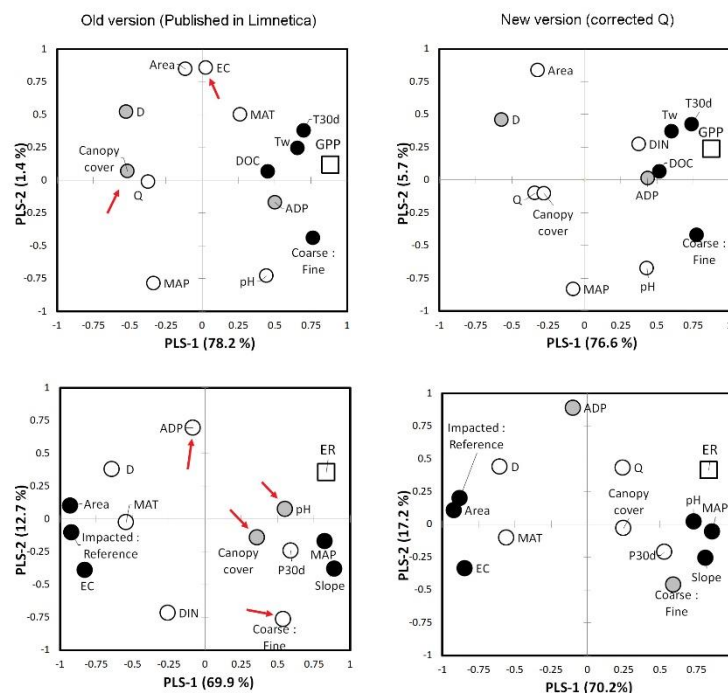


Table S3. Correlation matrix among the studied variables. In red the corrected values.

Variables	Slope	D	Q	Tw	pH	EC	DIN	DOC	Canopy cover	Coarse: fine	Impacted: reference	Area	Elevation	MAP	MAT	ADP	P30d	T30d
	%	m	L/s	°C		µS/cm	µg N/L	mg/L	%			km <sup>2</sup>	m	mm	°C	days	mm	°C
<b>Slope</b>	<b>1.00</b>	-0.62	<b>-0.20</b>	-0.09	0.41	-0.44	0.04	0.51	0.45	0.57	-0.61	-0.82	-0.34	0.64	-0.39	-0.21	0.58	-0.17
<b>D</b>	-0.62	<b>1.00</b>	<b>0.42</b>	-0.05	-0.35	0.51	-0.08	-0.54	0.09	-0.40	0.38	0.69	0.06	-0.22	0.39	-0.01	-0.10	0.07
<b>Q</b>	<b>-0.20</b>	<b>0.42</b>	<b>1.00</b>	<b>-0.13</b>	<b>-0.20</b>	<b>-0.14</b>	<b>-0.27</b>	<b>-0.31</b>	<b>-0.26</b>	<b>0.14</b>	<b>-0.28</b>	<b>0.10</b>	<b>0.33</b>	<b>0.19</b>	<b>-0.03</b>	<b>-0.06</b>	<b>0.07</b>	<b>-0.04</b>
<b>Tw</b>	-0.09	-0.05	<b>-0.13</b>	<b>1.00</b>	0.16	0.04	0.02	0.08	-0.06	0.14	0.00	-0.04	-0.24	-0.34	0.40	0.49	-0.21	0.85
<b>pH</b>	0.41	-0.35	<b>-0.20</b>	0.16	<b>1.00</b>	-0.32	-0.29	0.22	-0.37	0.59	-0.82	-0.71	0.17	0.37	-0.06	0.27	-0.01	0.17
<b>EC</b>	-0.44	0.51	<b>-0.14</b>	0.04	-0.32	<b>1.00</b>	0.38	-0.15	-0.13	-0.20	0.60	0.66	-0.21	-0.60	0.64	-0.03	-0.39	0.00
<b>DIN</b>	0.04	-0.08	<b>-0.27</b>	0.02	-0.29	0.38	<b>1.00</b>	0.05	0.09	0.56	0.53	0.33	-0.39	-0.05	-0.07	0.00	-0.33	-0.02
<b>DOC</b>	0.51	-0.54	<b>-0.31</b>	0.08	0.22	-0.15	0.05	<b>1.00</b>	0.22	0.23	-0.28	-0.49	0.02	0.11	-0.24	-0.20	0.25	0.34
<b>Canopy cover</b>	0.45	0.09	<b>-0.26</b>	-0.06	-0.37	-0.13	0.09	0.22	<b>1.00</b>	-0.07	-0.07	-0.20	-0.47	0.26	-0.13	-0.45	0.75	-0.06
<b>Coarse: fine</b>	0.57	-0.40	<b>0.14</b>	0.14	0.59	-0.20	0.56	0.23	-0.07	<b>1.00</b>	-0.42	-0.54	-0.24	0.50	-0.19	-0.10	-0.03	0.06
<b>Impacted: reference</b>	-0.61	0.38	<b>-0.28</b>	0.00	-0.82	0.60	0.53	-0.28	-0.07	-0.42	<b>1.00</b>	0.99	0.18	-0.72	0.03	0.29	-0.47	0.06
<b>Area</b>	-0.82	0.69	<b>0.10</b>	-0.04	-0.71	0.66	0.33	-0.49	-0.20	-0.54	0.99	<b>1.00</b>	0.19	-0.56	0.20	0.17	-0.53	0.01
<b>Elevation</b>	-0.34	0.06	<b>0.33</b>	-0.24	0.17	-0.21	-0.39	0.02	-0.47	-0.24	0.18	0.19	<b>1.00</b>	-0.20	-0.36	0.30	-0.13	0.11
<b>MAP</b>	0.64	-0.22	<b>0.19</b>	-0.34	0.37	-0.60	-0.05	0.11	0.26	0.50	-0.72	-0.56	-0.20	<b>1.00</b>	-0.55	-0.42	0.54	-0.31
<b>MAT</b>	-0.39	0.39	<b>-0.03</b>	0.40	-0.06	0.64	-0.07	-0.24	-0.13	-0.19	0.03	0.20	-0.36	-0.55	<b>1.00</b>	0.01	-0.22	0.17
<b>ADP</b>	-0.21	-0.01	<b>-0.06</b>	0.49	0.27	-0.03	0.00	-0.20	-0.45	-0.10	0.29	0.17	0.30	-0.42	0.01	<b>1.00</b>	-0.51	0.42
<b>P30d</b>	0.58	-0.10	<b>0.07</b>	-0.21	-0.01	-0.39	-0.33	0.25	0.75	-0.03	-0.47	-0.53	-0.13	0.54	-0.22	-0.51	<b>1.00</b>	-0.12
<b>T30d</b>	-0.17	0.07	<b>-0.04</b>	0.85	0.17	0.00	-0.02	0.34	-0.06	0.06	0.06	0.01	0.11	-0.31	0.17	0.42	-0.12	<b>1.00</b>