

Table S2 Information of the observation data applied for model calibration and validation.

Observation	Period	Places	Observed frequency	Reference
Surface runoff	2004–2006	Lysimetric plot	Daily after precipitation	Deng et al., 2011
Sediment yield	2004–2006	Lysimetric plot	Daily after precipitation	Deng et al., 2011
PN yield	2004–2006	Lysimetric plot	Daily after precipitation	Deng et al., 2011
TN yield	2004–2006	Lysimetric plot	Daily after precipitation	Deng et al., 2011
Surface runoff	2017–2018	Lysimetric plot	Daily after precipitation	Hu, 2020
Sediment yield	2017–2018	Lysimetric plot	Daily after precipitation	Hu, 2020
TP yield	2017–2018	Lysimetric plot	Daily after precipitation	Hu, 2020
Stream flow	2007–2008	Catchment outlet	Monthly	Deng et al., 2011
Sediment yield	2007–2008	Catchment outlet	Monthly	Deng et al., 2011
PN yield	2007–2008	Catchment outlet	Monthly	Deng et al., 2011
TN yield	2007–2008	Catchment outlet	Monthly	Deng et al., 2011

PN, TN and TP are referred to particulate nitrogen, total nitrogen and total phosphorus, respectively.

Reference

Deng, J., Zhou, Z., Zhu, B., Zheng, X., Li, C., Wang, X., and Jian, Z.: Modeling nitrogen loading in a small watershed in southwest China using a DNDC model with hydrological enhancements, *Biogeosciences*, 8, 2999–3009, <https://doi.org/10.5194/bg-8-2999-2011>, 2011.

Hu, P.: Applicability of revised DNDC model to simulate phosphorus migration on the slope farmland of purple soil, *Institute of Mountain Hazards and Environment, University of Chinese Academy of Sciences, Chengdu*, 35–39, <https://doi.org/10.27525/d.cnki.gkchs.2020.000048>, 2020.