

Supplementary Table S1. Discharge variability metrics used in this study. Measures of discharge (Q): Q_{mean} – mean; Q_{max} – maximum; Q_{mean} – minimum; Q_{50} – 50th percentile; Q_{10} – 10th percentile; $Q_{99.863}$ – 99.863th percentile (equivalent to 2-year flood (Elliott and Capesius, 2009)); Q_{WMmax} – maximum of wettest month; Q_{WMmin} – minimum of wettest month; Q_{Dmax} – daily maximum of a year; Q_{Dmin} – daily minimum of the same year; $\sigma_{Q_{\text{Ymax}}}$ – standard deviation of the annual peak; Q_{Ymean} – mean annual peak flood.

Discharge variability metric	Equation	Reference
Q_{peak} : discharge peakedness	$Q_{\text{WMmax}}/Q_{\text{mean}}$	Leier et al., 2005
Q_{max}/Q_{10} : discharge variability	Q_{max}/Q_{10}	modified from $Q_{\text{max}}/Q_{\text{min}}$ of Latrubesse et al., 2005
$Q_{\text{max}}/Q_{\text{mean}}$: flood intensity	$Q_{\text{max}}/Q_{\text{mean}}$	Latrubesse et al., 2005
DVI_a : average discharge variability index	$(Q_{\text{WMmax}} - Q_{\text{WMmin}})/Q_{\text{mean}}$	Plink-Björklund, 2015
DVI_y : yearly discharge variability index	$(\sum(Q_{\text{Dmax}} - Q_{\text{Dmin}})/Q_{\text{mean}})/n$ years	Hansford et al., 2020
$Q_{99.863}/Q_{50}$: Flood magnitude	$Q_{99.863}/Q_{50}$	Hansford et al., 2020
CVQ_p : annual peak discharge variance	$(\sigma_{Q_{\text{Ymax}}})/Q_{\text{Ymean}}$	Fielding et al., 2018