

Trend (\checkmark or $-$)	Model	Descriptive formula	Global	Mid- latitudes (north)	Subtropics (north)	Tropics	Subtropics (south)	Mid- latitudes (south)
F_C	GLM (Poisson)	Trend in flood data $a + b_1\text{ENSO} + b_2\text{AMO} + b_3\text{PDO} + b_4\text{NAO}$ MK Test on residuals p value = Potential driver	\checkmark a, b_1, b_2, b_3 0.81 ENSO, AMO, NAO	$-$ $-$ $-$ $-$	$-$ $-$ $-$ $-$	\checkmark a, b_2, b_3 0.54 AMO, PDO	\checkmark a, b_2 0.18 AMO	\checkmark a, b_2, b_3 0.27 AMO, PDO
$F_{D_{\text{Median}}}$	GLM (Log-normal)	Trend in flood data $a + b_1\text{ENSO} + b_2\text{AMO} + b_3\text{PDO} + b_4\text{NAO}$ MK Test on residuals p value = Potential driver	\checkmark a 0.0001 Unexplained factor(s)	\checkmark a 0.03 Unexplained factor(s)	\checkmark a 0.06 No factor	\checkmark a 0.0003 Unexplained factor(s)	\checkmark a 0.008 Unexplained factor(s)	\checkmark a, b_1, b_4 0.23 ENSO, NAO
$F_{D_{90}}$	GLM (Poisson)	Trend in flood data $a + b_1\text{ENSO} + b_2\text{AMO} + b_3\text{PDO} + b_4\text{NAO}$ MK Test on residuals p value = Potential driver	\checkmark a, b_2, b_4 0.13 AMO, NAO	\checkmark a, b_2, b_3, b_4 0.3 AMO, PDO, NAO	$-$ $-$ $-$	\checkmark a, b_2, b_3, b_4 0.04 AMO, PDO, NAO, unexplained factor(s)	\checkmark a, b_1, b_2, b_4 0.17 ENSO, AMO, NAO	\checkmark a, b_1, b_4 0.2 ENSO, NAO