

Table S1. The mean of occurrence probability changes ( $\delta$ , also shown on figures S1—S6) across the flood hazards H1 through to H7, from the historical (1980-1999) climate to the near-, medium- and long-term climate.

	Near term (2020-2039)		Medium term (2050-2069)	
	RCP 4.5	RCP 8.5	RCP 4.5	RCP 8.5
H1	0.02 (-0.07..0.17)	0.01 (-0.09..0.18)	0.03 (-0.07..0.22)	0.10 ( 0.10.. 0.37)
H2	-0.01 (-0.08..0.03)	-0.00 (-0.09..0.04)	-0.02 (-0.10..0.03)	-0.05 (-0.18..-0.05)
H3	-0.01 (-0.12..0.05)	-0.00 (-0.12..0.06)	-0.02 (-0.15..0.05)	-0.07 (-0.28..-0.07)
H4	-0.01 (-0.12..0.04)	-0.01 (-0.11..0.05)	-0.02 (-0.15..0.04)	-0.07 (-0.26..-0.07)
H5	-0.01 (-0.18..0.06)	-0.00 (-0.17..0.06)	-0.03 (-0.20..0.05)	-0.09 (-0.30..-0.09)
H6	-0.00 (-0.12..0.05)	0.00 (-0.13..0.06)	-0.03 (-0.16..0.04)	-0.06 (-0.20..-0.04)
H7	-0.00 (-0.24..0.09)	0.01 (-0.23..0.13)	-0.04 (-0.30..0.07)	-0.10 (-0.33..-0.07)

	Long term (2080-2099)	
	RCP 4.5	RCP 8.5
H1	0.08 ( 0.00..0.30)	0.13 ( 0.06.. 0.39)
H2	-0.03 (-0.14..0.00)	-0.06 (-0.18..-0.03)
H3	-0.05 (-0.20..0.00)	-0.09 (-0.29..-0.05)
H4	-0.06 (-0.20..-0.00)	-0.09 (-0.27..-0.04)
H5	-0.06 (-0.27..-0.00)	-0.12 (-0.31..-0.05)
H6	-0.06 (-0.24..-0.01)	-0.08 (-0.22..-0.04)
H7	-0.12 (-0.46..-0.05)	-0.14 (-0.41..-0.07)

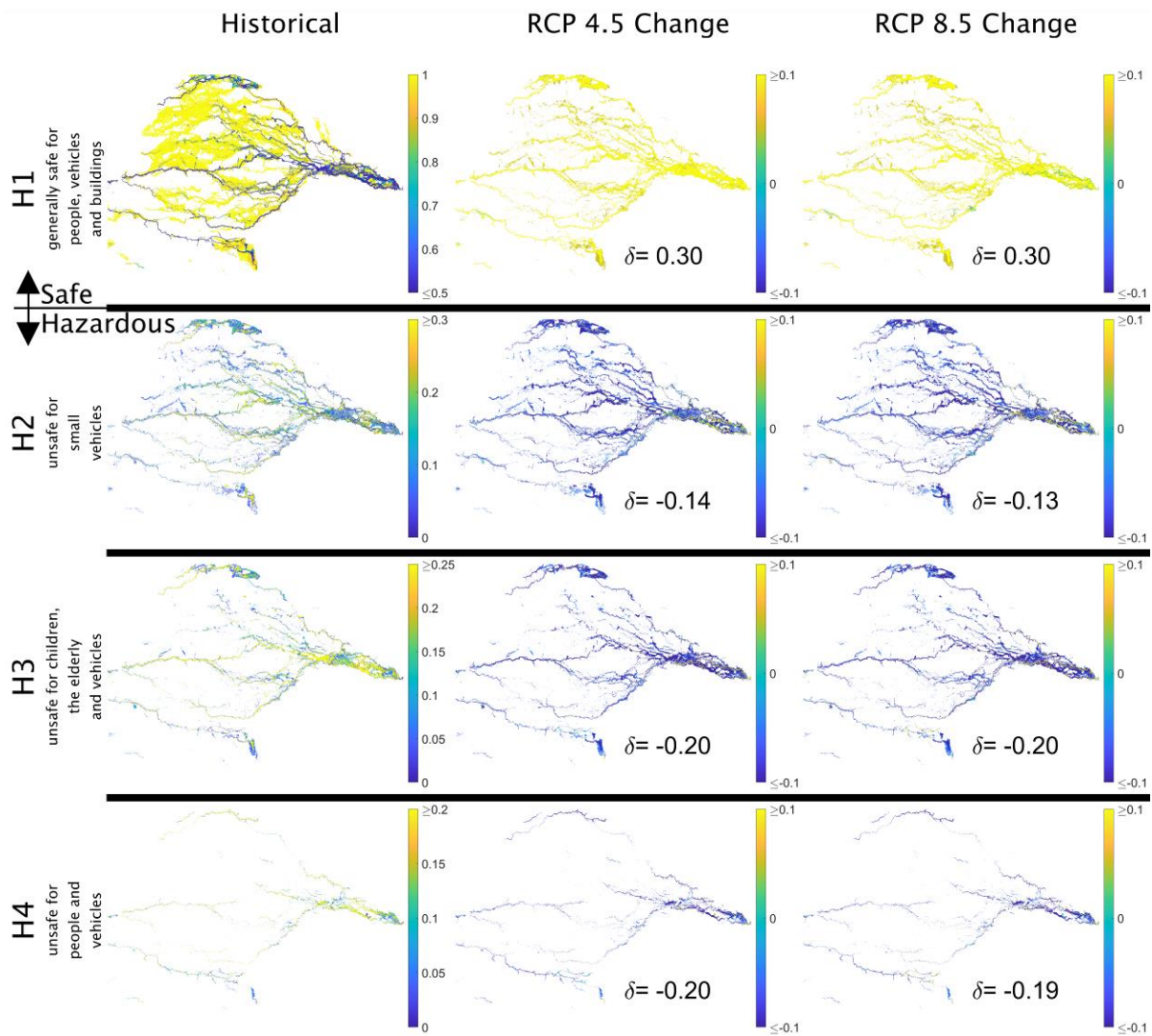


Figure S1 Gwydir Valley Flood hazard historical (1980—1999) classification occurrences and their changes under RCP 4.5 and RCP 8.5 (2080—2099) for the CCCma-CanESM2 global and UNSW-WRF360J regional climate models. The mean of occurrence probability changes,  $\delta$ , shown in each panel. For brevity, flood hazard historical classifications H5 to H7 are not shown as they are limited to within river and creek channels.

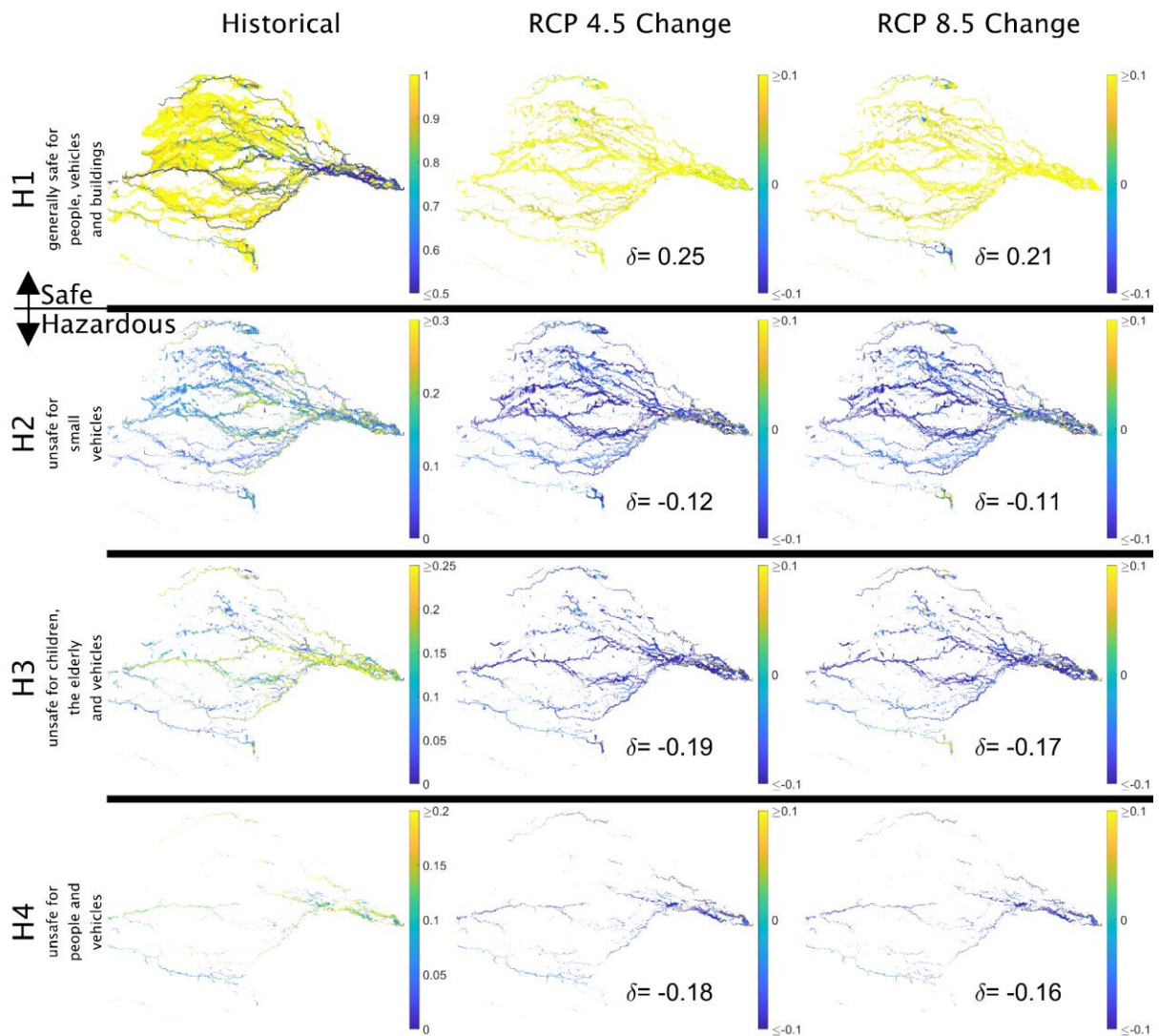


Figure S2 Gwydir Valley Flood hazard historical (1980—1999) classification occurrences and their changes under RCP 4.5 and RCP 8.5 (2080—2099) for the CCCma-CanESM2 global and UNSW-WRF360K regional climate models. The mean of occurrence probability changes,  $\delta$ , shown in each panel. For brevity, flood hazard historical classifications H5 to H7 are not shown as they are limited to within river and creek channels.

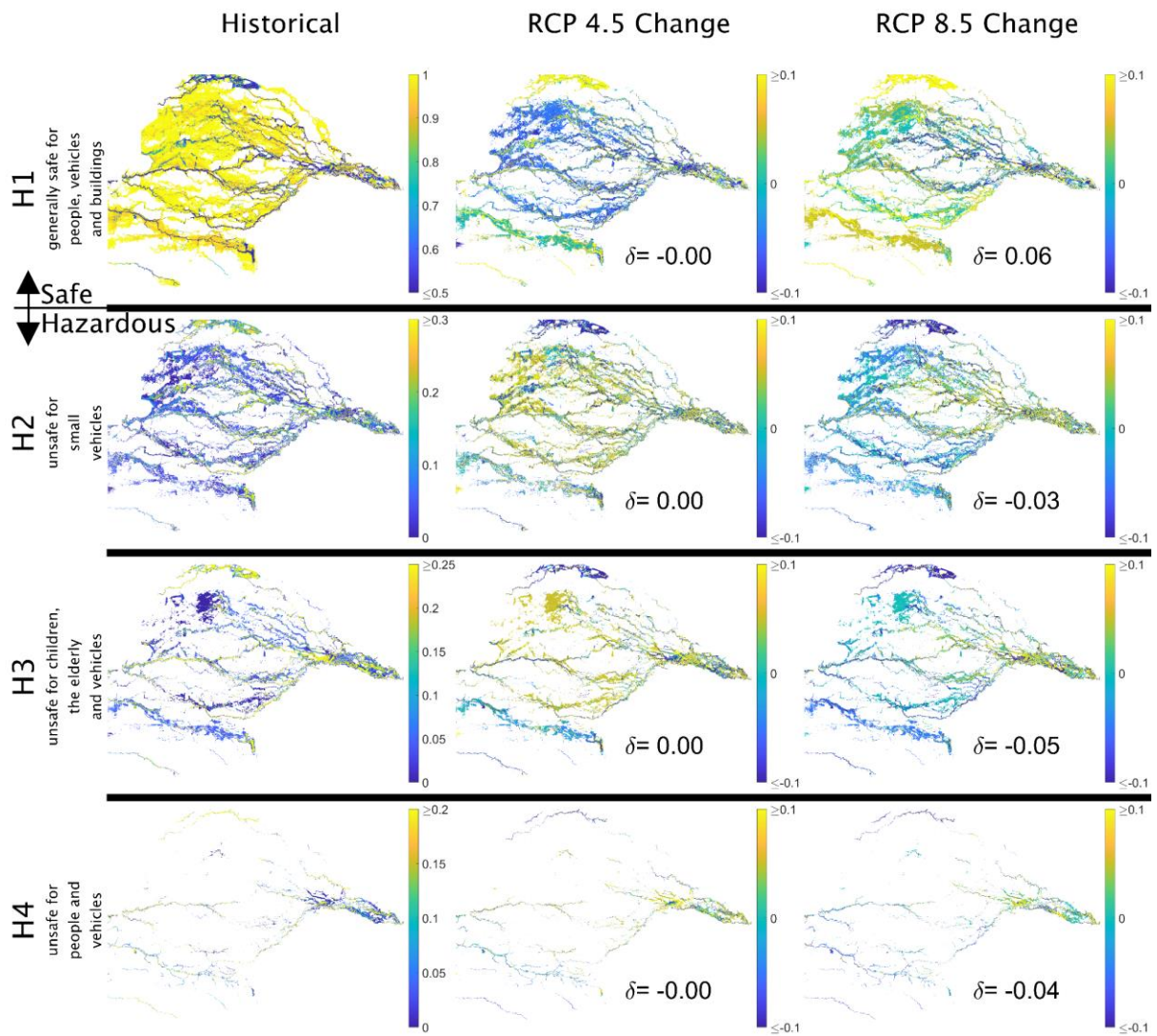


Figure S3 Gwydir Valley Flood hazard historical (1980—1999) classification occurrences and their changes under RCP 4.5 and RCP 8.5 (2080—2099) for the CSIRO-BOM-ACCESS1-0 global and UNSW-WRF360J regional climate models. The mean of occurrence probability changes,  $\delta$ , shown in each panel. For brevity, flood hazard historical classifications H5 to H7 are not shown as they are limited to within river and creek channels.



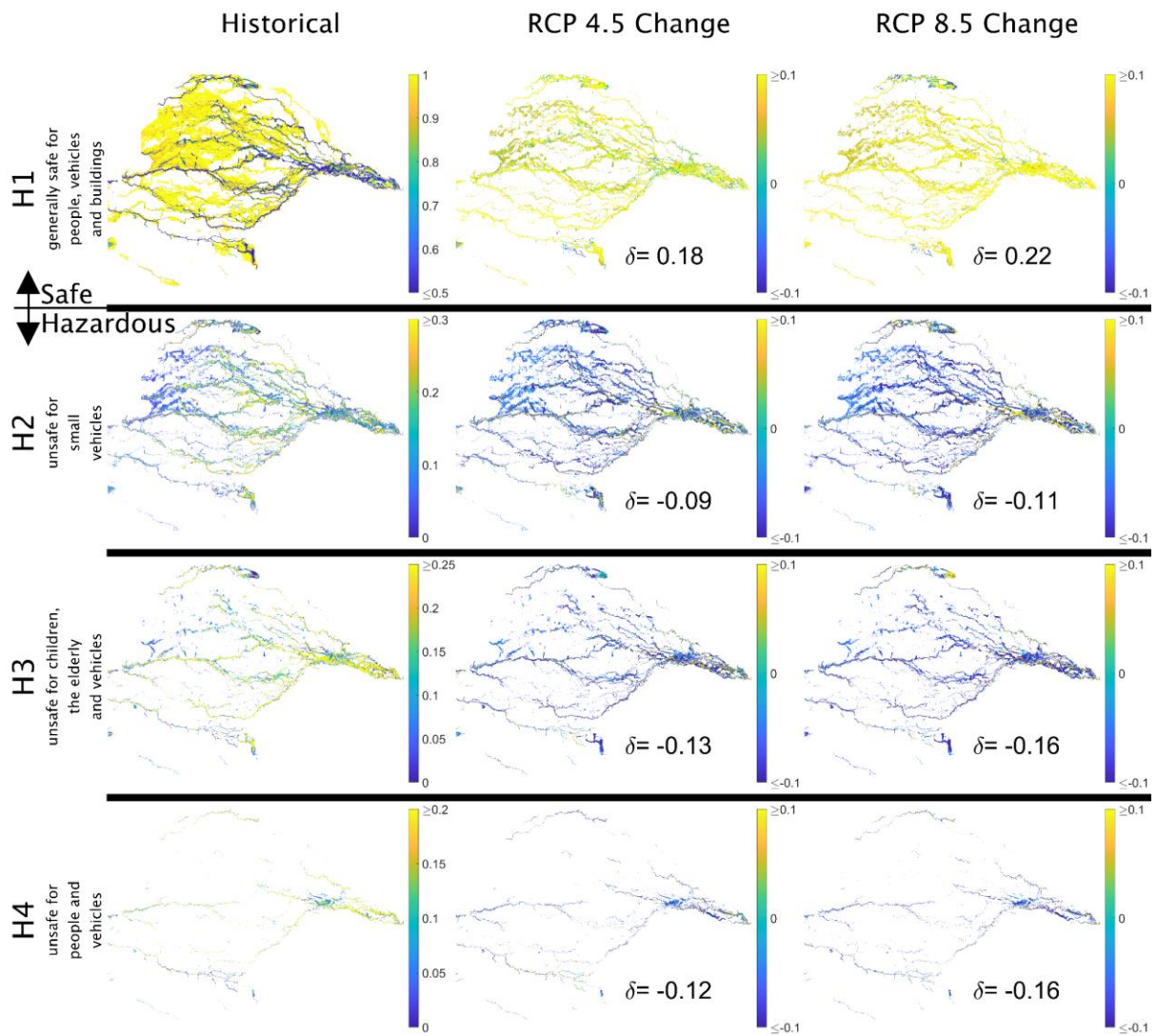


Figure S4 Gwydir Valley Flood hazard historical (1980—1999) classification occurrences and their changes under RCP 4.5 and RCP 8.5 (2080—2099) for the CSIRO-BOM-ACCESS1-0 global and UNSW-WRF360K regional climate models. The mean of occurrence probability changes,  $\delta$ , shown in each panel. For brevity, flood hazard historical classifications H5 to H7 are not shown as they are limited to within river and creek channels.

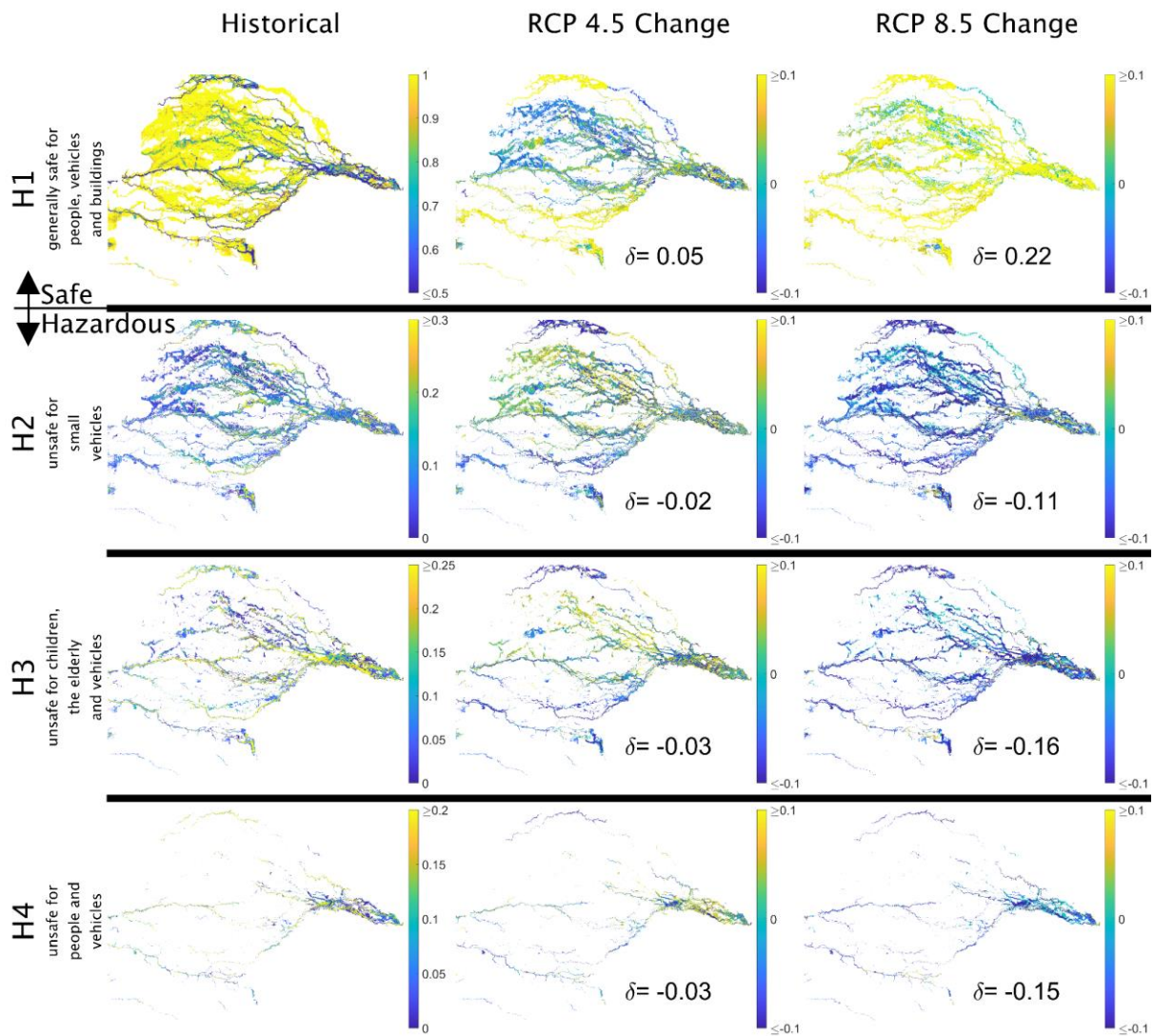


Figure S5 Gwydir Valley Flood hazard historical (1980–1999) classification occurrences and their changes under RCP 4.5 and RCP 8.5 (2080–2099) for the CSIRO-BOM-ACCESS1-3 global and UNSW-WRF360J regional climate models. The mean of occurrence probability changes,  $\delta$ , shown in each panel. For brevity, flood hazard historical classifications H5 to H7 are not shown as they are limited to within river and creek channels.

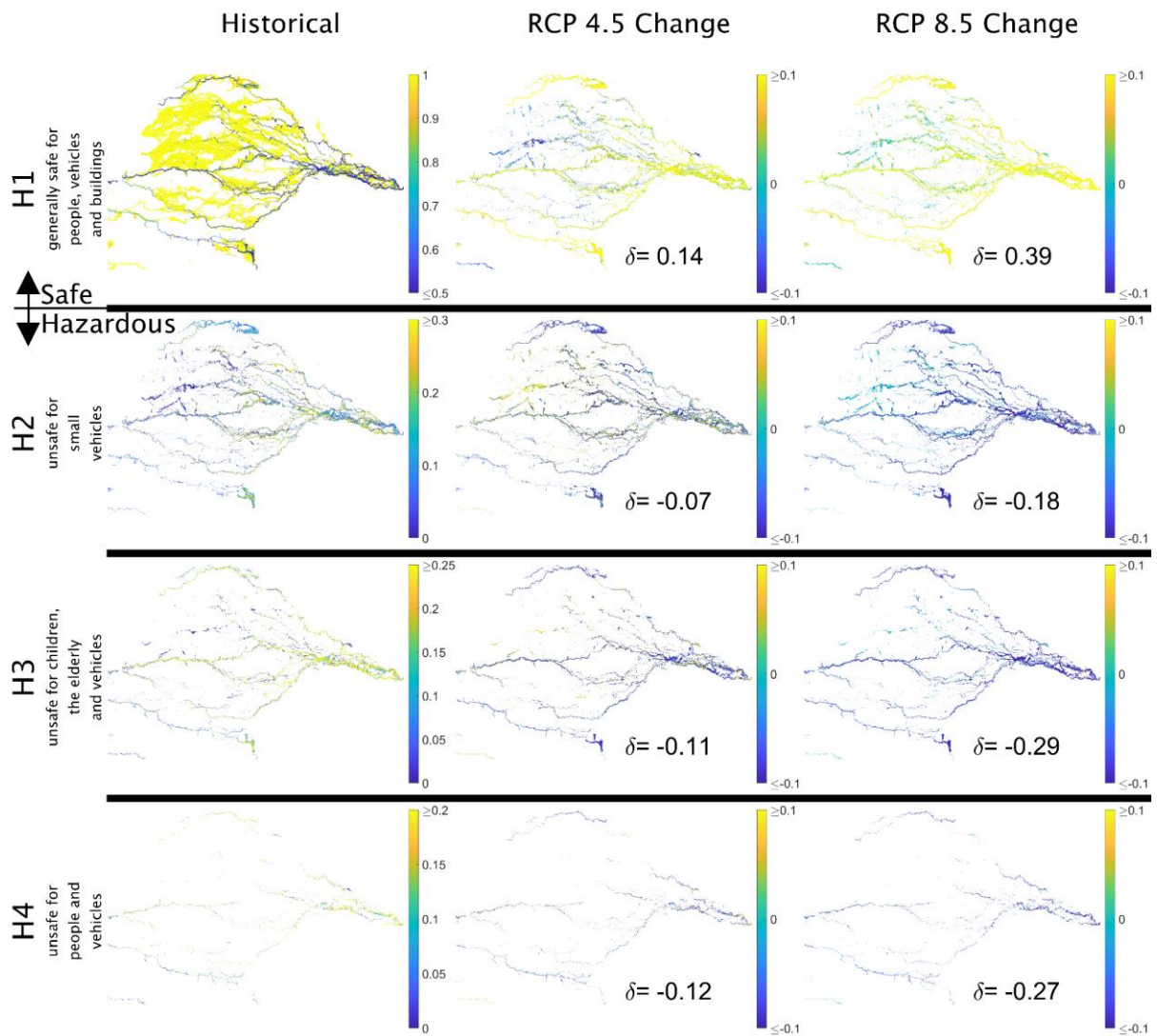


Figure S6 Gwydir Valley Flood hazard historical (1980—1999) classification occurrences and their changes under RCP 4.5 and RCP 8.5 (2080—2099) for the CSIRO-BOM-ACCESS1-3 global and UNSW-WRF360K regional climate models. The mean of occurrence probability changes,  $\delta$ , shown in each panel. For brevity, flood hazard historical classifications H5 to H7 are not shown as they are limited to within river and creek channels.