List of Figures

List of Tables

S1 Additional figures

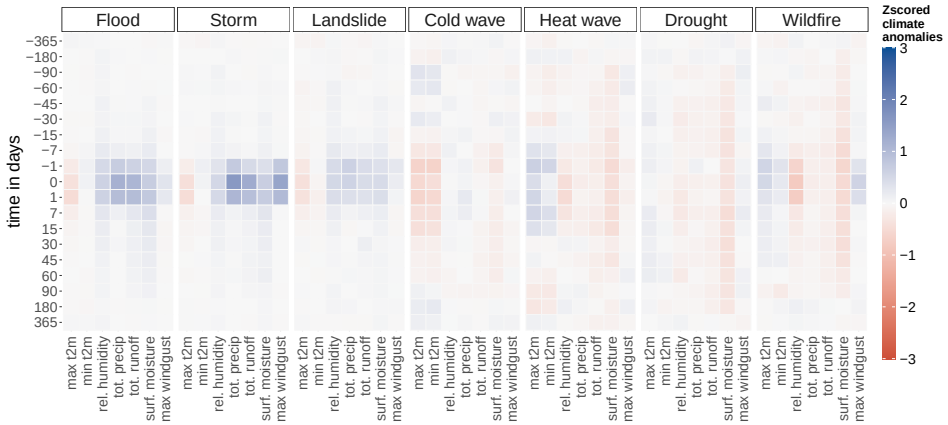

Fig. S1 Average climatological fingerprints of the different disaster types: Average climate anomalies per disaster type (panel) at selected dates between one year before and after the reported start of the events. The fingerprints were calculated using the superposed epoch analysis (reference). They show the temporal evolution of the averaged daily anomalies. All climate variables (x-axis) are scaled to zero mean and unit variance. Long names of the climate variables: maximum temperature, minimum temperature, relative humidity, total precipitation, surface moisture, total runoff and maximum wind gust.

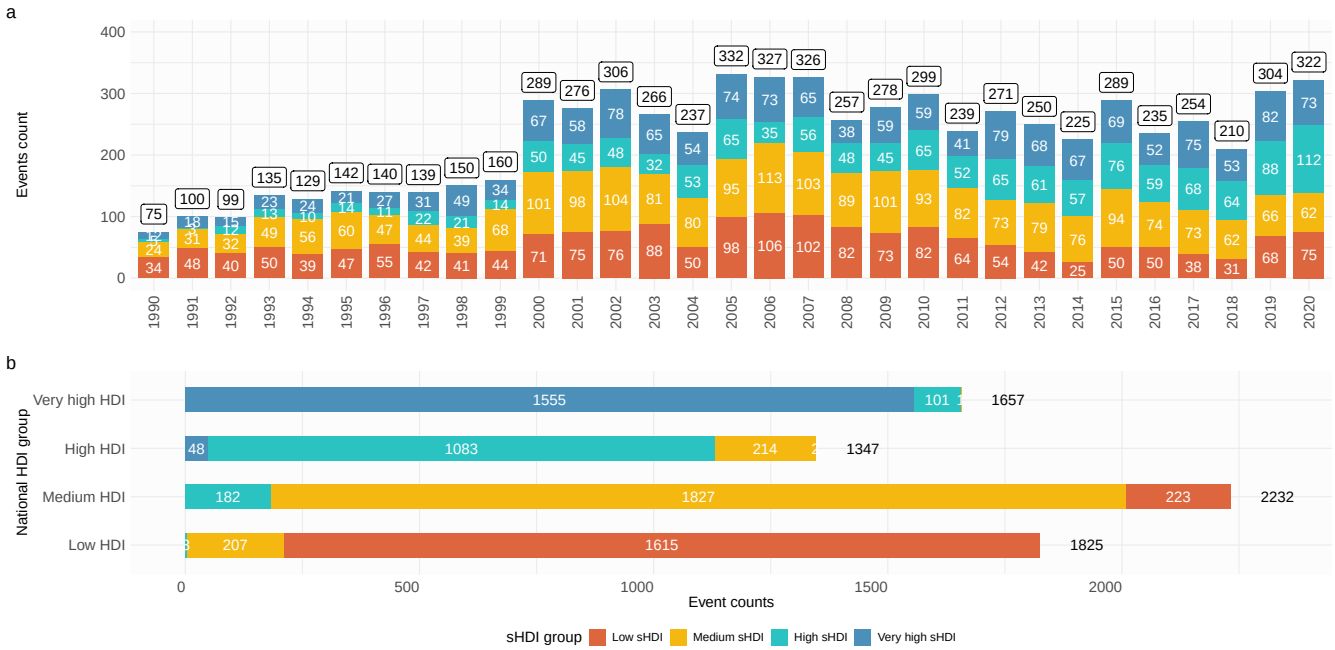

Fig. S2 Global Annual counts of studied climate disasters and the mismatch between subnational human development index (sHDI) and the national human development index (HDI) in the impacted regions. **(a)** Annual counts of reported events between 1990 and 2020. The breakdown per sHDI is indicated on the bars. **(b)** Mismatches between sHDI and national HDI. 13.56% of the studied regions have a different sHDI than the HDI of the country at the year of the event.

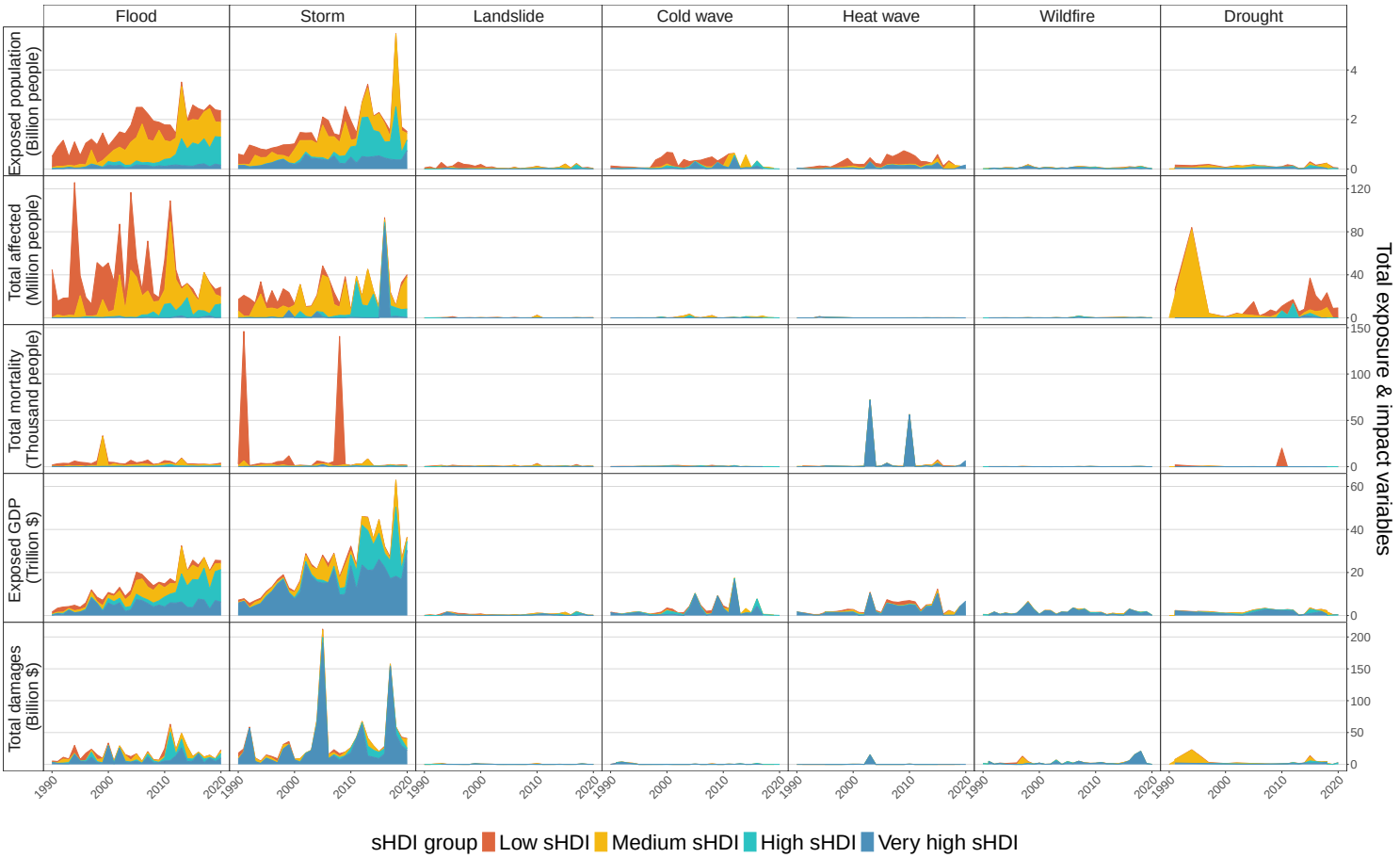

Fig. S3 Estimates of global annual population and economic exposure and corresponding impacts per disaster type and per subnational human development index (sHDI) group from 1990 to 2020. The stacked area charts show the annual sum of exposed population, affected people and fatalities numbers, and the sum of exposed GDP and total economic damages. The trends of the annual aggregates and per sHDI group are estimated using quantile regression (τ = 0.5), the corresponding slopes and pvalues are indicated in Tables S8-12.

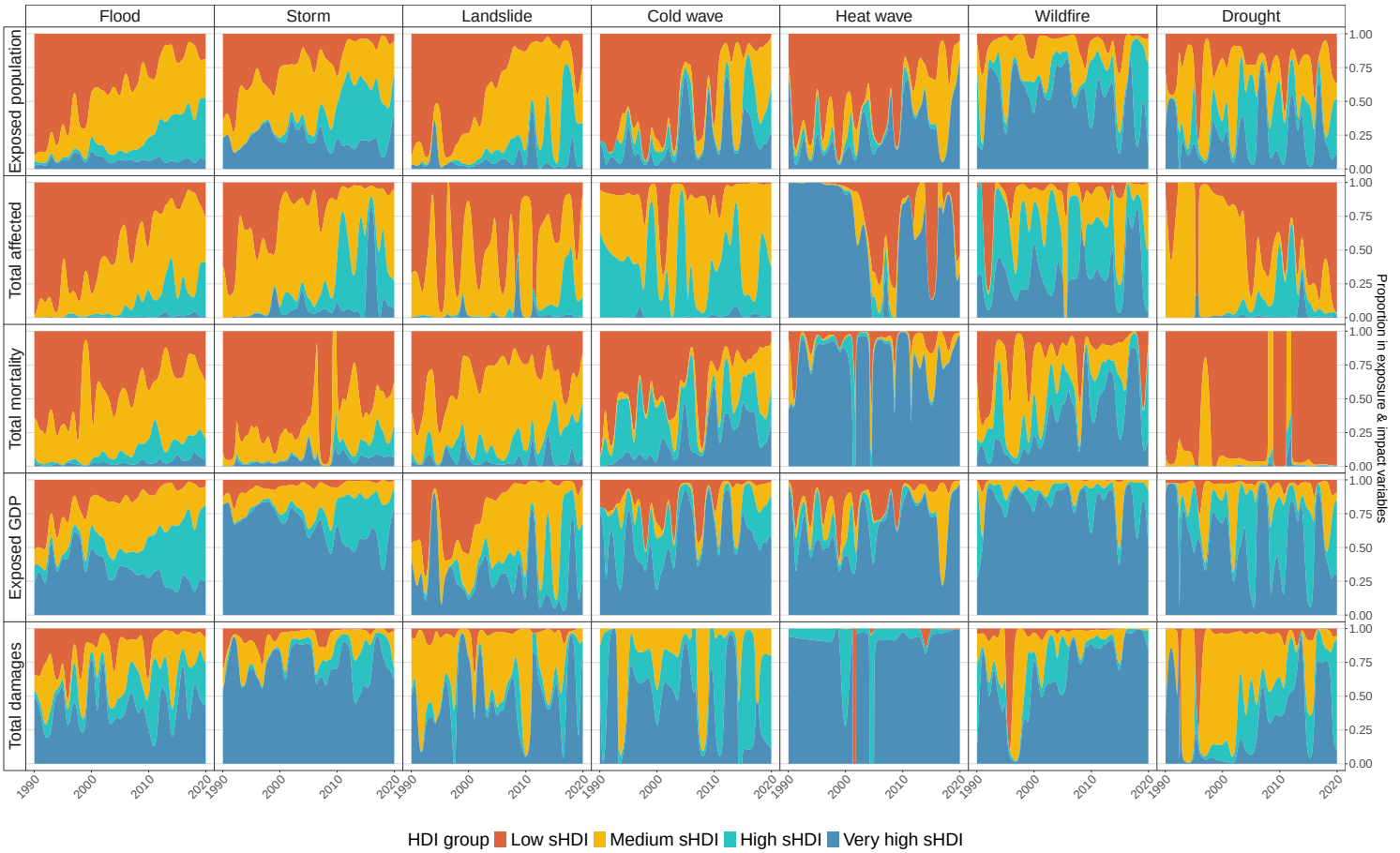

Fig. S4 Estimates of global annual proportions of the subnational human development index (sHDI) groups in population and economic exposure and corresponding impacts per disaster type from 1990 to 2020. The stacked area charts show the share of each sHDI group in the annual sum of exposed population, affected people and fatalities numbers, and the sum of exposed GDP and total economic damages.

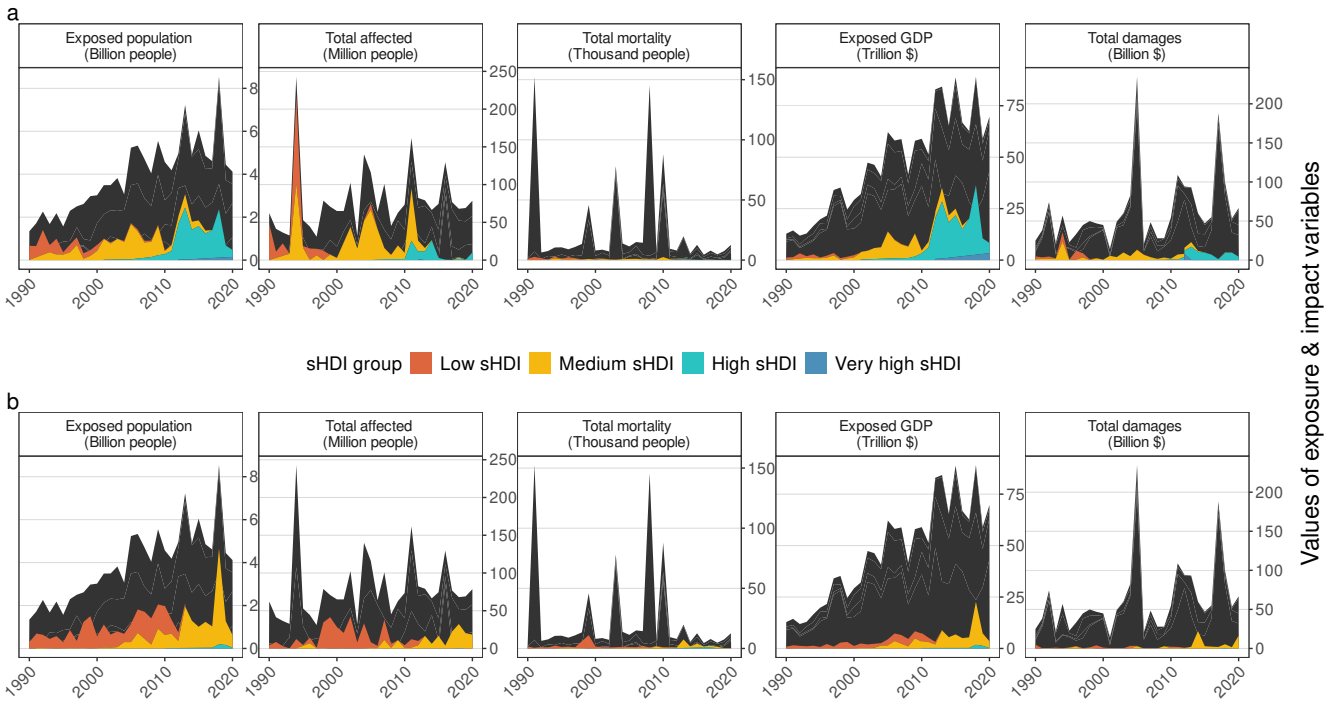

Fig. S5 Evolution of annual population and economic exposure and corresponding impacts in China and India from 1990 to 2020. The panels show the evolution of exposure and impacts and the subnational human development index (sHDI) corresponding to the reported regions in **(a)** China, and in **(b)** India. The black shading corresponds to the global annual aggregates. Both countries take different socioeconomic development paths that are reflected in the temporal evolution of sHDI.

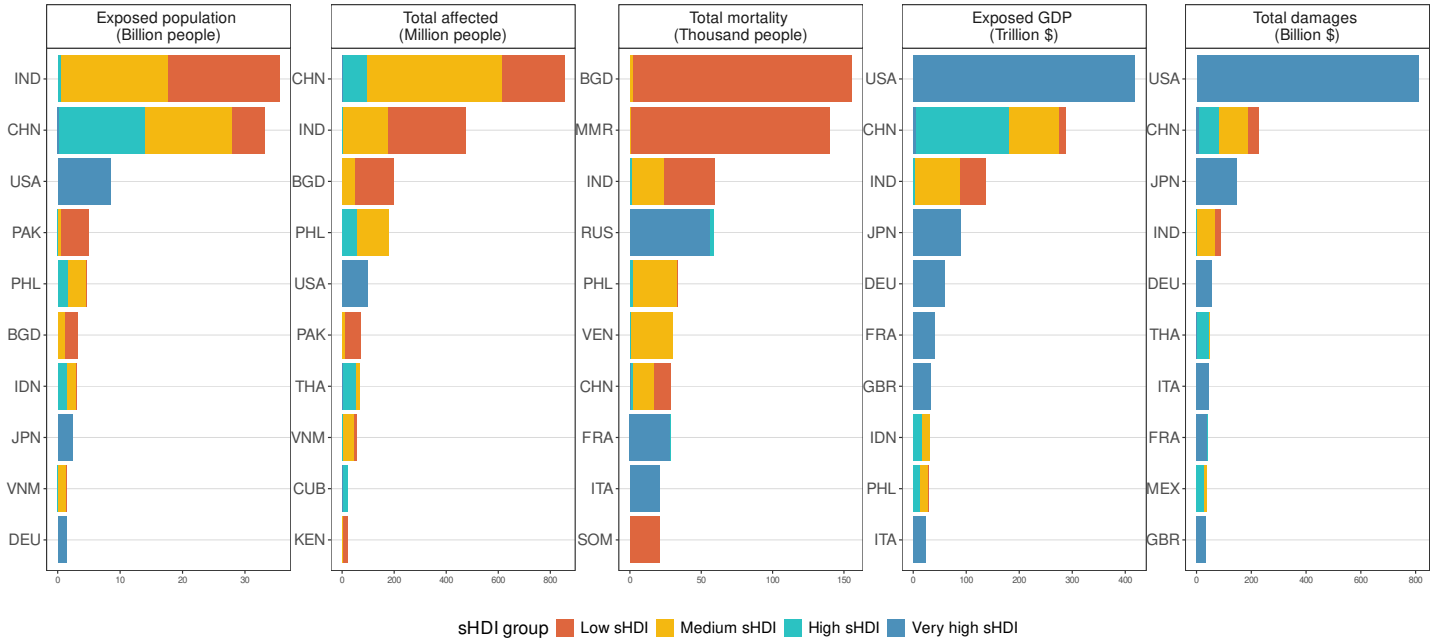

Fig. S6 Most exposed and impacted 10 countries for each variable and corresponding proportion of exposure and impacts per subnational human development index (sHDI) group. The panels show the most exposed and impacted countries from 1990 to 2020 for all disaster types combined, and for each exposure (population and economic) and impact (affected, fatalities, economic damages) variable. The proportion per sHDI within each country is indicated with the stacked bars. The country names corresponding to iso codes are: AUS (Australia), BGD (Bangladesh), BRA (Brazil), CHN (China), CUB (Cuba), DEU (Germany), ETH (Ethiopia), FRA (France), GBR (United Kingdom), IDN (Indonesia), IND (India), ITA (Italy), JPN (Japan), MEX (Mexico), MMR (Myanmar), PAK (Pakistan), PHL (Philippines), RUS (Russian Federation), SOM (Somalia), THA (Thailand), USA (United States of America), VEN (Venezuela), VNM (Viet Nam).

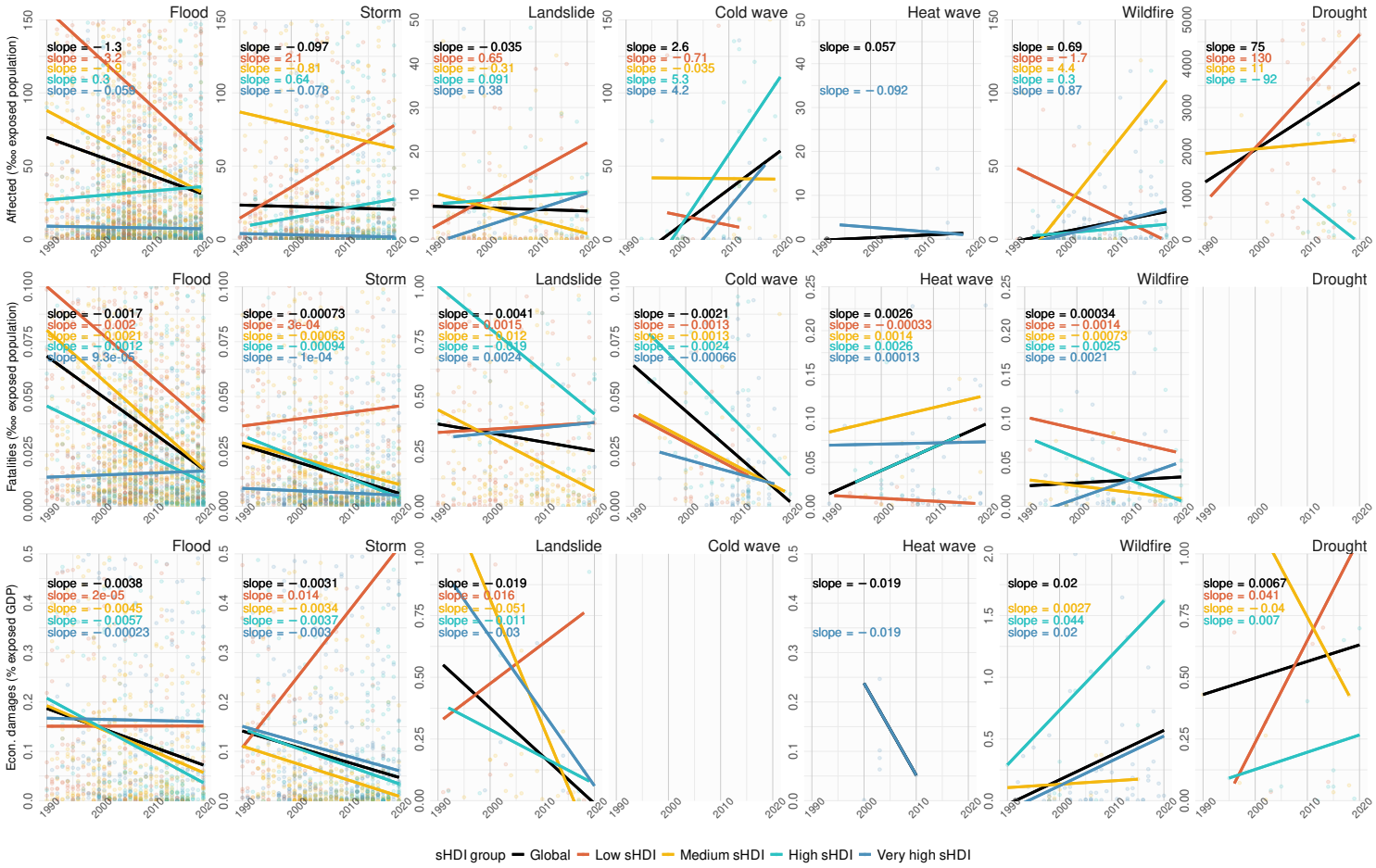

Fig. S7 Trends of event-level impact rates of human losses (affected and fatalities) and economic damages per disaster type from 1990 to 2020. For each disaster type and each sHDI group, we estimated trends using quantile regression ($\tau = 0.5$), the corresponding slopes and pvalues are indicated on the figure and in Tables S13, S14, and S15. The black lines indicates global trends. Cases with less than 10 observations were not considered.

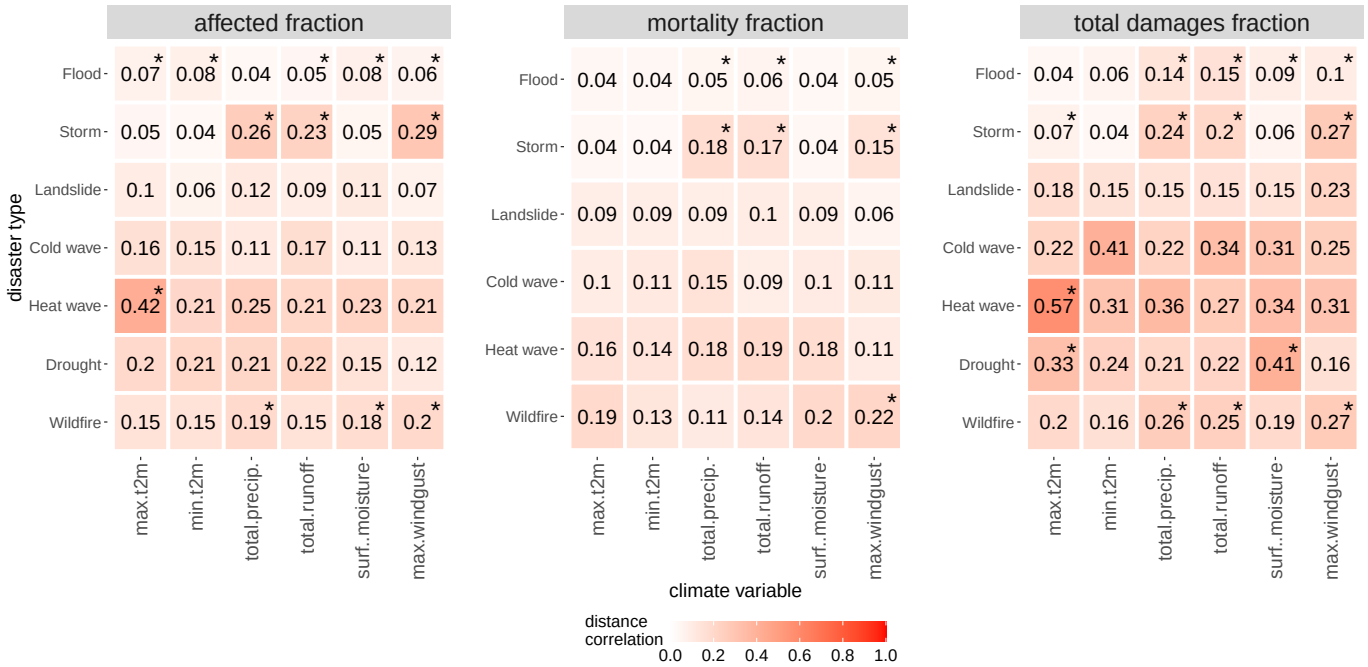

Fig. S8 Correlation between impact rates and climate anomalies. Distance correlation between the climate anomalies (x-axis) and the impact rates of the affected, fatalities and economic damages (panel) for each disaster type (y-axis). Statistical significance ($p < 0.05$) is determined with permutation testing and indicated with asterisk in case of significance. The climate anomalies (x-axis) are as follow: maximum temperature, minimum temperature, total precipitation, surface moisture, total runoff and maximum wind gust.

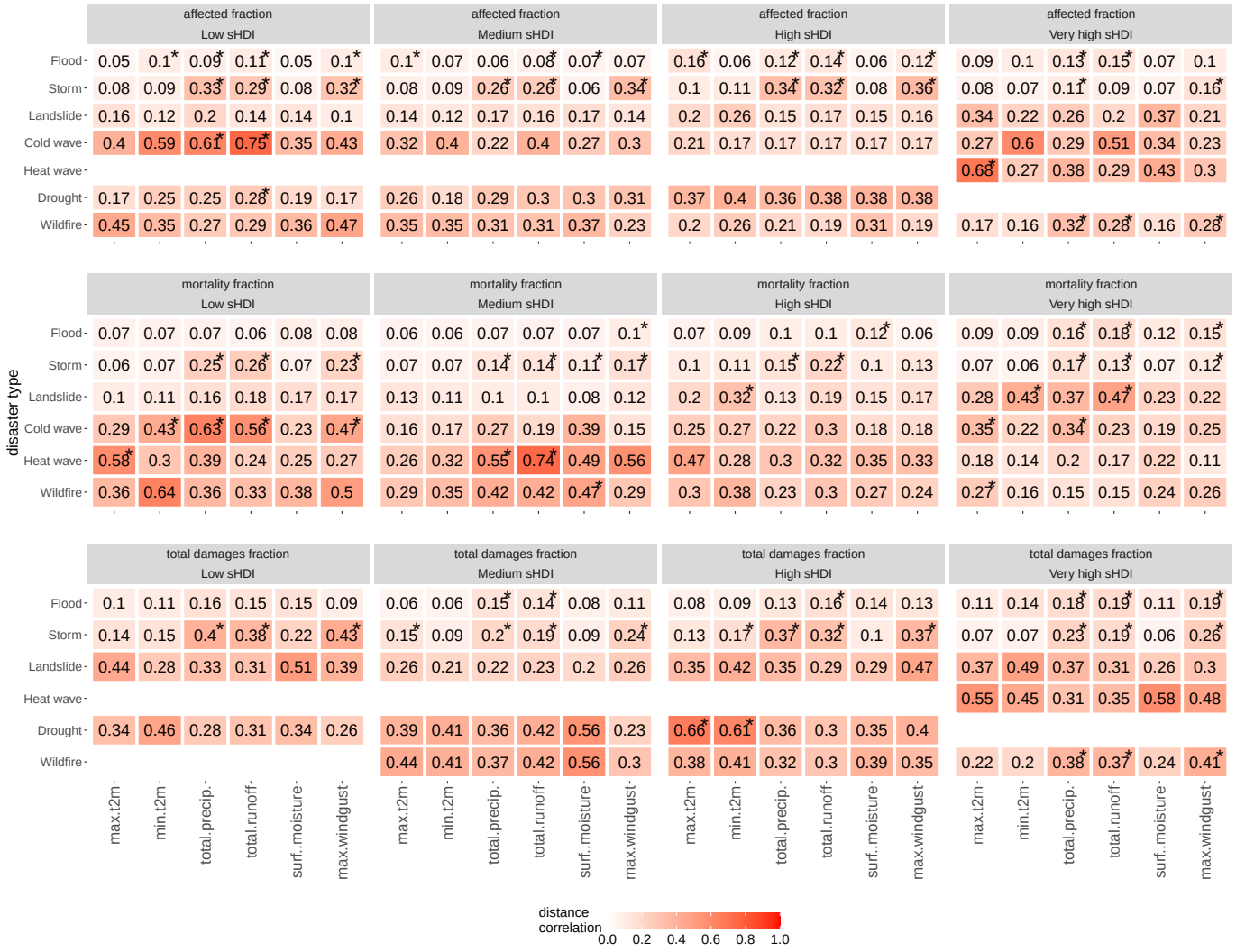

Fig. S9 Correlation between impact rates and climate anomalies stratified by subnational human development index (sHDI) group. Distance correlation between the climate anomalies (x-axis) and the impact rates of the affected, fatalities and economic damages (panel) for each disaster type (y-axis). Statistical significance ($p < 0.05$) is determined with permutation testing and indicated with asterisk in case of significance. The climate anomalies (x-axis) are as follow: maximum temperature, minimum temperature, total precipitation, surface moisture, total runoff and maximum wind gust.

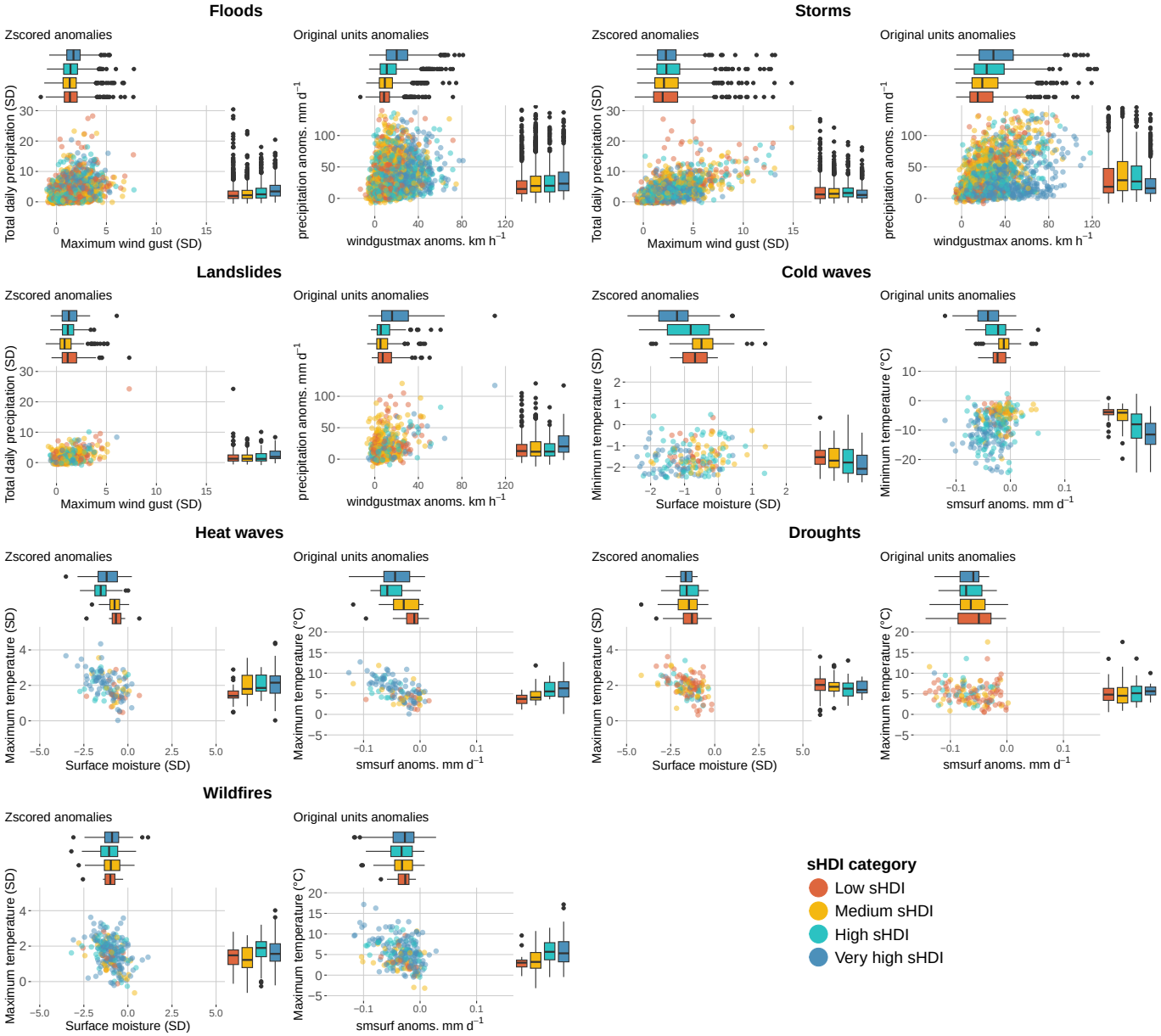

Fig. S10 Bivariate distributions of climate anomalies of analyzed disaster events per disaster type: The scatter plots show for every disaster type the bivariate distribution of anomalies in original units and zscored transformation. Original anomalies show the absolute severity of the events, while the zscored anomalies show the severity of the events relative to past climatology. The marginal boxplots show both aspects of severity per subnational human development index (sHDI) group (no testing for significance was performed). For floods, storms and landslides, the considered variables are total daily precipitation (y-axis) and maximum daily wind gust (x-axis). For cold waves, the considered variables are minimum daily temperature (y-axis) and daily surface moisture (x-axis). For heat waves, droughts and wildfires, the considered variables are maximum daily temperature (y-axis) and daily surface moisture (x-axis). For each disaster, the corresponding climate variables were sampled in a window of 2 days before and 2 days after the reported event start.

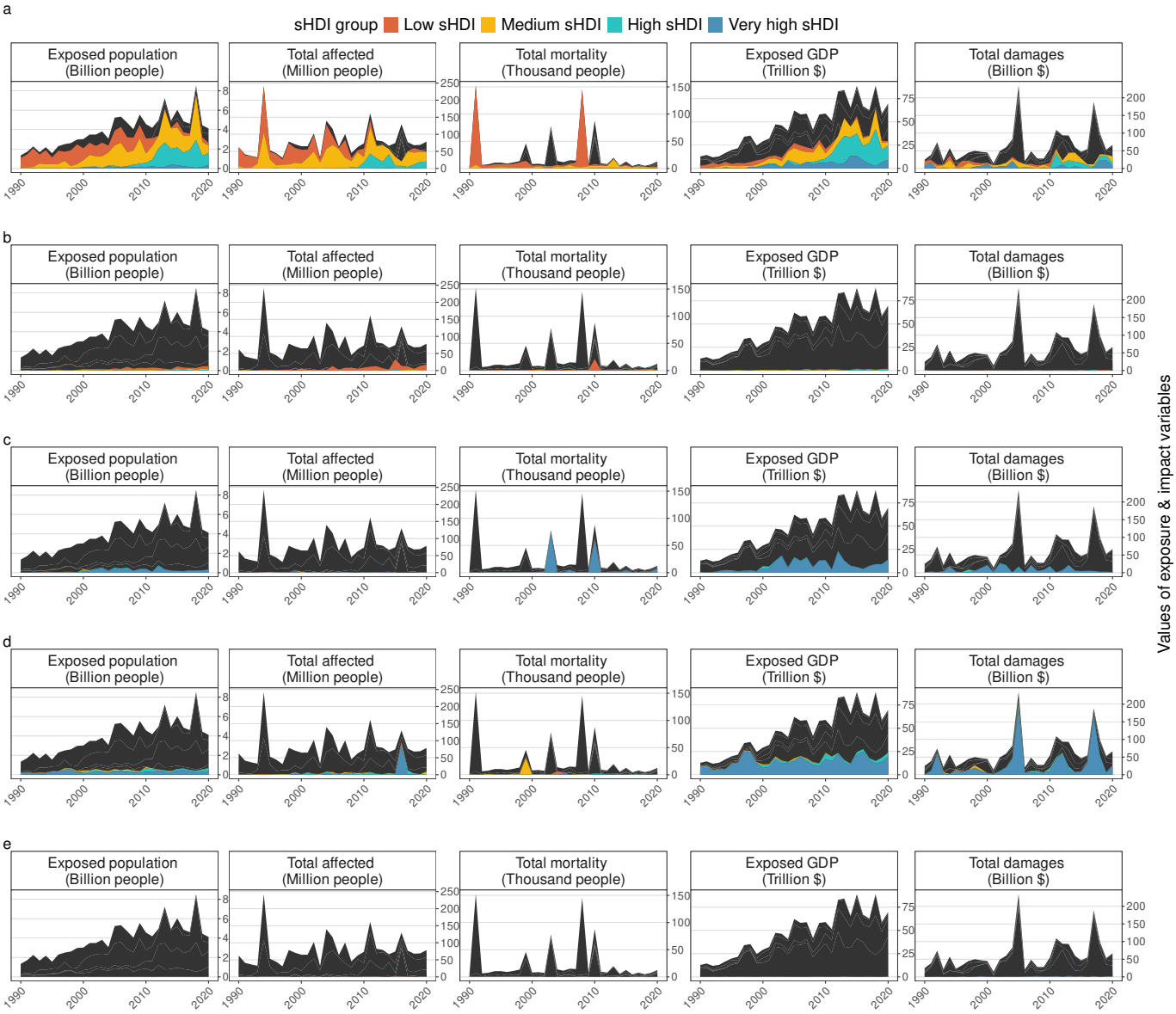

Fig. S11 Evolution of annual population and economic exposure and corresponding impacts per continent from 1990 to 2020. The panels show the evolution of exposure and impacts and the subnational human development index (sHDI) corresponding to the reported regions in **(a)** Asia, **(b)** Africa, **(c)** Europe, **(d)** the Americas and **(d)** Oceania. The black shading corresponds to the global annual aggregates.

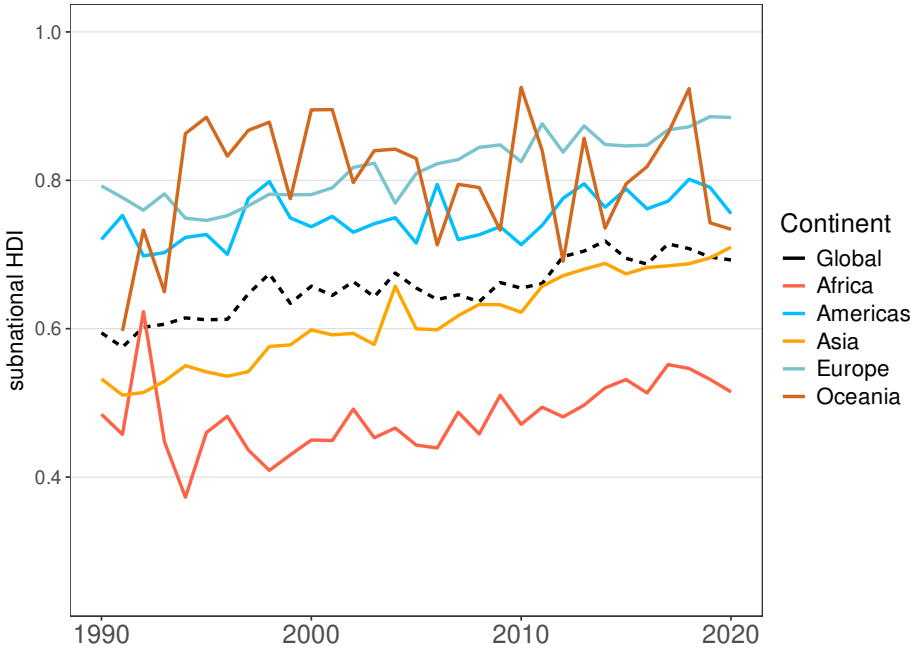

Fig. S12 Evolution of mean subnational human development index (sHDI) at continent level from 1990 to 2020. The lines show the evolution of average sHDI of reported impacted regions aggregated at continent level. The aggregate sHDI at continent level shows different socioeconomic development trajectories. All but the African continent converge at a high sHDI level. The important amplitudes of mean sHDI for Oceania is explained by the composition of this group that has four countries, two highly developed: AUS (Australia) and NZL (New Zealand), and two less developed countries: PNG (Papua New Guinea), VUT (Vanuatu).

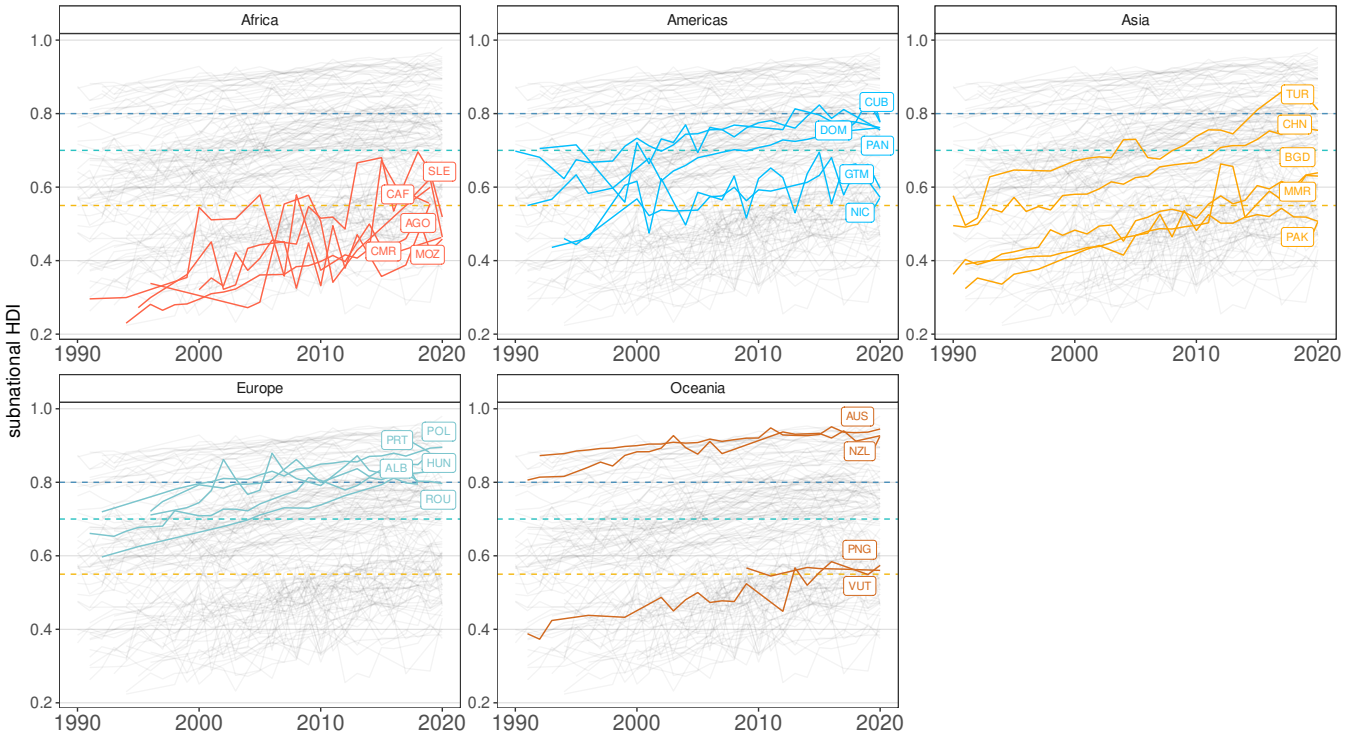

Fig. S13 Evolution of mean subnational human development index (sHDI) at country level from 1990 to 2020. The lines show the evolution of average sHDI of reported impacted regions aggregated at country level per continent (panel). For every continent, we show the 5 countries with highest mean sHDI increase between 1990 and 2020. The different countries take distinct socioeconomic development paths and promoting from one sHDI group to the next is the case in the Americas, Asia and Europe. In Africa, the average sHDI at 2020 for the countries with the highest evolution still lies in low sHDI (<0.55). In Oceania, the four countries that make this group are shown. The country names corresponding to iso codes are: In Africa: AGO (Angola), CAF (Central African Republic), CMR (Cameroon), MOZ (Mozambique), SLE (Sierra Leone). In the Americas: CUB (Cuba), DOM (Dominican Republic), GTM (Guatemala), NIC (Nicaragua), PAN (Panama). In ASIA: BGD (Bangladesh), CHN (China), MMR (Myanmar), PAK (Pakistan), TUR (Türkiye). In Europe: ALB (Albania), HUN (Hungary), POL (Poland), PRT (Portugal), PRT (Azores Islands), ROU (Romania). In Oceania: AUS (Australia), NZL (New Zealand), PNG (Papua New Guinea), VUT (Vanuatu).

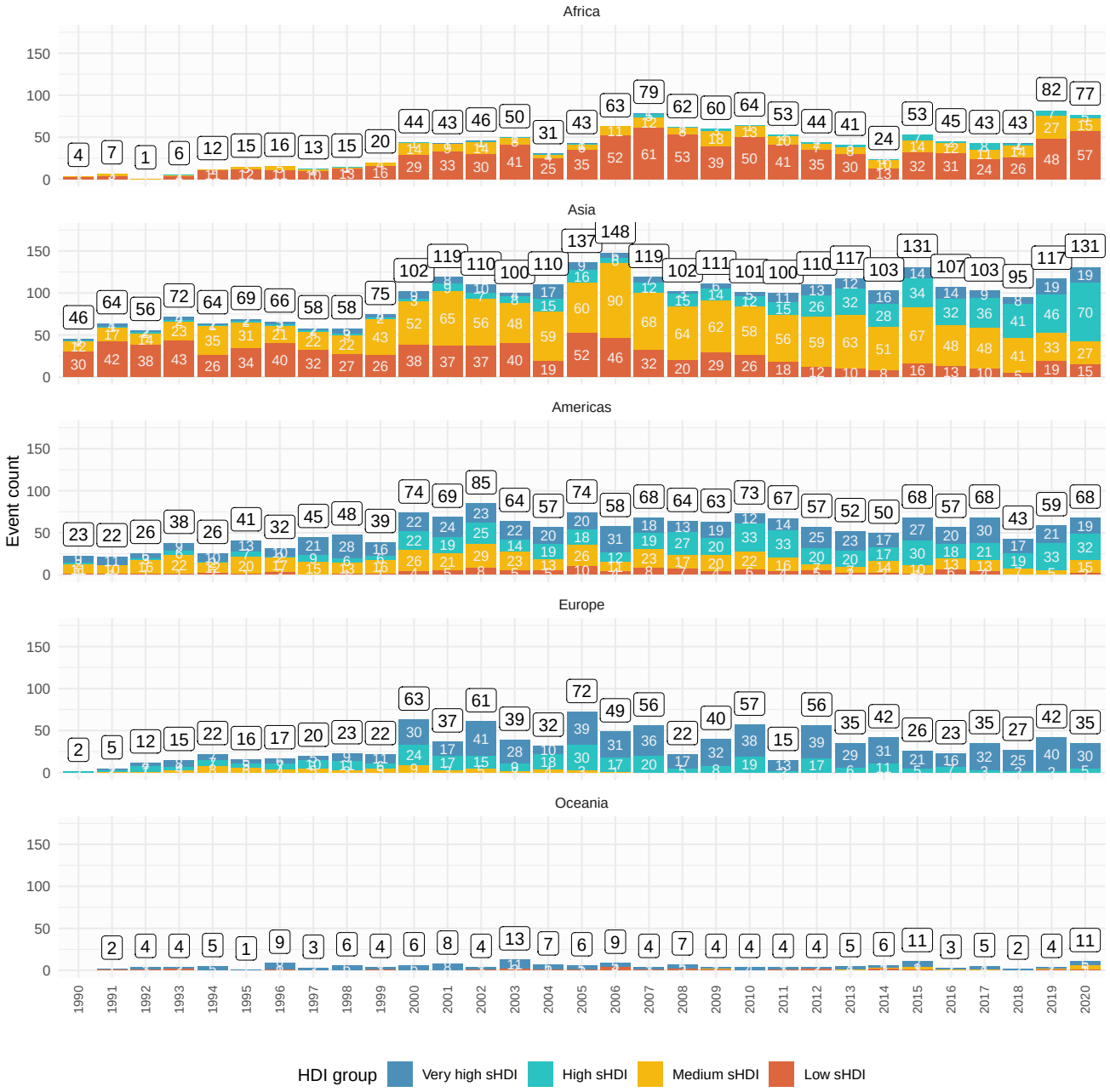

Fig. S14 Global Annual counts of studied climate disasters from 1990 to 2020 by continent. Annual counts of reported events between 1990 and 2020 aggregated by continent. The breakdown per sHDI is indicated on the bars. Along the study period, Asia is the continent where most events are reported, and where the evolution of sHDI of reported regions is most important. The majority of low/medium sHDI of reported events in the beginning of study period is replaced by a pervalence of high/medium sHDI by 2020. The African continent is the only exception from this perspective, the majority of reported regions remain from low sHDI throughout the study period.

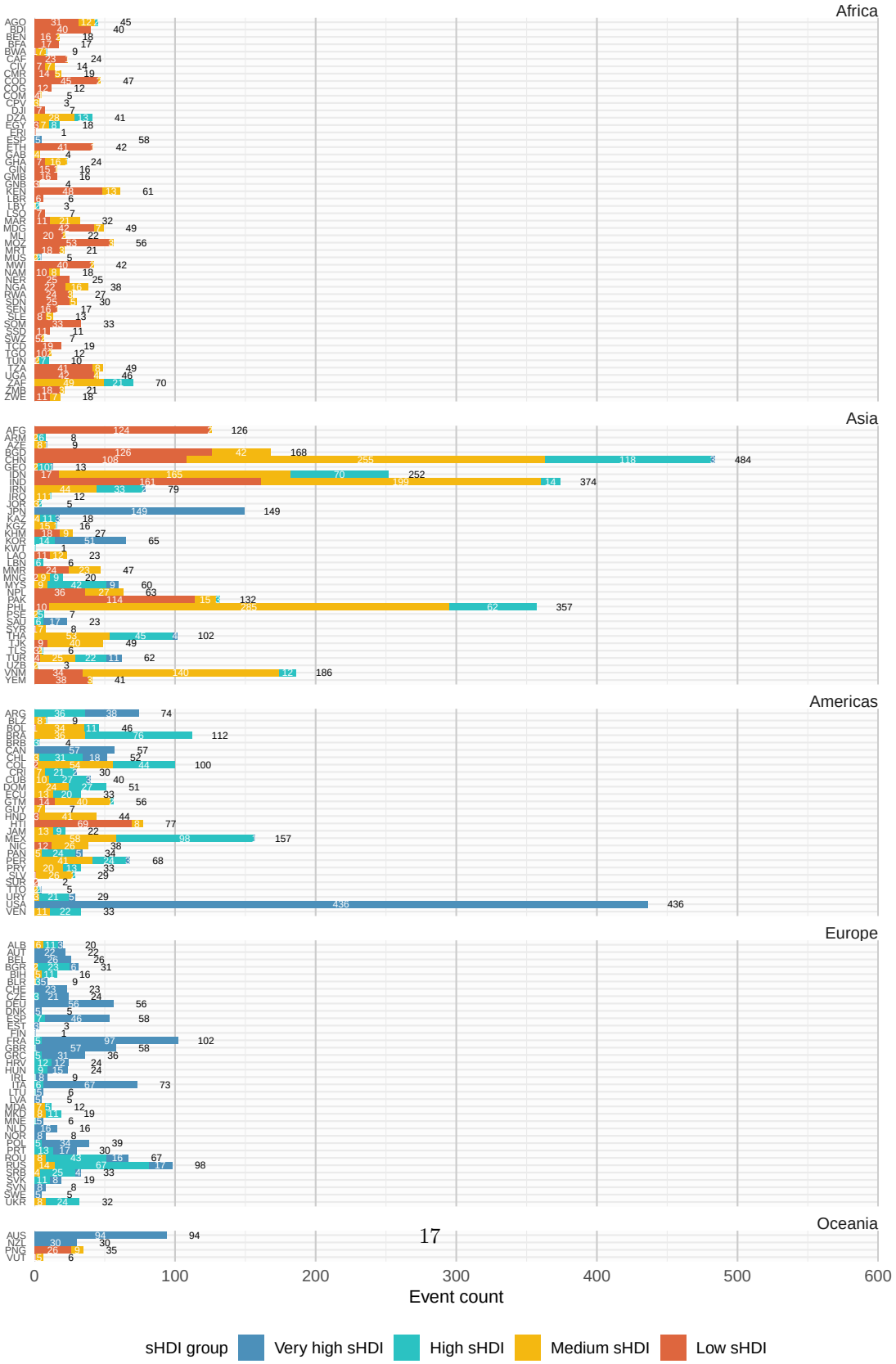

Fig. S15 Count of reported disaster events from 1990 to 2020 per country and breakdown by subnational human development index (sHDI) of impacted regions. The barplot shows the count of reported events per country and the colors the sHDI breakdown of impacted regions. The five countries with highest numbers of reported events are: USA (United States of America), CHN (CHINA), IND (India), PHL (The philippines) and IDN (Indonesia). Two countries had reported regions from all sHDI groups: TUR (Türkiye) and CHN (CHINA), and were among the countries with highest sHDI increase in the last 30 years.

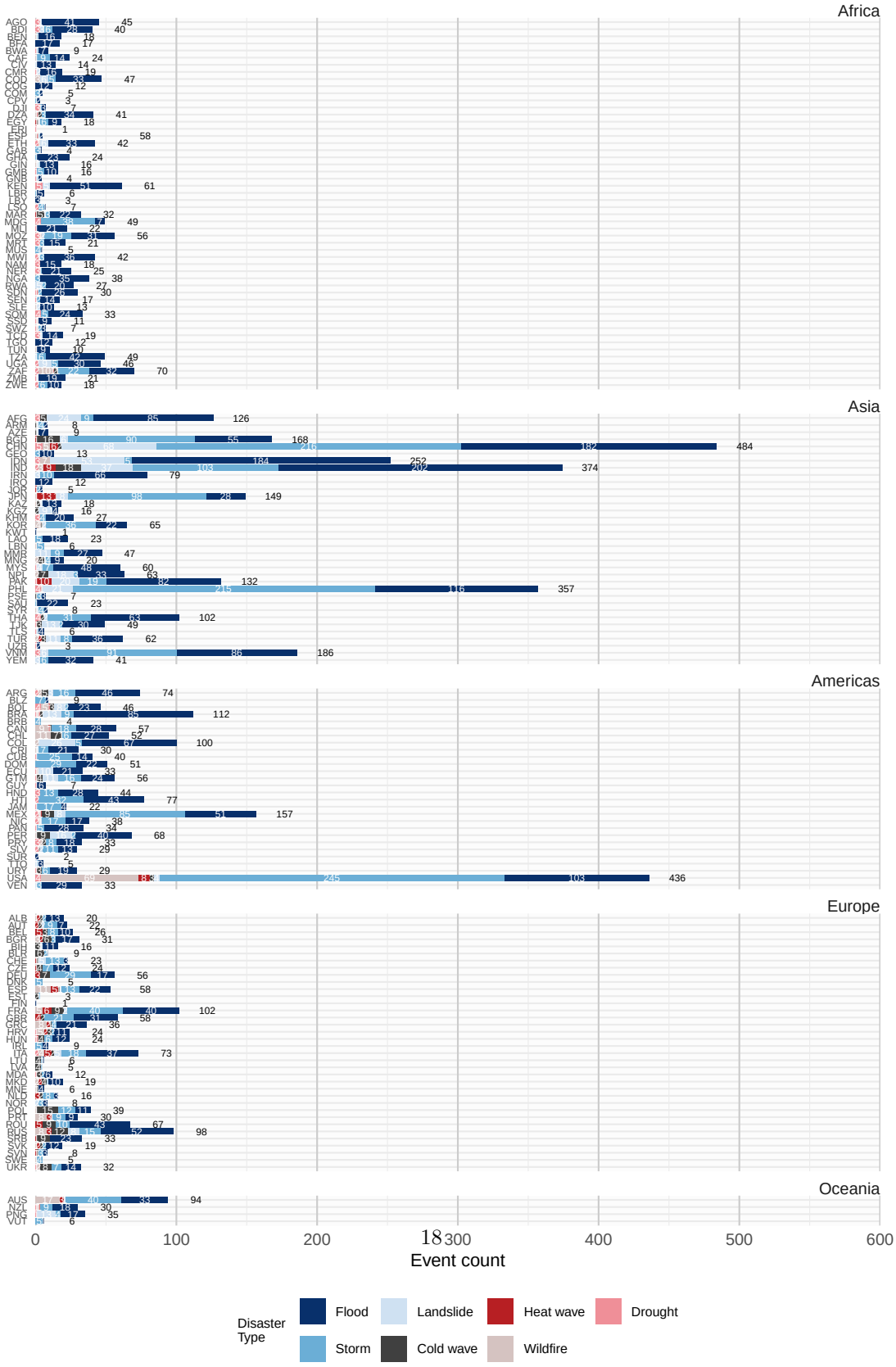

Fig. S16 Count of reported disaster events from 1990 to 2020 per country and breakdown by disaster types. The barplot shows the count of reported events per country and the colors the disaster types that impacted the regions in each country. Most of reported wildfires are in the USA (United States of America). Floods are the most common disaster type in every country on all continents. Storms are common mostly in Asia and the Americas. The number of droughts reported in Europe is very limited.

S2 Additional tables

Table S1 Counts and percentages of event types.

Disaster type	count	percentage (%)
Flood	3694	52.32
Storm	2090	29.60
Landslide	521	7.38
Cold wave	260	3.68
Heat wave	125	1.77
Wildfire	239	3.38
Drought	132	1.87

Table S2 Counts of event types per sHDI group.

Disaster type	Low sHDI	Medium sHDI	High sHDI	Very high sHDI
Flood	1145	1228	744	577
Storm	404	634	373	679
Landslide	163	250	73	35
Cold wave	31	49	92	88
Heat wave	16	18	18	73
Wildfire	15	37	46	141
Drought	66	33	23	10

Table S3 Region counts of deviation from national HDI for each sHDI group.

	better-off	nat-average	worse-off
Low sHDI	338	875	627
Medium sHDI	540	1162	547
High sHDI	333	888	148
Very high sHDI	202	1309	92

Table S4 Total count and proportion of exposure and impacts from 1990 to 2020 per sHDI group.

sHDI category	Variable	Total count	Percentage (%)
Low sHDI	pop exposure	3.48e+10	28.71
Medium sHDI	pop exposure	4.37e+10	35.99
High sHDI	pop exposure	2.37e+10	19.51
Very high sHDI	pop exposure	1.92e+10	15.79
Low sHDI	Total affected	1.01e+09	41.21
Medium sHDI	Total affected	1.02e+09	41.89
High sHDI	Total affected	2.91e+08	11.91
Very high sHDI	Total affected	1.22e+08	4.99
Low sHDI	Total mortality	4.31e+05	56.57
Medium sHDI	Total mortality	1.43e+05	18.71
High sHDI	Total mortality	2.61e+04	3.42
Very high sHDI	Total mortality	1.62e+05	21.3
Low sHDI	GDP exposure	9.59e+13	6.58
Medium sHDI	GDP exposure	2.59e+14	17.8
High sHDI	GDP exposure	3.08e+14	21.14
Very high sHDI	GDP exposure	7.94e+14	54.48
Low sHDI	Total damages	1.27e+11	6.51
Medium sHDI	Total damages	2.93e+11	15.05
High sHDI	Total damages	2.48e+11	12.76
Very high sHDI	Total damages	1.28e+12	65.68

Table S5 Total counts and proportion of exposure and impacts from 1990 to 2020 per disaster type.

Variable	Disaster type	Total count	Prop (%)
Pop exposure	Flood	5.25e+10	43.23
Pop exposure	Storm	5.02e+10	41.4
Pop exposure	Landslide	2.81e+09	2.31
Pop exposure	Cold wave	7.15e+09	5.89
Pop exposure	Heat wave	5.31e+09	4.37
Pop exposure	Wildfire	1.55e+09	1.28
Pop exposure	Drought	1.83e+09	1.51
Total affected	Flood	1.33e+09	54.5
Total affected	Storm	8.01e+08	32.75
Total affected	Landslide	6.66e+06	0.27
Total affected	Cold wave	1.49e+07	0.61
Total affected	Heat wave	1.88e+06	0.08
Total affected	Wildfire	3.88e+06	0.16
Total affected	Drought	2.85e+08	11.63
Total mortality	Flood	1.61e+05	21.16
Total mortality	Storm	3.81e+05	50.03
Total mortality	Landslide	2.63e+04	3.45
Total mortality	Cold wave	1.37e+04	1.79
Total mortality	Heat wave	1.55e+05	20.28
Total mortality	Wildfire	2.17e+03	0.29
Total mortality	Drought	2.29e+04	3.01
GDP exposure	Flood	4.43e+14	30.41
GDP exposure	Storm	7.47e+14	51.24
GDP exposure	Landslide	1.80e+13	1.24
GDP exposure	Cold wave	8.56e+13	5.88
GDP exposure	Heat wave	9.25e+13	6.35
GDP exposure	Wildfire	5.07e+13	3.48
GDP exposure	Drought	2.05e+13	1.4
Total damages	Flood	5.60e+11	28.8
Total damages	Storm	1.19e+12	61.22
Total damages	Landslide	7.70e+09	0.4
Total damages	Cold wave	1.01e+10	0.52
Total damages	Heat wave	1.58e+10	0.81
Total damages	Wildfire	1.03e+11	5.3
Total damages	Drought	5.74e+10	2.95

Table S6 Results from quantile regression analysis to estimate trends in population and economic exposure and impacts (human loss and economic damage) from 1990 to 2020 for each sHDI group.

impact	sHDI group	value 1990	value 2020	slope	pvalue
pop exposure (billion people)	all	1.34	4.12	1.51e-01	3.14e-08
pop exposure (billion people)	Low sHDI	1.01	0.57	-2.97e-02	1.00e-01
pop exposure (billion people)	Medium sHDI	0.08	0.88	8.02e-02	2.27e-04
pop exposure (billion people)	High sHDI	0.04	1.60	6.54e-02	1.85e-05
pop exposure (billion people)	Very high sHDI	0.21	1.06	2.60e-02	1.60e-05
affected (million people)	all	62.23	78.53	7.38e-01	3.50e-01
affected (million people)	Low sHDI	55.17	20.20	-7.57e-01	1.39e-01
affected (million people)	Medium sHDI	6.71	37.05	1.03e+00	6.00e-02
affected (million people)	High sHDI	0.19	20.53	5.50e-01	6.35e-04
affected (million people)	Very high sHDI	0.15	0.75	5.03e-02	1.08e-02
fatalities (thousand people)	all	5.42	12.59	-7.44e-02	8.64e-01
fatalities (thousand people)	Low sHDI	3.57	1.86	-1.85e-01	4.60e-02
fatalities (thousand people)	Medium sHDI	1.51	2.29	6.79e-03	8.82e-01
fatalities (thousand people)	High sHDI	0.16	1.51	4.06e-02	3.97e-04
fatalities (thousand people)	Very high sHDI	0.18	6.94	4.89e-02	1.71e-01
GDP exposure (trillion $)	all	12.83	69.67	2.41e+00	1.59e-09
GDP exposure (trillion $)	Low sHDI	2.25	1.64	-7.95e-02	1.22e-01
GDP exposure (trillion $)	Medium sHDI	0.69	4.67	4.63e-01	6.00e-04
GDP exposure (trillion $)	High sHDI	0.90	20.09	7.85e-01	2.65e-05
GDP exposure (trillion $)	Very high sHDI	8.99	43.28	1.11e+00	5.39e-05
damages (billion $)	all	24.89	66.61	9.76e-01	1.80e-01
damages (billion $)	Low sHDI	8.93	2.51	-1.74e-01	4.23e-02
damages (billion $)	Medium sHDI	3.55	19.20	7.87e-02	6.18e-01
damages (billion $)	High sHDI	1.58	12.77	4.61e-01	2.90e-04
damages (billion $)	Very high sHDI	10.82	32.12	9.59e-01	1.50e-01

Table S7 Results from quantile regression analysis to estimate trends in human losses (affected and fatalities rates) and economic damage impact rates from 1990 to 2020 overall and for each sHDI group.

Impact rate	sHDI group	rate 1990	rate 2020	% change	slope	pvalue	npoints
Affected (‰people)	all	34.05	32.79	-3.69	-4.19e-02	8.54e-01	5753
Affected (‰people)	Low sHDI	63.18	95.10	50.51	1.06e+00	2.49e-01	1573
Affected (‰people)	Medium sHDI	67.39	37.56	-44.26	-9.94e-01	6.70e-02	1904
Affected (‰people)	High sHDI	7.27	38.29	426.58	1.03e+00	2.18e-03	1159
Affected (‰people)	Very high sHDI	4.56	5.14	12.72	1.93e-02	8.08e-01	1117
Fatalities (‰people)	all	0.06	0.02	-69.77	-1.28e-03	0.00e+00	5487
Fatalities (‰people)	Low sHDI	0.08	0.05	-40.09	-1.12e-03	3.30e-02	1466
Fatalities (‰people)	Medium sHDI	0.07	0.02	-76.45	-1.88e-03	3.49e-09	1860
Fatalities (‰people)	High sHDI	0.05	0.01	-80.10	-1.27e-03	2.43e-07	1004
Fatalities (‰people)	Very high sHDI	0.01	0.01	2.55	9.33e-06	9.40e-01	1157
Damages (% GDP)	all	0.16	0.07	-58.01	-3.19e-03	1.10e-04	2580
Damages (% GDP)	Low sHDI	0.15	0.29	98.00	4.76e-03	3.45e-01	363
Damages (% GDP)	Medium sHDI	0.17	0.03	-80.76	-4.48e-03	3.86e-05	864
Damages (% GDP)	High sHDI	0.19	0.03	-82.03	-5.29e-03	1.14e-02	516
Damages (% GDP)	Very high sHDI	0.13	0.11	-17.77	-7.86e-04	7.09e-01	837

Table S8 Results from quantile regression analysis to estimate trends in annual population exposure from 1990 to 2020 for each sHDI group per disaster type.

Impact	sHDI group	disaster type	count 1990	count 2020	slope	pvalue	npoints
pop exposure	all	Flood	505.56	2353.07	57.73	5.03e-08	31
pop exposure	all	Storm	605.06	1508.92	66.66	1.42e-05	31
pop exposure	all	Landslide	49.67	22.45	-1.69	3.51e-01	31
pop exposure	all	Cold wave	125.12	5.37	11.75	7.07e-02	31
pop exposure	all	Wildfire	13.35	21.20	0.72	4.66e-01	31
pop exposure	all	Heat wave	38.29	160.61	4.52	3.60e-01	30
pop exposure	all	Drought	7.37	45.11	2.24	1.90e-01	25
pop exposure	Low sHDI	Flood	447.73	464.61	-12.87	1.28e-01	31
pop exposure	Low sHDI	Storm	420.32	74.09	-11.46	1.04e-03	31
pop exposure	Low sHDI	Landslide	48.41	7.82	-1.72	2.14e-01	31
pop exposure	Low sHDI	Cold wave	92.48		-0.99	9.30e-01	17
pop exposure	Low sHDI	Wildfire			0.02	9.36e-01	14
pop exposure	Low sHDI	Heat wave			3.25	7.25e-01	14
pop exposure	Low sHDI	Drought		26.61	0.25	8.44e-01	20
pop exposure	Medium sHDI	Flood	31.89	602.13	38.96	8.62e-06	31
pop exposure	Medium sHDI	Storm	40.77	264.17	21.41	2.75e-02	31
pop exposure	Medium sHDI	Landslide	0.90	10.94	0.91	6.86e-02	31
pop exposure	Medium sHDI	Cold wave			0.94	4.41e-01	22
pop exposure	Medium sHDI	Wildfire	0.17	3.42	0.46	4.64e-01	19
pop exposure	Medium sHDI	Heat wave	1.41		2.03	3.28e-01	12
pop exposure	Medium sHDI	Drought	7.37		0.20	9.28e-01	15
pop exposure	High sHDI	Flood	24.04	1135.01	34.20	2.72e-06	31
pop exposure	High sHDI	Storm		422.19	30.30	7.69e-05	30
pop exposure	High sHDI	Landslide	0.36	3.24	0.10	5.11e-01	25
pop exposure	High sHDI	Cold wave		5.37	0.31	7.37e-01	27
pop exposure	High sHDI	Wildfire	13.19	17.15	0.29	5.77e-01	21
pop exposure	High sHDI	Heat wave			-0.04	9.29e-01	10
pop exposure	High sHDI	Drought		18.50	-0.47	6.91e-01	14
pop exposure	Very high sHDI	Flood	1.90	151.32	6.04	2.31e-05	31
pop exposure	Very high sHDI	Storm	143.96	748.48	15.01	5.60e-05	31
pop exposure	Very high sHDI	Landslide		0.45	-0.11	7.42e-01	17
pop exposure	Very high sHDI	Cold wave	32.64		0.81	7.83e-01	21
pop exposure	Very high sHDI	Wildfire		0.63	-0.49	5.43e-01	30
pop exposure	Very high sHDI	Heat wave	36.88	160.61	5.53	8.36e-03	24
pop exposure	Very high sHDI	Drought			-0.79	3.94e-01	8

Table S9 Results from quantile regression analysis to estimate trends in annual reported affected people from 1990 to 2020 for each sHDI group per disaster type.

Impact	sHDI group	disaster type	count 1990	count 2020	slope	pvalue	npoints
affected	all	Flood	44.99	28.59	-0.38	5.37e-01	31
affected	all	Storm	16.97	40.24	0.39	2.57e-01	31
affected	all	Landslide	0.01	0.18	-0.00	7.53e-01	31
affected	all	Drought	0.25	9.22	0.25	2.26e-01	23
affected	all	Wildfire		0.27	0.00	5.20e-01	30
affected	all	Heat wave			0.00	8.56e-01	18
affected	all	Cold wave		0.03	0.02	3.64e-01	26
affected	Low sHDI	Flood	44.67	8.89	-0.71	1.32e-01	31
affected	Low sHDI	Storm	10.50	2.09	-0.39	1.51e-02	31
affected	Low sHDI	Landslide	0.01	0.00	0.00	9.32e-01	29
affected	Low sHDI	Drought		9.22	0.48	4.19e-02	19
affected	Low sHDI	Wildfire			0.00	9.10e-01	13
affected	Low sHDI	Heat wave			0.00	9.10e-01	13
affected	Low sHDI	Cold wave			0.00	6.06e-01	10
affected	Medium sHDI	Flood	0.13	6.86	0.73	1.27e-02	31
affected	Medium sHDI	Storm	6.32	29.89	0.14	7.15e-01	31
affected	Medium sHDI	Landslide		0.16	0.00	9.05e-01	30
affected	Medium sHDI	Drought	0.25		-0.05	9.54e-01	14
affected	Medium sHDI	Wildfire		0.14	0.00	4.39e-01	14
affected	Medium sHDI	Heat wave			0.00	4.39e-01	14
affected	Medium sHDI	Cold wave			0.00	9.54e-01	16
affected	High sHDI	Flood	0.19	12.54	0.25	2.46e-03	31
affected	High sHDI	Storm		7.81	0.32	1.76e-03	29
affected	High sHDI	Landslide		0.02	0.00	5.79e-01	20
affected	High sHDI	Drought			0.00	5.79e-01	20
affected	High sHDI	Wildfire		0.13	0.00	9.35e-01	16
affected	High sHDI	Heat wave			0.00	9.35e-01	16
affected	High sHDI	Cold wave		0.03	0.01	6.28e-01	22
affected	Very high sHDI	Flood	0.00	0.30	0.01	2.37e-01	31
affected	Very high sHDI	Storm	0.15	0.45	0.01	3.32e-01	31
affected	Very high sHDI	Landslide		0.00	0.00	7.21e-01	17
affected	Very high sHDI	Drought			0.00	7.21e-01	17
affected	Very high sHDI	Wildfire		0.00	0.00	7.29e-01	28
affected	Very high sHDI	Heat wave			0.00	9.19e-01	14
affected	Very high sHDI	Cold wave			0.00	5.40e-01	10

Table S10 Results from quantile regression analysis to estimate trends in annual reported fatalities from 1990 to 2020 for each sHDI group per disaster type.

Impact	sHDI group	disaster type	count 1990	count 2020	slope	pvalue	npoints
fatalities	all	Flood	1.88	3.91	-0.06	2.79e-01	31
fatalities	all	Landslide	0.17	0.51	-0.01	2.68e-01	31
fatalities	all	Storm	2.80	1.55	-0.06	3.40e-01	31
fatalities	all	Cold wave	0.18	0.00	-0.00	8.47e-01	31
fatalities	all	Heat wave	0.39	6.57	0.01	7.97e-01	30
fatalities	all	Wildfire		0.04	0.00	1.00e+00	30
fatalities	all	Drought			-0.04	8.97e-01	8
fatalities	Low sHDI	Flood	1.41	1.61	-0.07	4.32e-02	31
fatalities	Low sHDI	Landslide	0.10	0.04	-0.01	4.06e-02	31
fatalities	Low sHDI	Storm	1.88	0.20	-0.06	1.60e-01	31
fatalities	Low sHDI	Cold wave	0.18		-0.01	6.02e-01	17
fatalities	Low sHDI	Heat wave			0.00	9.58e-01	14
fatalities	Low sHDI	Wildfire			-0.00	2.11e-01	11
fatalities	Low sHDI	Drought			-0.08	9.04e-02	6
fatalities	Medium sHDI	Flood	0.27	1.49	0.02	3.14e-01	31
fatalities	Medium sHDI	Landslide	0.05	0.23	-0.00	9.34e-01	31
fatalities	Medium sHDI	Storm	0.81	0.57	-0.02	4.54e-01	31
fatalities	Medium sHDI	Cold wave			0.00	3.86e-01	18
fatalities	Medium sHDI	Heat wave	0.38		0.00	9.31e-01	12
fatalities	Medium sHDI	Wildfire		0.00	-0.00	4.23e-01	15
fatalities	Medium sHDI	Drought			-0.04	9.86e-01	3
fatalities	High sHDI	Flood	0.15	0.61	0.02	8.10e-06	31
fatalities	High sHDI	Landslide	0.01	0.22	0.00	5.39e-01	23
fatalities	High sHDI	Storm		0.64	0.01	1.88e-02	30
fatalities	High sHDI	Cold wave		0.00	-0.01	6.00e-02	26
fatalities	High sHDI	Heat wave			-0.00	9.38e-01	9
fatalities	High sHDI	Wildfire		0.04	0.00	8.68e-01	17
fatalities	Very high sHDI	Flood	0.06	0.19	0.01	1.32e-02	30
fatalities	Very high sHDI	Landslide		0.03	-0.00	3.88e-01	15
fatalities	Very high sHDI	Storm	0.11	0.15	0.00	4.67e-01	31
fatalities	Very high sHDI	Cold wave			0.00	8.32e-01	19
fatalities	Very high sHDI	Heat wave	0.01	6.57	0.01	8.67e-01	23
fatalities	Very high sHDI	Wildfire			0.00	6.59e-01	26

Table S11 Results from quantile regression analysis to estimate trends in economic exposure from 1990 to 2020 for each sHDI group per disaster type.

Impact	sHDI group	disaster type	count 1990	count 2020	slope	pvalue	npoints
GDP exposure	all	Flood	1.64	25.54	0.80	4.93e-13	31
GDP exposure	all	Storm	7.18	36.51	1.07	2.96e-06	31
GDP exposure	all	Landslide	0.08	0.16	-0.01	4.25e-01	31
GDP exposure	all	Cold wave	1.62	0.08	0.07	1.78e-01	31
GDP exposure	all	Wildfire	0.52	0.21	0.02	6.26e-01	31
GDP exposure	all	Heat wave	1.76	6.71	0.19	1.51e-02	30
GDP exposure	all	Drought	0.03	0.47	0.02	1.75e-01	25
GDP exposure	Low sHDI	Flood	0.95	1.31	-0.02	4.52e-01	31
GDP exposure	Low sHDI	Storm	0.97	0.22	-0.02	5.89e-02	31
GDP exposure	Low sHDI	Landslide	0.07	0.01	-0.01	1.22e-01	31
GDP exposure	Low sHDI	Cold wave	0.26		0.00	8.85e-01	17
GDP exposure	Low sHDI	Wildfire			0.00	9.24e-01	14
GDP exposure	Low sHDI	Heat wave			0.03	4.49e-01	14
GDP exposure	Low sHDI	Drought		0.10	0.00	1.39e-01	20
GDP exposure	Medium sHDI	Flood	0.28	2.89	0.26	9.53e-09	31
GDP exposure	Medium sHDI	Storm	0.36	1.71	0.14	1.52e-02	31
GDP exposure	Medium sHDI	Landslide	0.00	0.05	0.00	5.46e-01	31
GDP exposure	Medium sHDI	Cold wave			0.00	9.04e-01	22
GDP exposure	Medium sHDI	Wildfire	0.00	0.01	-0.00	9.82e-01	19
GDP exposure	Medium sHDI	Heat wave	0.03		0.01	5.62e-01	12
GDP exposure	Medium sHDI	Drought	0.03		0.00	9.00e-01	15
GDP exposure	High sHDI	Flood	0.36	15.14	0.40	2.05e-05	31
GDP exposure	High sHDI	Storm		4.27	0.32	1.73e-04	30
GDP exposure	High sHDI	Landslide	0.01	0.05	0.00	1.50e-01	25
GDP exposure	High sHDI	Cold wave		0.08	-0.00	9.37e-01	27
GDP exposure	High sHDI	Wildfire	0.52	0.17	0.00	9.16e-01	21
GDP exposure	High sHDI	Heat wave			-0.01	2.40e-01	10
GDP exposure	High sHDI	Drought		0.37	0.00	9.31e-01	14
GDP exposure	Very high sHDI	Flood	0.05	6.20	0.22	6.00e-04	31
GDP exposure	Very high sHDI	Storm	5.85	30.30	0.66	1.75e-04	31
GDP exposure	Very high sHDI	Landslide		0.04	-0.00	8.14e-01	17
GDP exposure	Very high sHDI	Cold wave	1.36		0.02	8.29e-01	21
GDP exposure	Very high sHDI	Wildfire		0.02	-0.03	4.15e-01	30
GDP exposure	Very high sHDI	Heat wave	1.73	6.71	0.19	1.34e-02	24
GDP exposure	Very high sHDI	Drought			-0.06	4.11e-01	8

Table S12 Results from quantile regression analysis to estimate trends in economic damage from 1990 to 2020 for each sHDI group per disaster type.

Impact	sHDI group	disaster type	count 1990	count 2020	slope	pvalue	npoints
damages	all	Flood	5.38	22.93	0.38	2.17e-01	31
damages	all	Storm	17.63	40.59	1.07	2.25e-02	31
damages	all	Cold wave	0.07		0.02	6.50e-01	15
damages	all	Wildfire	1.70	0.15	0.01	9.08e-01	31
damages	all	Drought	0.11	2.83	0.08	1.22e-01	22
damages	all	Landslide		0.11	0.00	5.57e-01	26
damages	Low sHDI	Flood	1.82	1.65	-0.06	4.88e-01	29
damages	Low sHDI	Storm	7.11	0.64	-0.06	2.67e-01	27
damages	Low sHDI	Landslide			0.00	7.15e-01	11
damages	Medium sHDI	Flood	0.56	4.16	0.07	4.88e-01	31
damages	Medium sHDI	Storm	2.69	15.04	-0.03	7.56e-01	31
damages	Medium sHDI	Landslide			-0.00	6.86e-01	17
damages	High sHDI	Flood	0.07	7.08	0.14	6.62e-03	31
damages	High sHDI	Storm		2.94	0.28	1.27e-03	29
damages	High sHDI	Wildfire	1.51	0.14	-0.01	7.19e-01	12
damages	High sHDI	Drought		2.61	0.03	7.64e-01	12
damages	Very high sHDI	Flood	2.93	10.03	0.20	2.24e-01	31
damages	Very high sHDI	Storm	7.83	21.97	0.51	2.66e-01	31
damages	Very high sHDI	Wildfire		0.01	0.07	2.79e-01	29

Table S13 Results from quantile regression analysis to estimate trends in affected rates (‰people) from 1990 to 2020 per sHDI group and disaster type.

Impact	sHDI group	disaster type	rate 1990	rate 2020	(%) change	slope	pvalue	npoints
affected	all	Flood	69.57	31.37	-54.91	-1.27e+00	1.35e-03	3307
affected	all	Storm	23.36	20.45	-12.48	-9.72e-02	7.34e-01	1663
affected	all	Landslide	7.50	6.44	-14.12	-3.53e-02	7.60e-01	335
affected	all	Cold wave		60.32		2.62e+00	1.16e-02	105
affected	all	Drought	1306.27	3563.52	172.80	7.52e+01	3.94e-01	106
affected	all	Heat wave		1.48		5.72e-02	1.63e-01	40
affected	all	Wildfire		18.87		6.88e-01	4.04e-03	196
affected	Low sHDI	Flood	157.19	60.44	-61.55	-3.22e+00	1.06e-02	1021
affected	Low sHDI	Storm	14.37	77.73	440.90	2.11e+00	3.56e-02	347
affected	Low sHDI	Landslide	2.60	21.99	746.29	6.46e-01	4.57e-01	106
affected	Low sHDI	Cold wave	23.78	2.53	-89.34	-7.08e-01	8.81e-01	14
affected	Low sHDI	Drought	847.29	4663.22	450.37	1.27e+02	1.49e-01	65
affected	Low sHDI	Wildfire	50.16			-1.71e+00	6.25e-01	14
affected	Medium sHDI	Flood	87.96	32.30	-63.28	-1.86e+00	7.84e-03	1110
affected	Medium sHDI	Storm	86.96	62.52	-28.10	-8.14e-01	6.31e-01	561
affected	Medium sHDI	Landslide	10.58	1.27	-88.01	-3.10e-01	8.00e-02	152
affected	Medium sHDI	Cold wave	42.12	41.08	-2.48	-3.48e-02	9.99e-01	23
affected	Medium sHDI	Drought	1950.21	2275.64	16.69	1.08e+01	9.44e-01	28
affected	Medium sHDI	Wildfire		108.61		4.43e+00	3.38e-01	24
affected	High sHDI	Flood	26.82	35.83	33.62	3.00e-01	5.74e-01	679
affected	High sHDI	Storm	8.27	27.38	231.10	6.37e-01	1.93e-01	326
affected	High sHDI	Landslide	7.98	10.70	34.10	9.07e-02	9.15e-01	47
affected	High sHDI	Cold wave		110.87		5.26e+00	1.01e-03	54
affected	High sHDI	Drought	2664.07			-9.17e+01	5.49e-01	13
affected	High sHDI	Wildfire	1.17	10.18	768.00	3.00e-01	8.55e-01	31
affected	Very high sHDI	Flood	8.94	7.16	-19.93	-5.94e-02	7.35e-01	497
affected	Very high sHDI	Storm	3.88	1.55	-59.96	-7.76e-02	1.68e-01	429
affected	Very high sHDI	Landslide		10.51		3.82e-01	8.02e-01	30
affected	Very high sHDI	Cold wave		63.41		4.22e+00	9.80e-01	14
affected	Very high sHDI	Heat wave	3.65	0.88	-75.82	-9.21e-02	9.99e-01	19
affected	Very high sHDI	Wildfire		20.50		8.74e-01	3.31e-04	127

Table S14 Results from quantile regression analysis to estimate trends in fatality rates (‰people) from 1990 to 2020 per sHDI group and disaster type.

Impact	sHDI group	disaster type	rate 1990	rate 2020	(%) change	slope	pvalue	npoints
fatalities	all	Flood	0.07	0.02	-75.17	-1.71e-03	0.00e+00	2783
fatalities	all	Storm	0.03	0.01	-78.65	-7.29e-04	8.88e-16	1711
fatalities	all	Landslide	0.37	0.25	-32.52	-4.06e-03	2.98e-01	502
fatalities	all	Cold wave	0.06	0.00	-96.73	-2.07e-03	1.48e-02	221
fatalities	all	Heat wave	0.01	0.09	557.42	2.64e-03	1.89e-01	117
fatalities	all	Wildfire	0.02	0.03	44.26	3.41e-04	7.16e-01	144
fatalities	Low sHDI	Flood	0.10	0.04	-61.24	-2.04e-03	3.19e-03	893
fatalities	Low sHDI	Storm	0.04	0.05	24.67	3.01e-04	6.55e-01	348
fatalities	Low sHDI	Landslide	0.34	0.38	13.38	1.50e-03	8.50e-01	162
fatalities	Low sHDI	Cold wave	0.04	0.00	-90.54	-1.25e-03	8.06e-01	30
fatalities	Low sHDI	Heat wave	0.01	0.00	-79.09	-3.25e-04	9.65e-01	16
fatalities	Low sHDI	Wildfire	0.10	0.06	-40.67	-1.38e-03	9.67e-01	11
fatalities	Medium sHDI	Flood	0.08	0.02	-78.65	-2.10e-03	1.60e-09	992
fatalities	Medium sHDI	Storm	0.03	0.01	-65.37	-6.29e-04	2.81e-03	548
fatalities	Medium sHDI	Landslide	0.44	0.07	-83.78	-1.23e-02	5.51e-03	240
fatalities	Medium sHDI	Cold wave	0.04	0.01	-87.18	-1.25e-03	5.77e-01	35
fatalities	Medium sHDI	Heat wave	0.08	0.13	49.38	1.39e-03	9.65e-01	16
fatalities	Medium sHDI	Wildfire	0.03	0.01	-71.32	-7.28e-04	6.55e-01	26
fatalities	High sHDI	Flood	0.05	0.01	-75.93	-1.16e-03	3.65e-04	531
fatalities	High sHDI	Storm	0.03	0.00	-87.49	-9.38e-04	3.47e-05	286
fatalities	High sHDI	Landslide	1.00	0.42	-58.09	-1.94e-02	6.01e-01	69
fatalities	High sHDI	Cold wave	0.09	0.01	-83.61	-2.39e-03	2.68e-01	73
fatalities	High sHDI	Heat wave	0.01	0.09	557.42	2.64e-03	9.40e-01	14
fatalities	High sHDI	Wildfire	0.08	0.01	-92.41	-2.45e-03	5.44e-01	31
fatalities	Very high sHDI	Flood	0.01	0.02	21.16	9.35e-05	7.04e-01	367
fatalities	Very high sHDI	Storm	0.01	0.01	-38.11	-1.04e-04	1.62e-01	529
fatalities	Very high sHDI	Landslide	0.31	0.38	23.25	2.40e-03	9.48e-01	31
fatalities	Very high sHDI	Cold wave	0.03	0.01	-70.65	-6.59e-04	7.15e-01	83
fatalities	Very high sHDI	Heat wave	0.07	0.07	5.50	1.28e-04	9.83e-01	71
fatalities	Very high sHDI	Wildfire		0.05		2.08e-03	2.58e-01	76

Table S15 Results from quantile regression analysis to estimate trends in economic damage rates (% GDP) from 1990 to 2020 per sHDI group and disaster type.

Impact	sHDI group	disaster type	rate 1990	rate 2020	(%) change	slope	pvalue	npoints
damages	all	Flood	0.19	0.07	-61.26	-3.81e-03	4.15e-03	1186
damages	all	Storm	0.14	0.05	-66.49	-3.13e-03	8.01e-04	1126
damages	all	Landslide	0.57			-1.93e-02	1.51e-01	65
damages	all	Wildfire		0.57		2.00e-02	2.08e-01	112
damages	all	Drought	0.43	0.63	46.77	6.70e-03	7.82e-01	43
damages	all	Heat wave	0.42			-1.86e-02	8.97e-01	10
damages	Low sHDI	Flood	0.15	0.15	0.39	1.98e-05	9.97e-01	219
damages	Low sHDI	Storm	0.11	0.51	376.43	1.35e-02	2.73e-01	115
damages	Low sHDI	Landslide	0.31	0.79	151.88	1.59e-02	7.55e-01	13
damages	Low sHDI	Drought		1.06		4.14e-02	1.91e-01	11
damages	Medium sHDI	Flood	0.19	0.06	-70.33	-4.51e-03	4.36e-02	434
damages	Medium sHDI	Storm	0.11	0.01	-91.70	-3.38e-03	9.15e-03	367
damages	Medium sHDI	Landslide	1.32			-5.08e-02	8.44e-01	28
damages	Medium sHDI	Wildfire	0.11	0.19	76.81	2.72e-03	9.97e-01	12
damages	Medium sHDI	Drought	1.54	0.35	-77.43	-3.97e-02	8.74e-01	16
damages	High sHDI	Flood	0.21	0.04	-82.38	-5.70e-03	3.27e-02	254
damages	High sHDI	Storm	0.15	0.03	-76.24	-3.69e-03	8.07e-02	209
damages	High sHDI	Landslide	0.40	0.07	-82.84	-1.10e-02	9.00e-01	12
damages	High sHDI	Wildfire	0.29	1.62	457.30	4.43e-02	6.08e-01	15
damages	High sHDI	Drought	0.06	0.27	368.58	6.98e-03	8.07e-01	16
damages	Very high sHDI	Flood	0.17	0.16	-4.20	-2.34e-04	9.64e-01	279
damages	Very high sHDI	Storm	0.15	0.06	-59.61	-3.00e-03	1.20e-01	435
damages	Very high sHDI	Landslide	0.97	0.06	-93.76	-3.02e-02	8.23e-01	12
damages	Very high sHDI	Wildfire		0.52		2.01e-02	3.11e-01	85
damages	Very high sHDI	Heat wave	0.42			-1.86e-02	8.95e-01	10

Table S16 Results from logistic regression analysis to estimate odds ratios of the likelihood of being affected per sHDI group and disaster type.

Impact	Disaster type	Case	Odds ratio	ci low	ci high	pvalue	npoints
Likelihood affected	All types	Low sHDI : Very high sHDI	3.43	2.53	4.84	2.75e-14	2690
Likelihood affected	All types	Medium sHDI : Very high sHDI	2.43	1.80	3.42	3.69e-08	3021
Likelihood affected	All types	High sHDI : Very high sHDI	1.59	1.13	2.29	1.03e-02	2276
Likelihood affected	Flood	Low sHDI : Very high sHDI	4.70	3.09	7.55	1.80e-11	1518
Likelihood affected	Flood	Medium sHDI : Very high sHDI	3.77	2.42	6.10	1.47e-08	1607
Likelihood affected	Flood	High sHDI : Very high sHDI	2.25	1.40	3.80	1.44e-03	1176
Likelihood affected	Storm	Low sHDI : Very high sHDI	2.51	1.52	4.60	1.17e-03	776
Likelihood affected	Storm	Medium sHDI : Very high sHDI	2.28	1.43	4.06	1.67e-03	990
Likelihood affected	Storm	High sHDI : Very high sHDI	1.70	0.96	3.16	8.28e-02	755
Likelihood affected	Landslide	Low sHDI : Very high sHDI	1.72	0.43	8.94	4.77e-01	136
Likelihood affected	Landslide	Medium sHDI : Very high sHDI	0.57	0.18	2.87	4.21e-01	182
Likelihood affected	Landslide	High sHDI : Very high sHDI	0.98	0.10	5.88	9.85e-01	77
Likelihood affected	Cold wave	Low sHDI : Very high sHDI	0.15	0.01	11.17	3.42e-01	28
Likelihood affected	Cold wave	Medium sHDI : Very high sHDI	2.10	0.35	145.03	6.99e-01	37
Likelihood affected	Cold wave	High sHDI : Very high sHDI	0.69	0.11	48.18	8.46e-01	68
Likelihood affected	Wildfire	Low sHDI : Very high sHDI	0.43	0.09	2.02	2.84e-01	141
Likelihood affected	Wildfire	Medium sHDI : Very high sHDI	0.66	0.14	2.88	5.76e-01	151
Likelihood affected	Wildfire	High sHDI : Very high sHDI	1.98	0.15	11.56	5.35e-01	158
Likelihood affected	Heat wave	Low sHDI : Very high sHDI	0.00	0.00	0.01	2.14e-04	25
Likelihood affected	Heat wave	Medium sHDI : Very high sHDI	0.04	0.00	0.39	2.41e-01	25
Likelihood affected	Heat wave	High sHDI : Very high sHDI	0.00	0.00	0.03	1.26e-04	28
Likelihood affected	Drought	Low sHDI : Very high sHDI	3.97	2.85	5.48	2.15e-16	66
Likelihood affected	Drought	Medium sHDI : Very high sHDI	2.16	1.16	3.74	9.47e-03	29
Likelihood affected	Drought	High sHDI : Very high sHDI	0.51	0.21	0.89	6.36e-02	14

Table S17 Results from logistic regression analysis to estimate odds ratios of the likelihood of fatalities per sHDI group and disaster type.

Impact	Disaster type	Case	Odds ratio	ci low	ci high	pvalue	npoints
Likelihood fatalities	All types	Low sHDI : Very high sHDI	1.99	0.91	4.79	1.12e-01	2623
Likelihood fatalities	All types	Medium sHDI : Very high sHDI	1.58	0.72	3.76	2.93e-01	3017
Likelihood fatalities	All types	High sHDI : Very high sHDI	1.27	0.56	3.16	5.97e-01	2161
Likelihood fatalities	Flood	Low sHDI : Very high sHDI	2.99	1.64	5.63	5.91e-04	1260
Likelihood fatalities	Flood	Medium sHDI : Very high sHDI	3.04	1.46	6.63	4.15e-03	1359
Likelihood fatalities	Flood	High sHDI : Very high sHDI	2.39	1.04	5.06	3.26e-02	898
Likelihood fatalities	Storm	Low sHDI : Very high sHDI	8.24	2.16	23.06	4.01e-04	877
Likelihood fatalities	Storm	Medium sHDI : Very high sHDI	2.08	0.81	5.31	1.30e-01	1077
Likelihood fatalities	Storm	High sHDI : Very high sHDI	0.45	0.23	0.98	2.89e-02	815
Likelihood fatalities	Landslide	Low sHDI : Very high sHDI	0.38	0.12	3.38	2.85e-01	193
Likelihood fatalities	Landslide	Medium sHDI : Very high sHDI	0.26	0.09	2.25	1.23e-01	271
Likelihood fatalities	Landslide	High sHDI : Very high sHDI	0.60	0.18	5.23	5.69e-01	100
Likelihood fatalities	Cold wave	Low sHDI : Very high sHDI	3.00	1.03	7.44	2.86e-02	113
Likelihood fatalities	Cold wave	Medium sHDI : Very high sHDI	12.55	0.50	48.77	8.71e-02	118
Likelihood fatalities	Cold wave	High sHDI : Very high sHDI	2.02	1.00	4.37	6.31e-02	156
Likelihood fatalities	Wildfire	Low sHDI : Very high sHDI	0.76	0.15	3.49	7.27e-01	87
Likelihood fatalities	Wildfire	Medium sHDI : Very high sHDI	0.21	0.05	0.96	3.92e-02	102
Likelihood fatalities	Wildfire	High sHDI : Very high sHDI	0.36	0.11	1.51	1.23e-01	107
Likelihood fatalities	Heat wave	Low sHDI : Very high sHDI	0.11	0.01	0.36	1.32e-02	87
Likelihood fatalities	Heat wave	Medium sHDI : Very high sHDI	0.53	0.08	1.73	4.11e-01	87
Likelihood fatalities	Heat wave	High sHDI : Very high sHDI	0.13	0.02	0.47	1.50e-02	85

Table S18 Results from logistic regression analysis to estimate odds ratios of the likelihood of economic damage per sHDI group and disaster type.

Impact	Disaster type	Case	Odds ratio	ci low	ci high	pvalue	npoints
Likelihood damages	All types	Low sHDI : Very high sHDI	0.66	0.39	1.12	1.11e-01	1200
Likelihood damages	All types	Medium sHDI : Very high sHDI	0.65	0.41	1.02	6.30e-02	1701
Likelihood damages	All types	High sHDI : Very high sHDI	0.46	0.28	0.75	1.65e-03	1353
Likelihood damages	Flood	Low sHDI : Very high sHDI	0.49	0.27	1.00	3.52e-02	498
Likelihood damages	Flood	Medium sHDI : Very high sHDI	0.53	0.27	1.12	8.72e-02	712
Likelihood damages	Flood	High sHDI : Very high sHDI	0.55	0.29	1.15	1.00e-01	533
Likelihood damages	Storm	Low sHDI : Very high sHDI	0.90	0.43	1.86	7.82e-01	550
Likelihood damages	Storm	Medium sHDI : Very high sHDI	0.60	0.30	1.21	1.65e-01	802
Likelihood damages	Storm	High sHDI : Very high sHDI	0.49	0.19	1.08	1.18e-01	644
Likelihood damages	Landslide	Low sHDI : Very high sHDI	0.44	0.13	1.53	1.86e-01	25
Likelihood damages	Landslide	Medium sHDI : Very high sHDI	2.92	0.38	12.89	2.37e-01	40
Likelihood damages	Landslide	High sHDI : Very high sHDI	0.85	0.11	3.56	8.52e-01	24
Likelihood damages	Wildfire	Low sHDI : Very high sHDI	9.03	0.01	15400.13	5.09e-01	88
Likelihood damages	Wildfire	Medium sHDI : Very high sHDI	2.18	0.04	9.41	5.25e-01	97
Likelihood damages	Wildfire	High sHDI : Very high sHDI	0.27	0.11	0.66	3.43e-03	100
Likelihood damages	Drought	Low sHDI : Very high sHDI	2.31	0.45	21.66	4.12e-01	20
Likelihood damages	Drought	Medium sHDI : Very high sHDI	9.62	0.80	93.65	5.15e-02	25
Likelihood damages	Drought	High sHDI : Very high sHDI	1.54	0.26	13.32	6.76e-01	25

Table S19 Results from logistic regression analysis to estimate odds ratios of the likelihood of being affected per sHDI group, deviation from national HDI, and disaster type.

Impact	Disaster type	Case	Odds ratio	ci low	ci high	pvalue	npoints
Likelihood affected	All types	Low sHDI - b.o : Very high sHDI	2.29	1.45	3.52	2.31e-04	1411
Likelihood affected	All types	Low sHDI - n.a : Very high sHDI	3.05	2.21	4.40	1.65e-10	1857
Likelihood affected	All types	Low sHDI - w.o : Very high sHDI	4.63	3.31	6.67	4.00e-18	1656
Likelihood affected	All types	Medium sHDI - b.o : Very high sHDI	1.67	1.07	2.61	2.35e-02	1557
Likelihood affected	All types	Medium sHDI - n.a : Very high sHDI	2.47	1.81	3.53	1.15e-07	2133
Likelihood affected	All types	Medium sHDI - w.o : Very high sHDI	3.12	2.12	4.67	7.38e-09	1565
Likelihood affected	All types	High sHDI - b.o : Very high sHDI	1.36	0.73	2.33	2.91e-01	1396
Likelihood affected	All types	High sHDI - n.a : Very high sHDI	1.60	1.11	2.38	1.44e-02	1867
Likelihood affected	All types	High sHDI - w.o : Very high sHDI	2.01	0.96	3.69	4.15e-02	1247
Likelihood affected	Flood	Low sHDI - b.o : Very high sHDI	2.69	1.53	4.87	8.57e-04	681
Likelihood affected	Flood	Low sHDI - n.a : Very high sHDI	4.55	2.89	7.63	6.62e-10	978
Likelihood affected	Flood	Low sHDI - w.o : Very high sHDI	6.01	3.85	10.03	1.65e-13	853
Likelihood affected	Flood	Medium sHDI - b.o : Very high sHDI	2.42	1.26	4.46	6.56e-03	774
Likelihood affected	Flood	Medium sHDI - n.a : Very high sHDI	3.69	2.35	6.14	9.52e-08	1074
Likelihood affected	Flood	Medium sHDI - w.o : Very high sHDI	5.45	3.24	9.51	5.05e-10	753
Likelihood affected	Flood	High sHDI - b.o : Very high sHDI	2.57	1.08	5.42	2.16e-02	628
Likelihood affected	Flood	High sHDI - n.a : Very high sHDI	2.08	1.28	3.53	4.91e-03	964
Likelihood affected	Flood	High sHDI - w.o : Very high sHDI	2.73	1.14	5.87	1.72e-02	578
Likelihood affected	Storm	Low sHDI - b.o : Very high sHDI	2.61	1.10	5.51	1.67e-02	504
Likelihood affected	Storm	Low sHDI - n.a : Very high sHDI	2.18	1.11	4.17	2.08e-02	591
Likelihood affected	Storm	Low sHDI - w.o : Very high sHDI	2.94	1.40	5.77	2.84e-03	539
Likelihood affected	Storm	Medium sHDI - b.o : Very high sHDI	1.83	0.90	3.53	8.26e-02	556
Likelihood affected	Storm	Medium sHDI - n.a : Very high sHDI	2.32	1.39	4.13	2.53e-03	735
Likelihood affected	Storm	Medium sHDI - w.o : Very high sHDI	2.65	1.30	5.19	4.80e-03	557
Likelihood affected	Storm	High sHDI - b.o : Very high sHDI	1.38	0.52	3.07	4.70e-01	533
Likelihood affected	Storm	High sHDI - n.a : Very high sHDI	1.80	0.92	3.49	8.29e-02	624
Likelihood affected	Storm	High sHDI - w.o : Very high sHDI	2.25	0.13	6.77	3.75e-01	456

b.o: better-off ; n.a: national-average, w.o: worse-off

Table S20 Results from logistic regression analysis to estimate odds ratios of the likelihood of fatality per sHDI group, deviation from national HDI, and disaster type.

Impact	Disaster type	Case	Odds ratio	ci low	ci high	pvalue	npoints
Likelihood fatalities	All types	Low sHDI - b.o : Very high sHDI	2.27	0.82	6.16	1.12e-01	1426
Likelihood fatalities	All types	Low sHDI - n.a : Very high sHDI	2.38	0.96	6.23	7.68e-02	1885
Likelihood fatalities	All types	Low sHDI - w.o : Very high sHDI	1.22	0.54	2.97	6.65e-01	1626
Likelihood fatalities	All types	Medium sHDI - b.o : Very high sHDI	1.03	0.43	2.69	9.47e-01	1628
Likelihood fatalities	All types	Medium sHDI - n.a : Very high sHDI	1.39	0.53	3.75	5.12e-01	2086
Likelihood fatalities	All types	Medium sHDI - w.o : Very high sHDI	2.50	0.97	6.64	6.49e-02	1617
Likelihood fatalities	All types	High sHDI - b.o : Very high sHDI	1.36	0.37	4.11	6.21e-01	1435
Likelihood fatalities	All types	High sHDI - n.a : Very high sHDI	0.92	0.32	2.51	8.72e-01	1787
Likelihood fatalities	All types	High sHDI - w.o : Very high sHDI	3.30	0.88	9.63	5.11e-02	1253
Likelihood fatalities	Flood	Low sHDI - b.o : Very high sHDI	2.77	1.10	6.11	1.92e-02	520
Likelihood fatalities	Flood	Low sHDI - n.a : Very high sHDI	2.79	1.30	5.77	7.08e-03	809
Likelihood fatalities	Flood	Low sHDI - w.o : Very high sHDI	3.40	1.35	8.14	9.88e-03	665
Likelihood fatalities	Flood	Medium sHDI - b.o : Very high sHDI	2.13	0.95	4.45	5.56e-02	635
Likelihood fatalities	Flood	Medium sHDI - n.a : Very high sHDI	2.22	1.16	4.27	1.60e-02	858
Likelihood fatalities	Flood	Medium sHDI - w.o : Very high sHDI	5.80	1.33	16.93	1.67e-02	600
Likelihood fatalities	Flood	High sHDI - b.o : Very high sHDI	3.93	0.70	10.60	5.11e-02	489
Likelihood fatalities	Flood	High sHDI - n.a : Very high sHDI	1.82	0.64	4.35	2.34e-01	725
Likelihood fatalities	Flood	High sHDI - w.o : Very high sHDI	2.74	0.75	6.42	6.40e-02	418
Likelihood fatalities	Storm	Low sHDI - b.o : Very high sHDI	2.74	1.31	6.53	1.20e-02	606
Likelihood fatalities	Storm	Low sHDI - n.a : Very high sHDI	12.72	1.19	41.39	5.39e-03	698
Likelihood fatalities	Storm	Low sHDI - w.o : Very high sHDI	4.96	1.93	12.44	7.94e-04	631
Likelihood fatalities	Storm	Medium sHDI - b.o : Very high sHDI	0.68	0.30	1.64	3.61e-01	657
Likelihood fatalities	Storm	Medium sHDI - n.a : Very high sHDI	1.04	0.49	2.40	9.20e-01	816
Likelihood fatalities	Storm	Medium sHDI - w.o : Very high sHDI	5.68	1.29	17.04	9.89e-03	662
Likelihood fatalities	Storm	High sHDI - b.o : Very high sHDI	0.36	0.15	0.86	2.09e-02	631
Likelihood fatalities	Storm	High sHDI - n.a : Very high sHDI	0.34	0.17	0.78	4.73e-03	690
Likelihood fatalities	Storm	High sHDI - w.o : Very high sHDI	1.57	0.39	4.64	4.78e-01	552

b.o: better-off ; n.a: national-average, w.o: worse-off

Table S21 Results from logistic regression analysis to estimate odds ratios of the likelihood of economic damage per sHDI group, deviation from national HDI, and disaster type.

Impact	Disaster type	Case	Odds ratio	ci low	ci high	pvalue	npoints
Likelihood damages	All types	Low sHDI - b.o : Very high sHDI	0.46	0.22	0.86	3.03e-02	894
Likelihood damages	All types	Low sHDI - n.a : Very high sHDI	0.53	0.32	0.86	1.16e-02	1016
Likelihood damages	All types	Low sHDI - w.o : Very high sHDI	0.92	0.34	1.88	8.53e-01	964
Likelihood damages	All types	Medium sHDI - b.o : Very high sHDI	0.56	0.20	1.22	2.18e-01	1010
Likelihood damages	All types	Medium sHDI - n.a : Very high sHDI	0.61	0.35	1.02	7.05e-02	1328
Likelihood damages	All types	Medium sHDI - w.o : Very high sHDI	0.82	0.33	1.56	6.09e-01	1036
Likelihood damages	All types	High sHDI - b.o : Very high sHDI	0.30	0.12	0.59	2.71e-03	968
Likelihood damages	All types	High sHDI - n.a : Very high sHDI	0.46	0.25	0.81	9.85e-03	1176
Likelihood damages	All types	High sHDI - w.o : Very high sHDI	0.91	0.37	1.80	8.16e-01	883
Likelihood damages	Flood	Low sHDI - b.o : Very high sHDI	0.63	0.16	1.71	4.48e-01	309
Likelihood damages	Flood	Low sHDI - n.a : Very high sHDI	0.47	0.25	0.96	3.10e-02	385
Likelihood damages	Flood	Low sHDI - w.o : Very high sHDI	0.47	0.21	1.03	5.67e-02	362
Likelihood damages	Flood	Medium sHDI - b.o : Very high sHDI	1.14	0.26	3.42	8.44e-01	355
Likelihood damages	Flood	Medium sHDI - n.a : Very high sHDI	0.47	0.24	0.95	2.69e-02	535
Likelihood damages	Flood	Medium sHDI - w.o : Very high sHDI	0.23	0.09	0.55	1.65e-03	380
Likelihood damages	Flood	High sHDI - b.o : Very high sHDI	0.24	0.08	0.58	3.53e-03	329
Likelihood damages	Flood	High sHDI - n.a : Very high sHDI	0.54	0.26	1.15	1.00e-01	458
Likelihood damages	Flood	High sHDI - w.o : Very high sHDI	1.33	0.25	3.62	6.75e-01	304
Likelihood damages	Storm	Low sHDI - b.o : Very high sHDI	0.44	0.19	0.92	4.28e-02	459
Likelihood damages	Storm	Low sHDI - n.a : Very high sHDI	0.88	0.37	1.87	7.55e-01	493
Likelihood damages	Storm	Low sHDI - w.o : Very high sHDI	1.29	0.31	3.65	6.97e-01	468
Likelihood damages	Storm	Medium sHDI - b.o : Very high sHDI	0.17	0.09	0.33	1.29e-07	524
Likelihood damages	Storm	Medium sHDI - n.a : Very high sHDI	0.34	0.16	0.70	3.84e-03	632
Likelihood damages	Storm	Medium sHDI - w.o : Very high sHDI	1.77	0.58	4.10	2.45e-01	516
Likelihood damages	Storm	High sHDI - b.o : Very high sHDI	0.40	0.08	1.01	1.51e-01	503
Likelihood damages	Storm	High sHDI - n.a : Very high sHDI	0.54	0.13	1.44	3.23e-01	561
Likelihood damages	Storm	High sHDI - w.o : Very high sHDI	0.46	0.14	1.06	1.30e-01	450

b.o: better-off; n.a: national-average; w.o: worse-off.