Supplementary Information for

Pacific Island Countries are Resilient to Climate-related Conflict Risks

A. Creation of the social conflict dataset

We drew on news websites dedicated to the Pacific Island region as well as the online archives of national newspaper for Fiji, the Solomon Islands, and Vanuatu. Checking global news databases like BBC News or Lexis-Nexis yielded no additional events (and generally covered very few events) because international newspapers rarely cover these three countries. The search term used was: “*protest OR riot OR strike OR violence OR violent OR war*”.

We consulted the following sources:

- ABC Pacific Beat (https://www.abc.net.au/radio-australia/programs/pacificbeat)
- Asia Pacific Report (https://asiapacificreport.nz)
- Daily Post (Vanuatu)
- Fiji Broadcasting Corporation (Fiji)
- Fiji Sun (Fiji)
- Fiji Times (Fiji)
- Radio New Zealand Pacific News (https://www.rnz.co.nz/international/pacific-news)
- Solomon Island Broadcasting Corporation (Solomon Islands)
- Solomon Star (Solomon Islands)
- Solomon Times (Solomon Islands)
- The Island Sun (Solomon Islands)
- Vila Times (Vanuatu)

We located and geocoded all events with the help of GoogleMaps and ArcGIS. If the exact information is unknown, the longitude for the next major town/city or the capital of the administrative region is provided (this information is recorded in the geoprecision tab). If the exact start date of an event could not be determined, the first day of the respective month or the first day and month of the respective year are listed (the date precision tabs record this information).

B. Summary Statistics, Additional Figures, and Model Estimates

Table S1: Summary statistics of all variables used in main and robustness models

	Min	Median	Mean	Max	Std. Dev.
Social conflict$_{it}$	0	0	0.217	11	0.902
Protests$_{it}$	0	0	0.133	11	0.734
Riots$_{it}$	0	0	0.0513	3	0.269
Assaults$_{it}$	0	0	0.022	2	0.155
Violence against civilians$_{it}$	0	0	0.011	1	0.103
Storms$_{it}$	0	0	0.030	1	0.170
Other disasters$_{it}$	0	0	0.012	1	0.108
Climate-related disasters (combined)$_{it}$	0	0	0.042	1	0.200
Storm anomalies$_{it}$	-0.667	0	-2.85e-17	2.667	0.3.924
Other disaster anomalies$_{it}$	-0.667	0	1.59e-17	2.667	0.262
Temperature$_{it}$	24.27	25.445	25.121	25.6	0.520
Cell area$_{it}$ [1]	0.441	5.837	5.511	7.987	1.640
Nighttime light (calibrated, 2012 values)$_{it}$	0.061	0.061	0.062	0.077	0.003
Farmland$_{it}$ [1]	0	4.834	3.781	9.895	3.757
Travel time$_{it}$ [1]	4.666	6.701	6.578	8.551	0.667
Life expectancy$_{jt}$ [1]	4.217	4.256	4.251	4.268	0.015
Population$_{jt}$ [1]	12.458	13.351	13.234	13.734	0.434
GDP PC$_{jt}$ [1]	7.640	7.791	7.946	8.650	0.347
Democracy$_{j}$	0	1	0.760	1	0.428
Capital city$_{i}$	0	0	0.029	1	0.168

[1] Natural log

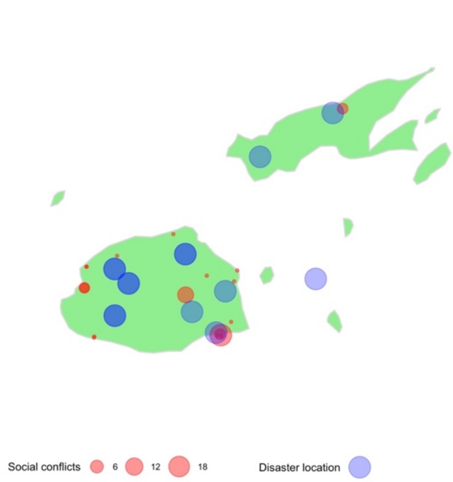
Table S2: Linear model estimates of social conflict in three Pacific states

	GFE baseline	GFE country	CFE local	CFE full
$Storms_{it}$	0.041	0.040	0.057	0.033
	(0.071)	(0.074)	(0.090)	(0.090)
$Other\ disasters_{it}$	0.045	0.050	1.034	1.010
	(0.168)	(0.184)	(0.764)	(0.765)
$Temperature_{it}$		0.226		0.090
		(0.173)		(0.127)
$Social\ conflict_{it-1}$	−0.079	−0.084	0.586***	0.580***
	(0.093)	(0.096)	(0.096)	(0.097)
$Nighttime\ light\ (calibrated,\ 2012\ values)_{it}$			70.534**	66.990**
			(28.931)	(29.584)
$Farmland_{it}$ [1]			0.004	0.002
			(0.004)	(0.004)
$Travel\ time_{it}$ [1]			−0.007	−0.033
			(0.052)	(0.059)
$Cell\ area_{it}$ [1]				0.026**
				(0.013)
$Life\ expectancy_{jt}$ [1]		8.601		3.025
		(5.942)		(6.408)
$Population_{jt}$ [1]		0.132		0.477
		(0.970)		(0.566)
$GDP\ PC_{jt}$ [1]		0.401		0.555
		(0.386)		(0.629)
τ_t	0.011*	−0.010	0.002	−0.013
	(0.005)	(0.015)	(0.003)	(0.013)
Observations	832	832	824	824
R^2	0.688	0.690	0.455	0.457
Adjusted R^2	0.642	0.643	0.449	0.448
Disaster type coef. eq. χ^2	5e-04	0.003	1.649	1.642
Fixed effects	Grid cell	Grid cell	Country	Country

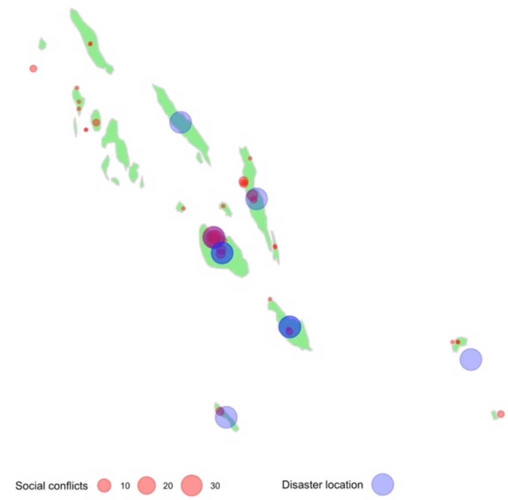
Standard errors clustered on grid cell in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

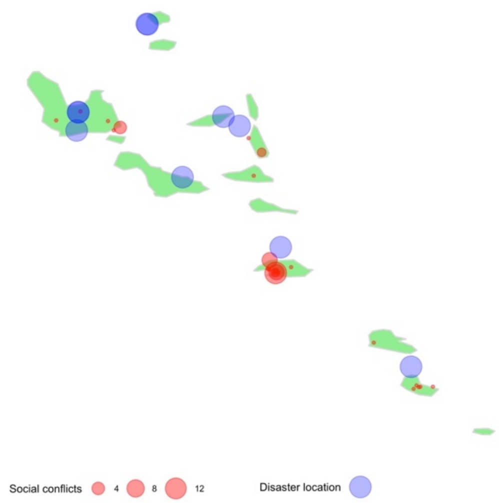
[1] Natural log



(a) Fiji

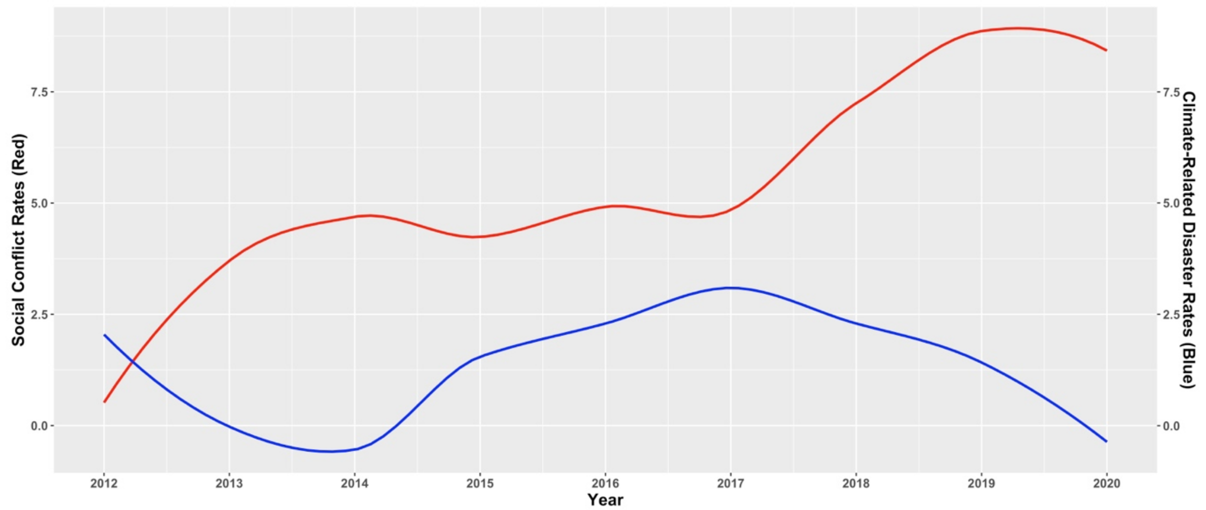


(b) Solomon Islands

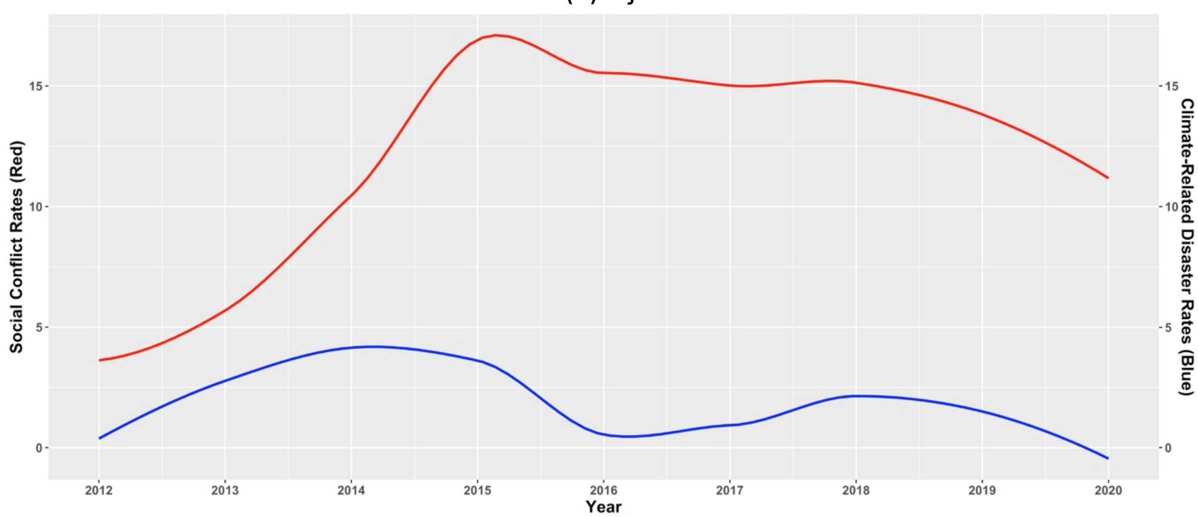


(c) Vanuatu

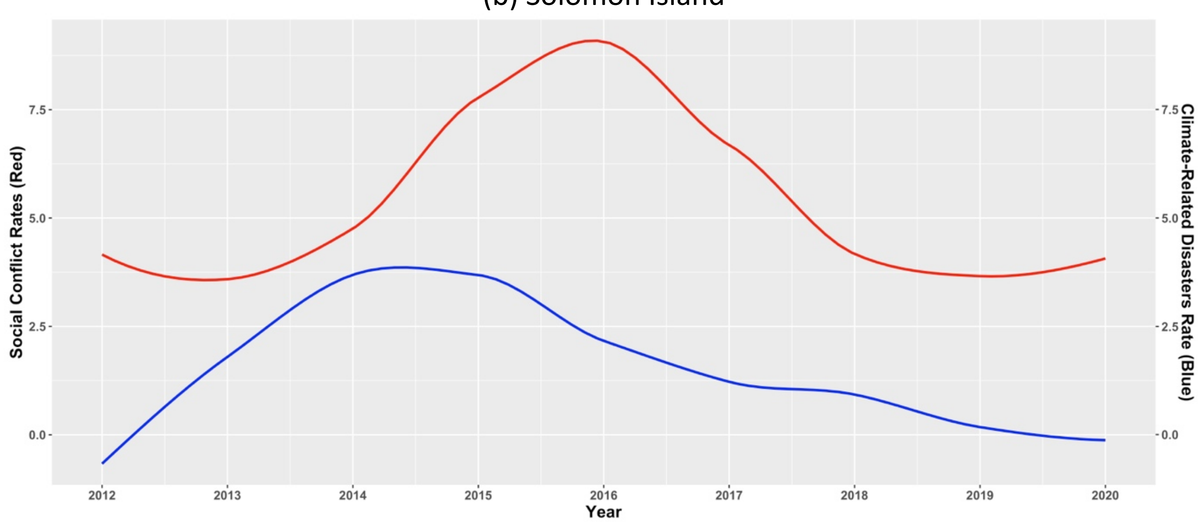
Figure S1: Social conflict frequency (red) and climate-related disaster locations (blue) in three Pacific Island states. Climate-related disasters include droughts, floods, and storms.



(a) Fiji



(b) Solomon Island



(c) Vanuatu

Figure S2: Climate disaster and social conflict rates in three Pacific Island states.

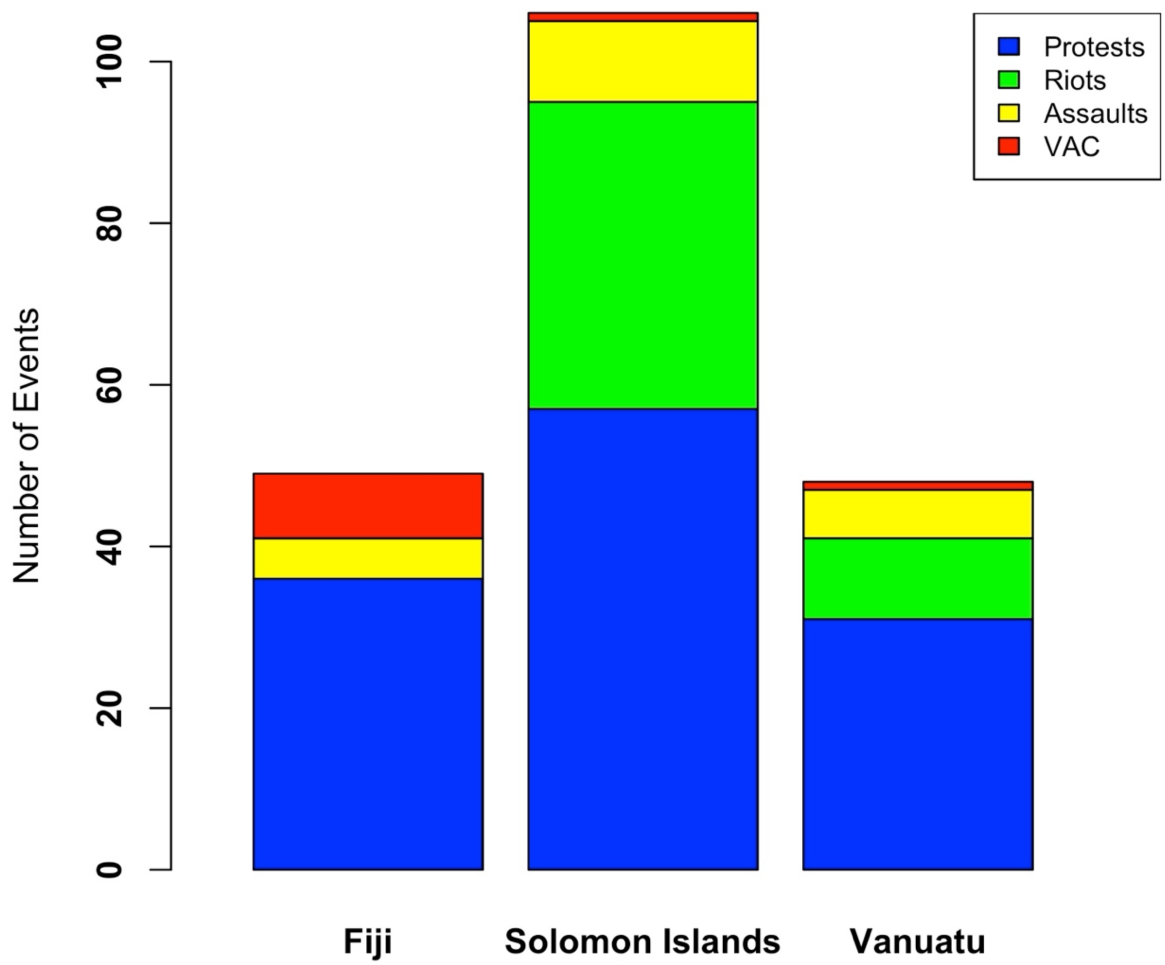


Figure S3: Social Conflict Rates by Type in three Pacific Island states.

C. Robustness Checks

Table S3: Linear model estimates of social conflict in three Pacific states – storms only

	GFE baseline	GFE country	CFE local	CFE full
Storms$_{it}$	0.039	0.037	0.051	0.024
	(0.071)	(0.074)	(0.090)	(0.087)
Temperature$_{it}$		0.228		0.117
		(0.170)		(0.122)
Social conflict$_{it-1}$	−0.080	−0.086	0.583***	0.577***
	(0.089)	(0.090)	(0.093)	(0.093)
Nighttime light (calibrated, 2012 values)$_{it}$			71.752**	67.245**
			(29.263)	(29.842)
Farmland$_{it}$ [1]			0.005	0.003
			(0.004)	(0.004)
Travel time$_{it}$ [1]			−0.010	−0.043
			(0.057)	(0.068)
Cell area$_{it}$ [1]				0.032**
				(0.015)
Life expectancy$_{jt}$ [1]		8.445		−0.559
		(5.627)		(7.544)
Population$_{jt}$ [1]		0.123		0.319
		(0.978)		(0.574)
GDP PC$_{jt}$ [1]		0.400		0.524
		(0.388)		(0.631)
τ_t	0.010**	−0.009	−0.002	−0.006
	(0.005)	(0.015)	(0.003)	(0.014)
Observations	832	832	824	824
R^2	0.688	0.690	0.444	0.447
Adjusted R^2	0.643	0.643	0.438	0.438
Fixed effects	Grid cell	Grid cell	Country	Country

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S4: Linear model estimates of social conflict in three Pacific states – floods and droughts

	GFE baseline	GFE country	CFE local	CFE full
Other disasters$_{it}$	0.039	0.044	1.033	1.009
	(0.168)	(0.184)	(0.764)	(0.764)
Temperature$_{it}$		0.225		0.088
		(0.173)		(0.128)
Social conflict$_{it-1}$	−0.079	−0.084	0.586***	0.580***
	(0.093)	(0.096)	(0.096)	(0.096)
Nighttime light (calibrated, 2012 values)$_{it}$			70.657**	67.009**
			(28.937)	(29.613)
Farmland$_{it}$ [1]			0.004	0.002
			(0.004)	(0.004)
Travel time$_{it}$ [1]			−0.005	−0.032
			(0.052)	(0.059)
Cell area$_{it}$ [1]				0.026**
				(0.013)
Life expectancy$_{jt}$ [1]		8.590		3.028
		(5.945)		(6.403)
Population$_{jt}$ [1]		0.122		0.469
		(0.965)		(0.571)
GDP PC$_{jt}$ [1]		0.414		0.565
		(0.383)		(0.623)
τ_t	0.010*	−0.010	0.002	−0.013
	(0.005)	(0.015)	(0.003)	(0.013)
Observations	832	832	824	824
R^2	0.688	0.690	0.455	0.457
Adjusted R^2	0.643	0.643	0.450	0.449
Fixed effects	Grid cell	Grid cell	Country	Country

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S5: Linear Model Estimates of Social Conflict in three Pacific states – Aggregated Disaster Indicator

	GFE baseline	GFE country	CFE local	CFE full
Climate-related disasters$_{it}$	0.042	0.042	0.275	0.248
	(0.066)	(0.071)	(0.206)	(0.202)
Temperature$_{it}$		0.226		0.119
		(0.170)		(0.123)
Social conflict$_{it-1}$	-0.079	-0.084	0.584^{***}	0.578^{***}
	(0.090)	(0.092)	(0.093)	(0.094)
Nighttime light (calibrated, 2012 values)$_{it}$			70.951^{**}	67.058^{**}
			(28.771)	(29.351)
Farmland$_{it}{}^{1}$			0.005	0.003
			(0.004)	(0.004)
Travel time$_{it}{}^{1}$			-0.015	-0.044
			(0.059)	(0.068)
Cell area$_{it}{}^{1}$				0.028^{**}
				(0.013)
Life expectancy$_{jt}{}^{1}$		8.574		0.275
		(5.667)		(7.097)
Population$_{jt}{}^{1}$		0.131		0.408
		(0.975)		(0.567)
GDP PC$_{jt}{}^{1}$		0.400		0.459
		(0.393)		(0.641)
τ_t	0.011^{**}	-0.010	-0.0003	-0.010
	(0.005)	(0.015)	(0.003)	(0.014)
Observations	832	832	824	824
R^2	0.688	0.690	0.447	0.450
Adjusted R^2	0.643	0.643	0.442	0.441
Fixed effects	Grid cell	Grid cell	Country	Country

Standard errors clustered on grid cell in parentheses.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$
[1] Natural log

Table S6: Linear model estimates of protests in three Pacific states – Country X year FEs

	GFE baseline	GFE country	CFE local	CFE full
Storms$_{it}$	−0.016	−0.016	0.003	−0.017
	(0.077)	(0.077)	(0.101)	(0.101)
Other disasters$_{it}$	0.030	0.030	1.021	0.986
	(0.152)	(0.152)	(0.753)	(0.749)
Social conflict$_{it-1}$	−0.084	−0.084	0.593***	0.587***
	(0.090)	(0.090)	(0.094)	(0.095)
Nighttime light (calibrated, 2012 values)$_{it}$			69.606**	65.949**
			(28.873)	(29.319)
Farmland$_{it}$ [1]			0.004	0.002
			(0.004)	(0.004)
Travel time$_{it}$ [1]			−0.005	−0.031
			(0.051)	(0.059)
Cell area$_{it}$ [1]				0.026**
				(0.013)
Observations	832	832	824	824
R^2	0.700	0.700	0.470	0.471
Adjusted R^2	0.646	0.646	0.450	0.451
Fixed effects	Country × year + grid cell	Country × year + grid cell	Country × year	Country × year

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S7: Linear model estimates of protests in three Pacific states

	GFE baseline	GFE country	CFE local	CFE full
Storms$_{it}$	0.026	0.022	0.048	0.030
	(0.052)	(0.053)	(0.046)	(0.048)
Other disasters$_{it}$	−0.217	−0.210	0.326	0.308
	(0.344)	(0.338)	(0.289)	(0.279)
Temperature$_{it}$		0.085		0.049
		(0.116)		(0.083)
Protests$_{it-1}$	−0.055	−0.058	0.553***	0.551***
	(0.156)	(0.156)	(0.100)	(0.099)
Nighttime light (calibrated, 2012 values)$_{it}$			58.230**	55.468**
			(24.519)	(24.525)
Farmland$_{it}$ [1]			−0.0003	−0.002
			(0.004)	(0.004)
Travel time$_{it}$ [1]			−0.018	−0.036
			(0.052)	(0.063)
Cell area$_{it}$ [1]				0.018
				(0.013)
Life expectancy$_{jt}$ [1]		6.360		1.093
		(4.483)		(5.745)
Population$_{jt}$ [1]		−0.214		0.356
		(0.749)		(0.485)
GDP PC$_{jt}$ [1]		0.246		0.460
		(0.356)		(0.590)
τ_t	0.006	−0.003	0.001	−0.008
	(0.004)	(0.011)	(0.003)	(0.011)
Observations	832	832	824	824
R^2	0.658	0.659	0.397	0.398
Adjusted R^2	0.607	0.606	0.390	0.388
Fixed effects	Grid cell	Grid cell	Country	Country

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S8: Linear model estimates of riots in three Pacific states

	GFE baseline	GFE country	CFE local	CFE full
Storms$_{it}$	0.086	0.087	0.088	0.075
	(0.063)	(0.063)	(0.080)	(0.077)
Other disasters$_{it}$	0.180	0.190	0.436	0.421
	(0.324)	(0.327)	(0.350)	(0.351)
Temperature$_{it}$		0.036		0.014
		(0.041)		(0.044)
Riots$_{it-1}$	-0.068	-0.071	0.211^{**}	0.196^{**}
	(0.112)	(0.110)	(0.085)	(0.082)
Nighttime light (calibrated, 2012 values)$_{it}$			5.347	2.465
			(4.716)	(4.307)
Farmland$_{it}$^{1}			0.003	0.002
			(0.002)	(0.002)
Travel time$_{it}$^{1}			-0.017	-0.035
			(0.019)	(0.023)
Cell area$_{it}$^{1}				0.018^{***}
				(0.006)
Life expectancy$_{jt}$^{1}		1.975		1.874
		(2.446)		(1.850)
Population$_{jt}$^{1}		0.405^{*}		0.295
		(0.212)		(0.204)
GDP PC$_{jt}$^{1}		0.138		0.101
		(0.138)		(0.127)
τ_t	0.002	-0.008	0.001	-0.006
	(0.002)	(0.006)	(0.002)	(0.005)
Observations	832	832	824	824
R^2	0.293	0.295	0.098	0.107
Adjusted R^2	0.188	0.186	0.088	0.092
Fixed effects	Grid cell	Grid cell	Country	Country

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S9: Linear model estimates of assaults in three Pacific states

	GFE baseline	GFE country	CFE local	CFE full
Storms$_{it}$	−0.026	−0.026	−0.037	−0.039
	(0.029)	(0.029)	(0.025)	(0.024)
Other disasters$_{it}$	0.160	0.159	0.233*	0.232*
	(0.159)	(0.158)	(0.138)	(0.139)
Temperature$_{it}$		0.072		0.063
		(0.051)		(0.048)
Assault$_{it-1}$	−0.007	−0.011	0.173*	0.170*
	(0.109)	(0.106)	(0.101)	(0.099)
Nighttime light (calibrated, 2012 values)$_{it}$			11.366	11.034
			(7.971)	(8.360)
Farmland$_{it}$ [1]			0.002*	0.002
			(0.001)	(0.001)
Travel time$_{it}$ [1]			0.007	0.005
			(0.011)	(0.013)
Cell area$_{it}$ [1]				0.002
				(0.003)
Life expectancy$_{jt}$ [1]		3.253**		3.675**
		(1.472)		(1.462)
Population$_{jt}$ [1]		−0.231		−0.193
		(0.391)		(0.349)
GDP PC$_{jt}$ [1]		0.015		0.052
		(0.114)		(0.121)
τ_t	0.003	−0.0004	0.002	−0.002
	(0.002)	(0.006)	(0.002)	(0.005)
Observations	832	832	824	824
R^2	0.232	0.242	0.090	0.099
Adjusted R^2	0.119	0.125	0.080	0.083
Fixed effects	Grid cell	Grid cell	Country	Country

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S10: Linear model estimates of violence against civilians in three Pacific states

	GFE baseline	GFE country	CFE local	CFE full
$Storms_{it}$	−0.046**	−0.046**	−0.023	−0.023
	(0.022)	(0.021)	(0.016)	(0.015)
$Other\ disasters_{it}$	−0.049	−0.057	−0.016	−0.023*
	(0.039)	(0.042)	(0.011)	(0.014)
$Temperature_{it}$		0.028		0.023
		(0.021)		(0.023)
$Violence\ against\ civilians_{it-1}$	−0.089***	−0.094***	0.063	0.061
	(0.022)	(0.022)	(0.056)	(0.059)
$Nighttime\ light\ (calibrated,\ 2012\ values)_{it}$			15.438***	15.304**
			(5.691)	(5.960)
$Farmland_{it}$ [1]			0.002*	0.002*
			(0.001)	(0.001)
$Travel\ time_{it}$ [1]			0.009	0.008
			(0.008)	(0.009)
$Cell\ area_{it}$ [1]				0.001
				(0.002)
$Life\ expectancy_{jt}$ [1]		−3.184		−2.938
		(2.425)		(2.420)
$Population_{jt}$ [1]		0.202		0.193
		(0.267)		(0.265)
$GDP\ PC_{jt}$ [1]		0.023		−0.003
		(0.142)		(0.144)
τ_t	−0.0001	0.001	−0.00003	0.001
	(0.001)	(0.005)	(0.001)	(0.005)
Observations	832	832	824	824
R^2	0.277	0.282	0.157	0.162
Adjusted R^2	0.170	0.172	0.148	0.148
Fixed effects	Grid cell	Grid cell	Country	Country

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S11: Linear model estimates of social conflict in three Pacific states – controlling for democracy

	Local	**Full**
Storms$_{it}$	0.065	0.032
	(0.092)	(0.090)
Other disasters$_{it}$	1.102	1.007
	(0.812)	(0.764)
Temperature$_{it}$		0.059
		(0.100)
Social conflict$_{it-1}$	0.661***	0.580***
	(0.080)	(0.096)
Democracy$_{j}$	−0.036	0.455
	(0.063)	(0.670)
Nighttime light (calibrated, 2012 values)$_{it}$		67.035**
		(29.594)
Farmland$_{it}$ [1]		0.002
		(0.004)
Travel time$_{it}$ [1]		−0.032
		(0.059)
Cell area$_{it}$ [1]		0.026**
		(0.013)
Life expectancy$_{jt}$ [1]		3.851
		(6.134)
Population$_{jt}$ [1]		0.113
		(0.240)
GDP PC$_{jt}$ [1]		0.517
		(0.623)
τ_t	0.001	−0.008
	(0.003)	(0.011)
Constant	0.100	−27.763
	(0.064)	(28.051)
Observations	832	824
R^2	0.428	0.457
Adjusted R^2	0.425	0.449
Fixed effects	None	None

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S12: Linear model estimates of social conflict in three Pacific states – disaster anomalies

	GFE baseline	GFE country	CFE local	CFE full
Storm anomalies$_{it}$	0.013	0.015	0.346	0.353
	(0.069)	(0.075)	(0.299)	(0.300)
Other disaster anomalies$_{it}$	0.016	0.016	0.030	0.027
	(0.028)	(0.029)	(0.052)	(0.053)
Temperature$_{it}$		0.227		0.093
		(0.174)		(0.128)
Social conflict$_{it-1}$	−0.079	−0.084	0.595***	0.589***
	(0.094)	(0.097)	(0.105)	(0.105)
Democracy$_{j}$	−0.036	0.455		
	(0.063)	(0.670)		
Nighttime light (calibrated, 2012 values)$_{it}$			69.911**	65.160**
			(28.777)	(29.462)
Farmland$_{it}$ [1]			0.006	0.004
			(0.004)	(0.004)
Travel time$_{it}$ [1]			−0.004	−0.039
			(0.052)	(0.063)
Cell area$_{it}$ [1]				0.033**
				(0.015)
Life expectancy$_{jt}$ [1]		8.552		2.559
		(5.955)		(6.506)
Population$_{jt}$ [1]		0.132		0.472
		(0.970)		(0.567)
GDP PC$_{jt}$ [1]		0.402		0.544
		(0.385)		(0.634)
τ_t	0.010*	−0.010	0.001	−0.012
	(0.005)	(0.015)	(0.003)	(0.013)
Constant	0.100	−27.763		
	(0.064)	(28.051)		
Observations	832	832	824	824
R^2	0.688	0.690	0.451	0.454
Adjusted R^2	0.642	0.643	0.445	0.445
Fixed effects	Grid cell	Grid cell	Country	Country

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S13: Two-way system GMM model estimates of social conflict in three Pacific states

	Baseline	**Country**
Storms$_{it}$	0.089	0.117
	(0.095)	(0.170)
Other disasters$_{it}$	1.267	1.279
	(1.225)	(0.977)
Temperature$_{it}$		0.117
		(0.079)
Social conflict$_{it-1}$	0.702***	0.700***
	(0.072)	(0.070)
Life expectancy$_{jt}$ [1]		5.971
		(9.481)
Population$_{jt}$ [1]		−0.086
		(0.120)
GDP PC$_{jt}$ [1]		0.367
		(0.342)
Observations	832	832
Sargan	43.162***	48.312***
AR(1)	-4.219***	-2.860***
Effects	Two-way	Two-way

Two-step robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

Table S14: Linear model estimates of social conflict in three Pacific states – climate-related disasters X capital city

	CFE local	CFE full
Climate-related disasters$_{it}$	0.125	0.093
	(0.109)	(0.103)
Capital city$_{i}$	1.462*	1.476*
	(0.791)	(0.782)
Climate-related disasters$_{it}$ $\times$ *Capital city*$_{i}$	0.679	0.692
	(1.370)	(1.377)
Temperature$_{it}$		0.139
		(0.136)
Social conflict$_{it-1}$	0.423***	0.414***
	(0.126)	(0.125)
Nighttime light (calibrated, 2012 values)$_{it}$	83.714***	79.183**
	(32.020)	(33.094)
Farmland$_{it}$ [1]	0.007	0.005
	(0.005)	(0.005)
Travel time$_{it}$ [1]	0.045	0.011
	(0.041)	(0.049)
Cell area$_{it}$ [1]		0.034**
		(0.017)
Life expectancy$_{jt}$ [1]		2.757
		(5.908)
Population$_{jt}$ [1]		0.298
		(0.607)
GDP PC$_{jt}$ [1]		0.425
		(0.591)
τ_t	0.002	−0.010
	(0.004)	(0.012)
Observations	824	824
R^2	0.502	0.505
Adjusted R^2	0.495	0.496
Fixed effects	Country	Country

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

C. Multicollinearity Tests

Table S15: Linear Model Estimates of Social Conflict in three Pacific states – No FEs

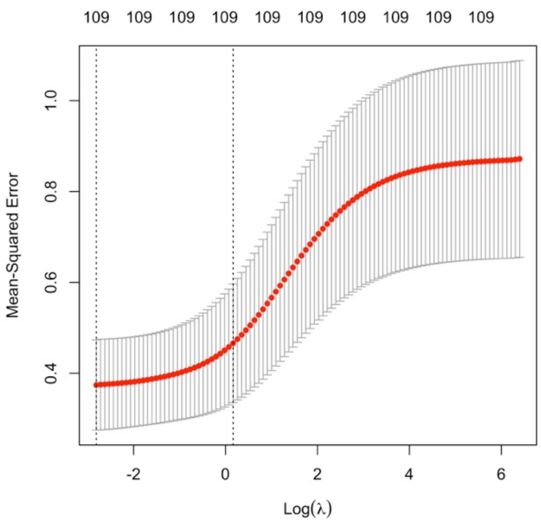
	GFE baseline (35)	GFE country (36)	CFE local (37)	CFE full (38)
Storms$_{it}$	0.069	0.064	0.032	0.037
	(0.092)	(0.094)	(0.093)	(0.090)
Other disasters$_{it}$	1.094	1.109	1.081	1.014
	(0.816)	(0.806)	(0.785)	(0.765)
Temperature$_{it}$		0.055		0.081
		(0.079)		(0.091)
Social conflict$_{it-1}$	−0.079	−0.084	0.586***	0.580***
	(0.093)	(0.096)	(0.096)	(0.097)
Nighttime light (calibrated, 2012 values)$_{it}$			65.162**	66.893**
			(27.501)	(29.611)
Farmland$_{it}$[1]			0.003	0.002
			(0.004)	(0.004)
Travel time$_{it}$[1]			0.018	−0.031
			(0.040)	(0.059)
Cell area$_{it}$[1]				0.026**
				(0.013)
Life expectancy$_{jt}$[1]		5.187		6.687
		(6.223)		(6.084)
Population$_{jt}$[1]		0.011		−0.020
		(0.123)		(0.125)
GDP PC$_{jt}$[1]		0.278		0.180
		(0.299)		(0.288)
τ_t	0.001	−0.009	0.002	−0.010
	(0.003)	(0.012)	(0.003)	(0.011)
Observations	832	832	824	824
R^2	0.428	0.428	0.453	0.457
Adjusted R^2	0.425	0.423	0.448	0.449
Fixed effects	None	None	None	None

Standard errors clustered on grid cell in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
[1] Natural log

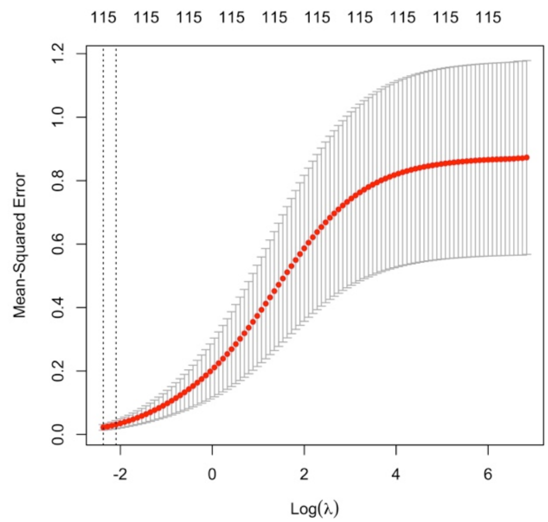
Table S16: Variance Inflation Factor Tests

	GFE baseline	GFE country	CFE local	CFE full
Cell level indicators				
Storms$_{it}$	1.267	1.281	1.018	1.034
Other disasters$_{it}$	1.291	1.312	1.024	1.047
Social conflict$_{it-1}$	3.095	3.116	1.201	1.221
Nighttime light (calibrated, 2012 values)$_{it}$			1.394	1.457
Farmland$_{it}$[1]			1.040	1.070
Travel time$_{it}$[1]			1.896	2.131
Cell area$_{it}$[1]				1.252
Country level indicators				
Temperature$_{it}$		1.428		14.153
Life expectancy$_{jt}$[1]		36.29		36.28
Population$_{jt}$[1]		426.27		426.27
GDP PC$_{jt}$[1]		81.80		81.48

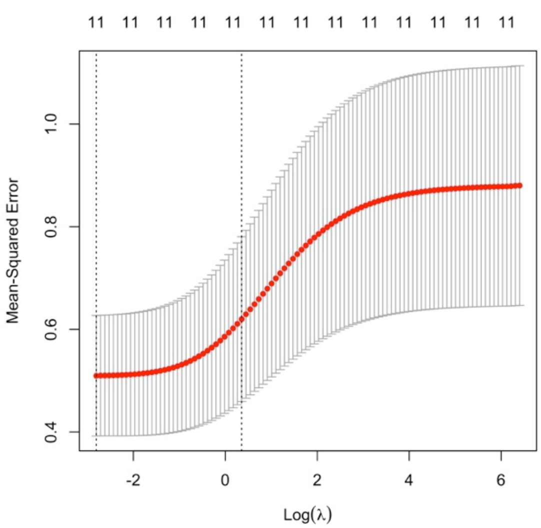
[1] Natural log



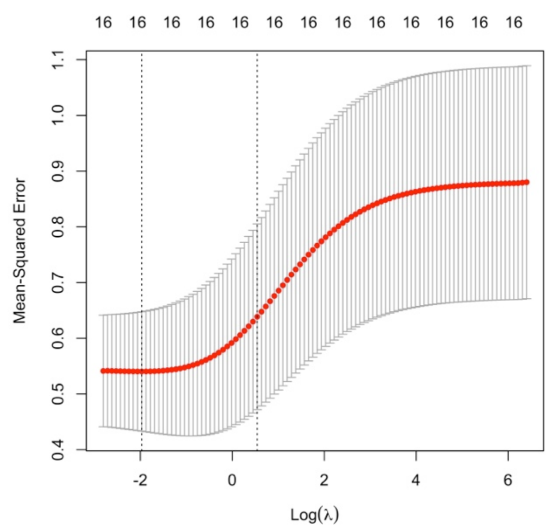
(a) GFE baseline (best λ= 0.06)



(b) GFE country (best λ= 0.09)



(c) CFE local (best λ= 0.13)



(d) CFE full (best λ= 0.12)

Figure S4: Ridge regression lambda value that minimizes the test MSE for each of the models.